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Seismic mitigation retrofit and life-cycle replacements project at the Economic and Social Commission for Asia and the Pacific premises in Bangkok

Report of the Secretary-General

Summary

The Secretary-General hereby submits the third progress report on the seismic mitigation retrofit and life-cycle replacements project at the Economic and Social Commission for Asia and the Pacific (ESCAP) premises in Bangkok, pursuant to section VII of General Assembly resolution [73/279 A](#), in which the Assembly requested that the next progress report be submitted at the main part of its seventy-fourth session.

The present report provides an update on the progress made on the project since the issuance of the previous report of the Secretary-General ([A/73/327](#)). It outlines the activities undertaken since that date, provides an update on the status of implementation and seeks necessary appropriations to finance the continuation of project activities in 2020.

While it is subject to risks, the project is on track, with construction expected to be completed in 2023 within the overall estimated maximum cost of \$40,019,000.

The recommendations of the Secretary-General on proposed actions to be taken by the General Assembly are set out in section VI of the report and include taking note of the revised project cost plan, approval of the proposed establishment of three temporary positions in the project team and appropriating an amount of \$6,410,700 for 2020.

* [A/74/150](#).



I. Introduction

1. The present report is the third progress report on the seismic mitigation retrofit and life-cycle replacements project at the Economic and Social Commission for Asia and the Pacific (ESCAP) premises in Bangkok, which was approved by the General Assembly in section IV of its resolution [71/272 A](#), in which the Assembly authorized the activities related to all phases of the project.

2. The present report is submitted pursuant to section VII of General Assembly resolution [73/279 A](#), in which the Assembly requested that the next progress report on the implementation of the project be submitted at the main part of its seventy-fourth session. The report provides an update on the progress made on the project since the previous report of the Secretary-General ([A/73/327](#)).

3. The project continues to be implemented in accordance with the previously reported project objectives. The present report contains an update on the progress made towards achieving those objectives, encompassing the actions taken to implement the requests and decisions of the General Assembly,¹ including the following:

(a) Incorporation of local lessons learned and best practices, including support provided by the host country; and continued engagement with the Global Asset Management Policy Service (formerly, the Global Property Management Service of the Office of Central Support Services) in providing guidance on managing United Nations capital projects, such as the use of standard procedures, best practices and lessons learned from other capital projects (resolution [73/279 A](#), sect. VII, paras. 7 and 8);

(b) Results of the second Monte Carlo risk analysis, which concludes that the confidence level for the project being completed within budget has increased slightly since the previous Monte Carlo analysis was conducted in 2018, as well as an update on the current project risks (resolution [73/279 A](#), sect. VII, para. 10);

(c) Progress made on the construction of the on-site swing space building, as approved by the General Assembly during its seventy-third session, aimed at minimizing disruption to regular work activities and ensuring business continuity by relying exclusively on on-site swing space (resolution [73/279 A](#), sect. VII, para. 12);

(d) Evaluation of rental income at the ESCAP premises, including information on the potential for future rental income from the implementation of the on-site swing space strategy (resolution [73/279 A](#), sect. VII, para. 13);

(e) Improvements towards full compliance with seismic building codes and industry norms related to health and safety, with the finalization of the design for the seismic retrofit and the life-cycle replacement works, which includes the approved refinements to the fire and life safety² upgrades (resolution [73/279 A](#), sect. VII, paras. 14 and 16).

4. In addition to the above, the report describes achievements in the design for life-cycle replacement works, addressing accessibility and capturing energy and other efficiencies. The design for the interior construction of the ESCAP secretariat building incorporates the proposed open-plan workspace solution, which will achieve

¹ As contained in section VII of General Assembly resolution [73/279 A](#) and the recommendations of the Advisory Committee on Administrative and Budgetary Questions ([A/73/425](#)), which were endorsed by the General Assembly.

² The term “life safety” refers to the safe use of fixed building elements during any emergency, especially fire or earthquake, or other event such as a power outage.

the target of a 20 per cent improvement in space efficiency ([A/73/425](#), paras. 14 and 15).

5. The present report presents a revised project schedule, which entails a new projected start date for construction, while maintaining the overall project completion date of the end of 2023. In addition, the project cost plan has been updated to reflect project activities since the issuance of the previous report.

6. Even though the results of the most recent risk analysis (see paras. 38 and 39) show that there is a possibility that the project could exceed the approved costs, the project team considers it feasible to mitigate these factors through value engineering to maintain overall project costs within approved levels, while ensuring compliance with all seismic, fire and life safety codes. The revised distribution of construction costs is contained in the annex to the report, which indicates that the project should remain within the overall estimated maximum cost.

7. The Secretary-General remains fully confident that the project will be completed within allocated budgetary resources and the approved project duration. At this relatively early stage, the risks identified are still high, and the project team will continue to ensure that adequate mitigation actions are taken from the ample options available to manage and reduce risks as the project progresses. Accordingly, no additional financing is expected to be sought from the General Assembly to cover project risks.

II. Progress made on the project during the reporting period

A. Cooperation with member States and the host Government

Member States

8. ESCAP continues to provide regular updates on the status of the project and to solicit voluntary contributions from member States via the Advisory Committee of Permanent Representatives and Other Representatives Designated by Members of the Commission in Bangkok. The Director of Administration, as Project Executive, briefed the Committee members during the 379th session, held in December 2018, and in the margins of the meeting, sought support from the members. During the recently concluded 382nd session of the Committee, in 2019, the Project Manager presented an update on status of the project and forthcoming activities, encouraging Committee members to support the project through voluntary contributions, including in-kind contributions of technical experts in the areas of energy and seismic engineering and sustainable building practices, as these areas are encompassed by the project objectives. Although concrete pledges have yet to be received, ESCAP will diligently continue its outreach to member States throughout the project.

9. Although there were no positive responses to the previously published job openings for Junior Professional Officers, ESCAP republished the job openings on the Department of Economic and Social Affairs website in 2019. The information was shared with the Advisory Committee of Permanent Representatives at its meeting in June 2019. ESCAP will continue to follow up with member States that may be able to support the project.

Host country relations

10. Pursuant to section VII, paragraph 4, of General Assembly resolution [73/279 A](#), ESCAP continues to engage with the Ministry of Foreign Affairs of Thailand to seek its assistance with and support for the project.

11. During the reporting period, the host country continued to support the project as ESCAP finalized the design and developed the bid documents for the general construction works. With the support of the host country, the project team continued to leverage the expert knowledge provided by the Council of Engineers of Thailand, which advised the project team on key issues related to standards and protocols for construction projects in Bangkok, including permits for contractors, applicable building codes and required approvals.

12. Requisite information on construction practices in the local context was shared with the project team to support it in creating a well-informed compilation of bidding documents for the main construction works. The guide to construction costs in Thailand published by the Ministry of Commerce was also shared with the project team and proved to be helpful in validating the project cost estimates calculated by the lead consulting firm. During the finalization of the construction documentation, valuable guidance on occupational health and safety during construction in an occupied building was shared with the project team. Information on local laws and regulations related to construction works in the government district near Royal Place, where the ESCAP premises are located, was also shared.

13. Furthermore, the host country will support the project team in its interactions with the Bangkok Metropolitan Administration prior to and during the construction works to ensure that all safety and building codes and applicable regulations are adhered to by the general construction contractor. The host country has also offered to facilitate discussions with and garner support from any neighbouring government facilities that may be affected by the construction works.

14. Throughout the construction phase of the project, the project team will continue to liaise closely with the Council of Engineers and the Advisory Committee of Local Technical Experts, which was established in 2018 to provide technical advice and expertise, as required. ESCAP recognizes the value of being able to call upon such a broad range of local expertise and it will continue to work closely with valuable local partners to ensure the successful completion of the main construction works.

B. Project governance

15. In accordance with the established governance structure, described in a previous report of the Secretary-General ([A/72/338](#) and [A/72/338/Corr.1](#)), the Executive Secretary of ESCAP is the project owner and has assigned the Director of Administration of ESCAP to serve as the Project Executive. The day-to-day project execution is led by the dedicated Project Manager.

Stakeholders committee

16. During the reporting period, the stakeholders committee met or was provided with project updates, in lieu of in-person meetings, four times. Committee members were briefed on the general progress of the project, including the development of the design and construction documentation, project schedule, project costs and risk management activities.

17. During the most recent stakeholder committee meeting, in June 2019, stakeholders were requested to provide support by ensuring the success of the change management and business readiness activities to enable the construction phase of the project to commence on schedule, without being impeded by client-related delays. The committee members, including the United Nations Resident Coordinator in Thailand who was present, reaffirmed the stakeholders' continued support for the project and in this regard asked to be kept informed of upcoming project activities. Stakeholders were assured by the project team that there would be enhanced and

increased information-sharing as a result of the communication activities related to change management and business readiness.

Coordination and oversight by the Global Asset Management Policy Service at Headquarters

18. In line with the project coordination agreement, signed in 2017, the close coordination between the dedicated project management team and the Global Asset Management Policy Service at Headquarters continued throughout the reporting period. In addition to the regularly scheduled fortnightly coordination meetings, ad hoc meetings were convened to support the project team whenever required.

19. The dedicated Project Coordinator, embedded in the Global Asset Management Policy Service, continues to support the project as the key focal point between the project team based in Bangkok and various entities at United Nations Headquarters. Support for and guidance on the management of project risks continues to be provided, including coordination of all activities conducted by the independent risk management firm. These deliverables included two quarterly remote sessions to discuss risk management, as well as the most recent biannual report. The risk management status of the project is provided under section F below.

20. During the reporting period, the Global Asset Management Policy Service provided support for the review of design and technical documents to ensure that the documentation was aligned with established standards and guidelines for United Nations capital projects. Guidance on best practices and lessons learned from other capital projects was shared, and templates and sample documents were provided in relation to the development of the bid documents for furniture, moving services and the general construction works. Several meetings were convened to advise and guide the project team on developing bid documents for the general construction works that are compatible with the contract format of the International Federation of Consulting Engineers, which has been tried and successfully tested on other United Nations projects worldwide, and is a well-known international standard for construction contracts.

21. As emphasized by the General Assembly in section VII, paragraph 7, of its resolution [73/279 A](#), the project team will continue to seek guidance from the Global Asset Management Policy Service, including in areas such as streamlining and improving the change control process in advance of the start of the construction works.

C. Local knowledge and lessons learned

Capital project at the building of the United Nations Children's Fund in Bangkok

22. In April 2019, in order to benefit from local best practices in construction projects, a team from ESCAP, comprising members from the seismic mitigation project and the Procurement Unit, met with the project team responsible for the renovation works at the building of the United Nations Children's Fund (UNICEF) in Bangkok.

23. Although smaller in scope, the UNICEF building renovation project covers many of the same aspects as the ESCAP seismic mitigation project, including replacement of building systems that have reached the end of their useful life, interior renovation works and the implementation of a fully accessible open-plan workspace solution. During the meeting, the Project Manager of the UNICEF building renovation project elaborated upon the challenges faced in the tendering and

construction phase of the capital project and how they were addressed, which was pertinent in the light of the activities of a similar nature to be undertaken by the ESCAP seismic mitigation project team.

24. A key message conveyed was to take the time required to incorporate all aspects of the design into the construction and bid documents to avoid change orders and/or delays during the construction phase. In addition, ensuring the full integration of all works in the construction scope, minimizing design gaps, specifying requirements related to the on-site presence of the construction supervisor, being mindful of lead times related to specialized equipment and identifying funds to cover project staff costs to accommodate project delays were diligently noted as lessons learned. The project team will continue to consult with the UNICEF project team during the tendering and construction phases of the project, to continue to leverage its cumulative experience and knowledge.

Visit to One United Nations House in Viet Nam

25. In late 2018, the project team arranged for the designers of the lead consulting firm to visit One United Nations House in Viet Nam, as part of a best practice and benchmarking exercise. The sustainable building features and the “One United Nations” concept were particularly interesting and relevant to the project team, in anticipation of the implementation of an open-plan workspace accommodating multiple United Nations entities within the ESCAP secretariat building, which in turn would foster increased collaboration between the United Nations common system entities.

Meeting with the Office of the Insurance Commission of Thailand

26. In preparation for the issuance of the bid documents for the general construction works and on the basis of the initial advice received from the Risk Management and Compensation Section, located at United Nations Headquarters, on insurance terms and values, in April 2019, members of the procurement team at ESCAP met with the Office of the Insurance Commission of Thailand. The purpose of the meeting was to obtain further advice on the types of insurance and coverage limits offered in the Thai market for a general construction contract. ESCAP highlighted to the Commission the insurance types and ceilings under consideration, including professional liability insurance, builder’s risk insurance, commercial general liability insurance and workers’ compensation insurance. The Office of the Insurance Commission of Thailand confirmed that all insurance coverage types discussed were available in the Thai market. The Commission provided more details on each type of insurance sought and highlighted the most suitable types of coverage and ceilings found for construction projects of a similar size and scope in Thailand.

Aligning with the initiatives of the environmental management system

27. During the reporting period, the project team worked collaboratively with ESCAP divisions and other United Nations entities that comprise the membership of the ESCAP Sustainable Business Network to conduct a two-part workshop series with the Regional Head of Infrastructure and Green Initiatives of a leading regional technology consultancy firm. The workshop provided a platform for dialogue and exchange of knowledge on sustainability and best practices in the region and served as an informal vehicle for the peer review of the project’s sustainability scope.

28. The workshop also served to provide necessary benchmarks for various parameters, which are not specifically detailed in the Leadership in Energy and Environmental Design (LEED) criteria by further validating, and in some cases enhancing, the seismic mitigation project’s energy-saving solution. This includes

validating parameters such as building energy consumption, lighting design, air conditioning design and electrical design. Through a detailed technical review of these metrics, the project team is ensuring that the seismic mitigation project will meet its sustainability scope.

D. Project management

29. Of the nine established project positions, seven are encumbered. As indicated in the two previous progress reports ([A/72/338](#) and [A/72/338/Corr.1](#), and [A/73/327](#)), ESCAP continued to conduct extensive outreach to attract qualified female candidates. Of the five professional level project positions, four are encumbered by qualified female staff, including the Project Manager, the Civil and Structural Engineer, the Procurement Officer and the Headquarters-based Project Coordinator.

30. The recruitment process for the positions of the Logistics and Coordination Officer (National Professional Officer) and the Information Technology Assistant (Local level), approved by the General Assembly in its resolution [73/279 A](#), has been completed and the selected candidates are expected to assume their functions during the third quarter of 2019.

31. Two approved positions, the Civil and Structural Engineer (P-3) and the Procurement Officer (P-3), will expire after the end of 2019, as originally scheduled.

32. Three positions (1 Safety Project Officer, 1 Security Officer and 1 Information Technology Assistant), all at the Local level, that were scheduled to be established effective from 2020 in the original plan, are proposed to be established in 2020, in time for the next phase of the project in which the swing space will be occupied and the main construction will begin.

E. Internal project quality assurance system

Quality assurance as it relates to the project design and construction bid documents

33. As stated in a previous report of the Secretary-General ([A/72/338](#) and [A/72/338/Corr.1](#)), in 2017 ESCAP put in place an internal project quality assurance system, in anticipation of the significant impact that the construction phase of seismic mitigation project would have upon all operations at the ESCAP premises. The seismic mitigation project is the largest capital project undertaken by ESCAP to date, and considering the small footprint of the premises, due consideration was given to the potential disruptions during the construction works. ESCAP is continuing to use its central projects database to prioritize and streamline all ESCAP projects, manage limited resources and minimize conflicts.

34. As a means of mitigating the risk of change orders during construction, the project team prioritized quality assurance of the design and construction documents, taking steps to mitigate risks related to this area. Recognizing the challenges related to completing a package of over 600 construction documents remotely, with the lead consulting firm located in Spain, and finalizing refinements to the original design within short deadlines, the project team put in place the following measures:

(a) **Standards, procedures and best practices.** The bid documents for the construction works were drafted to align with the contract format of the International Federation of Consulting Engineers. This form of construction contract is an example of best practices being shared among United Nations capital projects, and has been successfully used by the United Nations Office at Geneva for bidding out construction

works under the strategic heritage plan. In addition, technical specifications were developed with reference to and in alignment with an international format;

(b) **Enhanced procedures for managing design deliverables.** Enhanced procedures and templates were introduced to ensure that the project team in Bangkok could optimize the results from the lead consulting firm working remotely from Spain by minimizing the likelihood of errors and miscommunication. These templates provided standard formats for documents and deliverables, clearly detailing expected products in qualitative and quantitative terms;

(c) **On-site design workshops.** An on-site technical workshop was conducted between the project team and the lead consulting firm, which accelerated progress on the construction documents from 50 per cent to 80 per cent completion within a three-week period during the first quarter of 2019;

(d) **Third-party peer review service.** In keeping with the best practices adopted for United Nations capital projects, ESCAP engaged the services of a professional engineering and construction firm to provide a third-party (independent) peer review of the lead consulting firm's deliverables.

F. Risk management

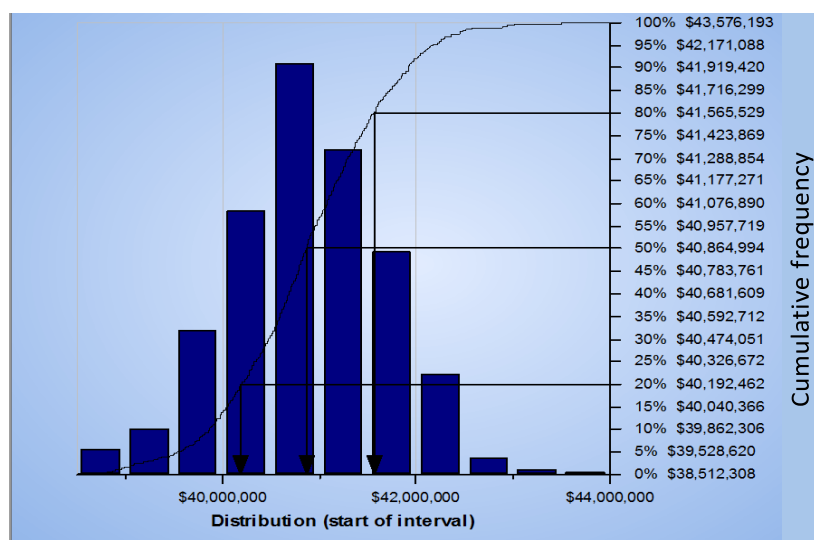
35. In March 2018, the first risk management workshop was held in Bangkok, facilitated by the Global Asset Management Policy Service. The workshop produced the project risk management strategy document, a risk register and the first quantitative (Monte Carlo) analysis of risks, the results of which were reported in the previous report of the Secretary-General ([A/73/327](#)). Since then, the independent risk management firm has produced two reports, one in July 2018 and another in May 2019, and conducted quarterly meetings to review the project risk register and provide guidance on the management of project risks.

36. In May 2019, the second Monte Carlo analysis was conducted to determine the project's current risks and the likelihood of achieving the "P80" benchmark that has been established as the target confidence level, meaning that the project team would ideally strive to have an 80 per cent confidence level that the project would be completed within budget. As noted in the previous report, the Monte Carlo analysis serves to provide a snapshot of the most likely overall cost of known risks, at the time when inputs were provided by the project team.

37. At the first risk management workshop in 2018, the inputs collated for the baseline Monte Carlo analysis were based on estimated costs rather than actual costs, as the project had yet to go out to the market for bid. This means a high degree of uncertainty remained at that time, and the confidence level that the project would be completed within budget was relatively low, until the contract for general construction was awarded. The high risk level is also partly due to currency fluctuations: the Thai baht has been appreciating against the United States dollar since late 2018.

38. A summary of the second Monte Carlo analysis of the project is shown in the form of a cost histogram in figure I.

Figure I
Cost histogram of analysed risks, May 2019



39. The first Monte Carlo simulation generated in 2018 showed that at the United Nations benchmark “P80” level, the project would be expected to come in at approximately \$42.5 million, or \$2.5 million over the budget. The second Monte Carlo simulation generated in May 2019 (see figure I) indicates that, at the “P80” level, the project would be expected to come in at approximately \$41.5 million, or \$1.5 million over the approved overall estimated maximum cost. The cost histogram illustrates that the confidence level for the project to be completed within the approved budget, without any further mitigation action, has risen to approximately 15 per cent, which is a slight increase from 12 per cent in the first Monte Carlo analysis. While the confidence level remains relatively low due to uncertainty around high value systems that are currently out for bid, it is fully expected to rise once construction bids are received and negotiated.

40. Throughout the reporting period, the project team has continued to proactively manage the risks identified, and to conduct further value engineering sessions with the lead consulting firm. A design workshop was conducted during the first quarter of 2019 to further clarify outstanding technical and design issues, and to tighten gaps identified in the construction bid documents. Such activities are an effective and useful risk mitigation tool and contribute to efforts to increase the confidence level towards the benchmark “P80” level.

Integrated risk management

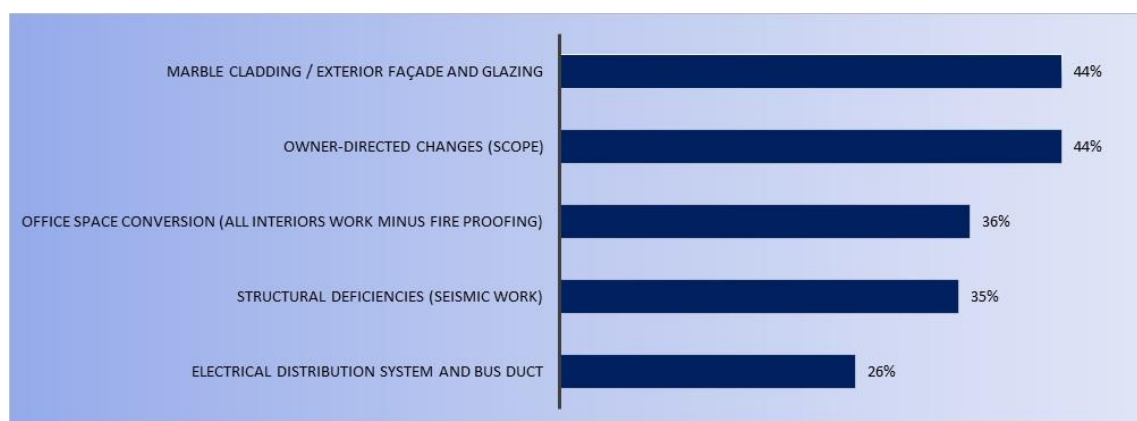
41. Integrated risk management was performed at the local level by the project team and supported by the lead consulting firm during the finalization of the construction documents and during the bid tendering process. As at the time of drafting the present report, the project was in the bid tendering process for the main construction works, with bid proposals due in September 2019. Most of the risks that are given the highest priority are associated with high-value items that could be affected by unforeseeable circumstances during construction, such as escalation of costs, unknown site conditions and owner-directed changes. While the project team is making every effort to put in place mitigating measures, some items will remain beyond the team’s control.

Risk register

42. The project risk register, which was established in line with the risk management strategy (A/73/327, para. 21), is monitored and updated on a regular basis by the project team. There are currently 23 risks listed and each risk will be signed off and closed after a four-phase documentation process. All risks are being monitored; none have been closed at this point in the project. It is expected that as the project moves into the construction phase, risks will be mitigated, signed off and closed, while new ones may emerge. The risk register is also intended to be a dynamic documentation tool that is fully coordinated with the Monte Carlo analysis process through to the end of the project.

43. Figure II presents a cost sensitivity analysis, which measures the correlation or relationship between individual risk entries and the overall estimated cost. The higher the cost sensitivity, the stronger the relationship between the estimate at completion and the individual risk. The figure contains a list of the top five risks.

Figure II
Cost sensitivity analysis as at June 2019



Description of the top five project risks

44. The top five risks identified in figure II are explained in more detail below with a description of the risk response:

(a) **Marble cladding/exterior façade and glazing.** Given that the current façade design covers a large area, spanning two sides of a 15-floor building, it entails inherent design and construction risks with regard to weather proofing and insulation. The risk will remain high until construction bids are received. Primary concerns are related to fabrication and installation quality, and the limited available market warranty options. To mitigate this risk, the design team has required bidders to validate the constructability and warranty requirements described in the construction documents as part of their technical proposals. Alternative façade designs can be submitted by the bidders in the form of value engineering proposals;

(b) **Owner-directed changes (late design requirements and/or optional scope additions).** This risk pertains to owner requirements that may not have been captured in the baseline design and construction documents and that could potentially result in additional costs if change orders are received during construction. This risk is due in part to the fact that, among the more than 20 United Nations entities housed within the ESCAP premises, many are undergoing restructuring and changes in composition and leadership in the context of the United Nations reform, which, in turn, could lead to fluctuation in staffing numbers and to the overall tenant

composition at ESCAP. Risk mitigation measures continued to be focused on attaining stakeholder review and approvals prior to the issuance of construction documents to minimize change requests later. The ability to change limited parts of the support spaces prior to the execution of each phase is included in the construction documents to further accommodate last-minute tenant variations. The project team aims to leverage the stakeholders committee's active involvement and support, in line with the risk management strategy, to manage these risks;

(c) **Office space conversion.** This will remain a high risk until construction is under way, as renovation of existing premises carries risks due to unknown conditions that may be revealed during demolition or construction. At the release of the construction request for proposal stage, in June 2019, the cost estimate for typical interior construction, including finished ceiling material, lighting fixtures, interior hard walls, doors and hardware exceeds the estimated budget for this line item. The project team plans to value engineer as necessary once construction bids have been received and the technical team will reassess costs and associated risks. This risk will be actively mitigated through extensive site surveying, due diligence, pre-construction value engineering and market research of material suppliers;

(d) **Structural deficiencies.** This risk remains one of the top five risks because of the high value and inherent nature of this part of the scope of the seismic mitigation project. The structural components are part of the existing structure and require reinforcing in order to mitigate future seismic activity. The installation of these components is specialized work. Consequently, the potential for unforeseen conditions, as well as disruption to operations and the construction schedule remains high. This risk is being actively mitigated through extensive on-site due diligence and surveying in consultation with the project engineers. Furthermore, the bidders are required to demonstrate their expertise in this field and the proposed construction methodology as part of their technical proposal;

(e) **Electrical distribution.** This risk has emerged due to the high value and broad scope of this item. The electrical works are comprehensive, extending throughout the entire building, and require careful integration with existing infrastructure and control systems; therefore, the likelihood for unforeseen conditions and relatively high cost places it among the top five risks. This risk is being mitigated through site surveying of existing conditions and consultations with project engineers, and the additional effort invested in clearly detailing the technical documents issued to bidders, however, it is not completely avoidable.

G. Procurement

45. The Procurement Unit of ESCAP continues to support the project by ensuring that the acquisition of goods and services is carried out in a timely manner and in strict compliance with United Nations regulations and rules, as well as the relevant provisions of General Assembly resolutions governing procurement in the United Nations. A summary of key procurement actions is provided below.

Contract for the construction of on-site swing space

46. The process to acquire the services of a general construction contractor for the execution of the on-site temporary swing space construction works was successfully concluded in late 2018, with the award of a contract valued at \$2 million to a reputable and well-qualified local construction firm. The construction works were started in January 2019. At the time of drafting the present report, the construction works were progressing in line with the project schedule.

Third-party peer review services

47. In October 2018, in line with best practices established in other United Nations capital projects, a contract for third-party peer review services was awarded, to serve as an additional layer of quality assurance over the lead consulting firm deliverables. The contract, with a value of \$54,500, was awarded to an engineering and design firm with experience in providing similar services for the capital project at the Economic Commission for Africa (ECA).

Contract for the general construction works

48. The main procurement activities in 2019 are focused on the acquisition of a general construction contractor to execute the main construction works covered under the scope of the project, which include the seismic mitigation works for the secretariat and the service buildings and the life-cycle replacement works, as well as the interior construction of the secretariat building, with an estimated value of \$20.358 million.

49. ESCAP has carried out extensive outreach since 2018 to attract as many qualified vendors as possible. A request for expressions of interest was posted on the United Nations Global Marketplace, the Procurement Division website and the ESCAP Procurement Unit website in the fourth quarter of 2018 and in the second quarter of 2019. The request for expressions of interest was also disseminated to the Advisory Committee of Permanent Representatives in Bangkok, the Ministry of Foreign Affairs, the Thai Chamber of Commerce and the Thai Contractors Association. Copies of the request for expressions of interest were also disseminated at Architect'19, the largest architecture and construction exhibition held in Thailand. As a result of this extensive research and targeted outreach, ESCAP received initial expressions of interest from 44 companies from eight Member States (six from States with economies in transition).

50. Based on best practices from previous United Nations capital projects, and in accordance with guidance from the Office of Legal Affairs located at Headquarters, the bid documents for the project were developed in accordance with the contract format of the International Federation of Consulting Engineers. The request for proposals for this project was issued in June 2019 to 44 vendors and a mandatory bidders conference was conducted at the ESCAP premises and attended by 15 interested vendors.

Contract for the provision of office furniture

51. ESCAP has also pursued a solicitation exercise to award a furniture contract to provide office furniture and accessories to support the proposed open-plan workspace solution. Given that several United Nations capital projects are currently pursuing a similar workspace solution, the procurement and project teams at ESCAP, with support from the Procurement Division at Headquarters, worked closely with counterparts at ECA and the United Nations Office at Nairobi to seek input regarding furniture requirements and specifications with a view to establishing a contract that could also be used by other United Nations duty stations.

52. The first request for expressions of interest for the seismic mitigation project was issued in September 2018. A second request for expressions of interest to survey the flexibility of the market was issued in December 2018. A total of 84 companies from 30 States responded. The bid documents for this contract will be posted in August 2019. A contract to supply furniture, accessories and supporting services is expected to be awarded in time to furnish the temporary swing space locations.

53. In addition to the above-mentioned activities, the Procurement Unit is currently working on the tender exercises for the acquisition of moving and logistics services and the supply and installation of information technology and security equipment.

H. Overall project design

54. During the reporting period, the project design has progressed from the partial design development stage to full design completion and the finalization of construction bid documents to issue the request for proposals for the general construction works. The request for proposals was issued to the market on 28 June 2019. Throughout the process ESCAP has remained mindful of the need to adhere to all seismic and safety codes and regulations, ensuring project mandates and objectives are fully met, while continuing to maintain costs within the approved budget.

55. In the months leading up to the issuance of the request for proposals, some challenges were faced in the process of completing the design and construction documents, which resulted in the posting of the bid documents later than originally anticipated.

56. The slight delays in finalizing the design and construction documents were due to: (a) additional time required to incorporate the previously unforeseen fire and life safety scope into the final design and construction documents; (b) addressing scope gaps required to meet the overall objectives of the project, including a site survey to determine the stability of non-structural components; (c) conducting value engineering exercises to revise the design to stay within budget; and (d) implementing additional quality assurance measures to ensure the output of a high-quality set of bid documents to reduce the likelihood of change orders during construction.

57. ESCAP remains confident that the additional time taken in developing and issuing a clear and thorough set of bid documents will improve the quality of the bids and reduce the risk of receiving overpriced bids. In the construction bid documents, the project team has requested bidders to seize every opportunity to value engineer and provide proposals aimed at leveraging cost and time efficiencies without compromising the overall objectives of the project.

Seismic retrofit design

58. The seismic retrofit design for both the secretariat and service buildings was finalized and the construction documents for the structural package were completed. The final structural retrofit solution for the secretariat building involves a combination of carbon fibre reinforced polymer wrapping of selective walls, beams and columns, coupled with slab strengthening in some of the key areas of the building. In addition, the final design for both buildings will also integrate seismic joints between the buildings and the adjacent pedestrian bridges, as well as bracing to prevent building elements from falling and causing harm to occupants. The design complies with the required seismic codes.

Fire and life safety

59. Ensuring fire and life safety is one of the key objectives of this project. The initial review by the lead consulting firm identified significant deficiencies in fire protection of the building structure and in maintaining the safety of its occupants in the event of an emergency.

60. The building structure was identified to have inadequate fire protection ratings for its beams, columns and floor slabs. Regarding the safety of the building occupants in the event of an emergency, it was identified that there is a lack of floor smoke

compartmentation, some of the emergency egress staircases are too narrow, secure fire lift lobbies are required on each floor, and evacuation chairs in stairwells are required to comply with accessibility requirements. Corrective measures for these fire and life safety deficiencies have been included in the construction documents.

Façade solution

61. The lead consulting firm continued to develop the façade solution with the goal of achieving the targeted 16 to 18 per cent reduction in energy consumption. The selected solution entails replacing the current glazing with superior double-glazed laminated windows with increased light transmittance and reduced heat gain. The exterior beams and other external masonry and structural surfaces will be covered with an external thermal insulation composite system to provide superior insulation and weather resistance while maintaining the visual identity of the ESCAP secretariat building.

Life-cycle replacement (mechanical, electrical and plumbing)

62. The life-cycle replacement scope was further refined with the lead consultant firm engineering teams with the continued goal of achieving high-performing, energy-efficient and sustainable solutions for the secretariat building. Significant time was spent on this area of design development since it involves significant integration of new elements with existing infrastructure and control systems.

63. The electrical and lighting scope for the project includes the installation of new distribution and control panels, the replacement of old and deteriorated electrical systems throughout the building, upgrades to the lighting distribution system and the replacement of existing lighting fixtures with LED lighting. The incorporation of a new smart lighting control system with motion and daylight sensors was also added to the design, as were the requirements for the integration of the new electrical and lighting controls system into the existing building monitoring system. The importance of specifying this requirement and estimating related costs was a lesson learned from the consultations with the UNICEF capital project team.

64. Selective upgrades to plumbing works were also designed, detailed and incorporated into the bid documents. The engineering teams also spent considerable time detailing the integration of new mechanical and electrical systems with the existing infrastructure and control system to streamline operation and ensure maximum performance.

Energy efficiency and sustainability

65. As previously reported and based on the initial studies conducted, the project team continues to aim for compliance with the LEED-equivalent rating for building renovation projects. As it developed the design, the lead consulting firm tracked the environmental measures required for LEED compliance and incorporated them into the final design and tender package for the general construction works.

66. ESCAP finalized the design criteria and requirements for the implementation of a rainwater harvesting solution, which uses the secretariat building roof to collect and direct water into a ground floor tank that will then be used in the building's cooling towers, thereby reducing overall water consumption in the building.

67. As an additional sustainability measure, the waste management strategy for the project will be piloted in the new on-site swing space building, in collaboration with the ESCAP Environmental Management System Officer and the Facilities Management Unit.

Accessibility

68. The renovation works in the secretariat building will incorporate accessible features identified in the ESCAP accessibility road map and will be compliant with United Nations and international standards as applicable. The remedial works required to make the secretariat building fully accessible were incorporated into the final construction documents.

69. During the reporting cycle, the ESCAP accessibility and inclusivity initiative was approved, with the main objective of implementing 98 actions listed in the road map, and the initiative is now managed by the ESCAP accessibility working group in full coordination with the project team.

Construction methodology and swing space strategy

70. In the previous report, ESCAP proposed a five-phase construction methodology, which would allow construction to take place in smaller sections of the secretariat building, thereby limiting the number of occupants displaced during construction and proposing on-site only swing space during the construction works. Pursuant to the approval of this methodology by the General Assembly in section VII, paragraph 12, of its resolution [73/279 A](#), ESCAP has proceeded to execute that approach.

71. The on-site swing space comprises two spaces: a new construction that will accommodate up to 120 occupants and the ground floor of block A of the secretariat building, a previously underutilized space of approximately 540 m², which will be renovated, as required, to function as temporary swing space for 55 to 60 occupants.

72. The design for the on-site swing space was finalized and a construction contract was awarded in December 2018. Construction works commenced in January 2019 and the swing space is scheduled to be completed in time for the first phase of the main construction works in 2020. The on-site swing space will have an open-plan workspace design fitted with furniture and technology as required to support the operations of its occupants during their temporary stay. It will also serve as a pilot for the new open-plan workspace solution.

Space efficiency and utilization

73. The new open-plan workspace solution, to be implemented as part of the interior renovation works in the secretariat building, will deliver the 20 per cent space efficiency referred to in the report of the Secretary-General containing the proposal for the seismic mitigation retrofit and life-cycle replacements project ([A/71/333](#)). Reducing the space occupied by ESCAP will allow more space to be released for use by potential rent-paying tenants. This will translate into an additional 1,800 m² of space available for rent within the secretariat building.

74. The project team has worked closely with the lead designers to further develop this solution. Key Organizational initiatives, such as the repositioning of the United Nations development system and the improved business operations strategy, provide a unique opportunity for ESCAP to position itself as a future host of other United Nations agencies, funds and programmes. Consequently, the open-plan workspace design was further refined to increase space efficiency with these opportunities in mind and to address key themes of cross-collaboration, provision of value added services, the flexibility to adapt easily to changes in occupant group size and function and the ability to support common goals such as sustainability and accessibility. More details on this are provided in section J on rental income below.

75. There is no change to the 20 per cent space efficiency gains expected at the end of the project. Table 1 provides details on the calculations.

Table 1
Space efficiency calculations

Scenario	Gross area office space (m ²)		
	ESCAP	Tenants	Total
Existing conditions	9 500	7 900	17 400
Post-renovation ^a	7 700	9 700	17 400

^a Assumes 20 per cent efficiency gain over existing conditions. Additional efficiencies are expected with the implementation of flexible workspace strategies.

I. Project schedule

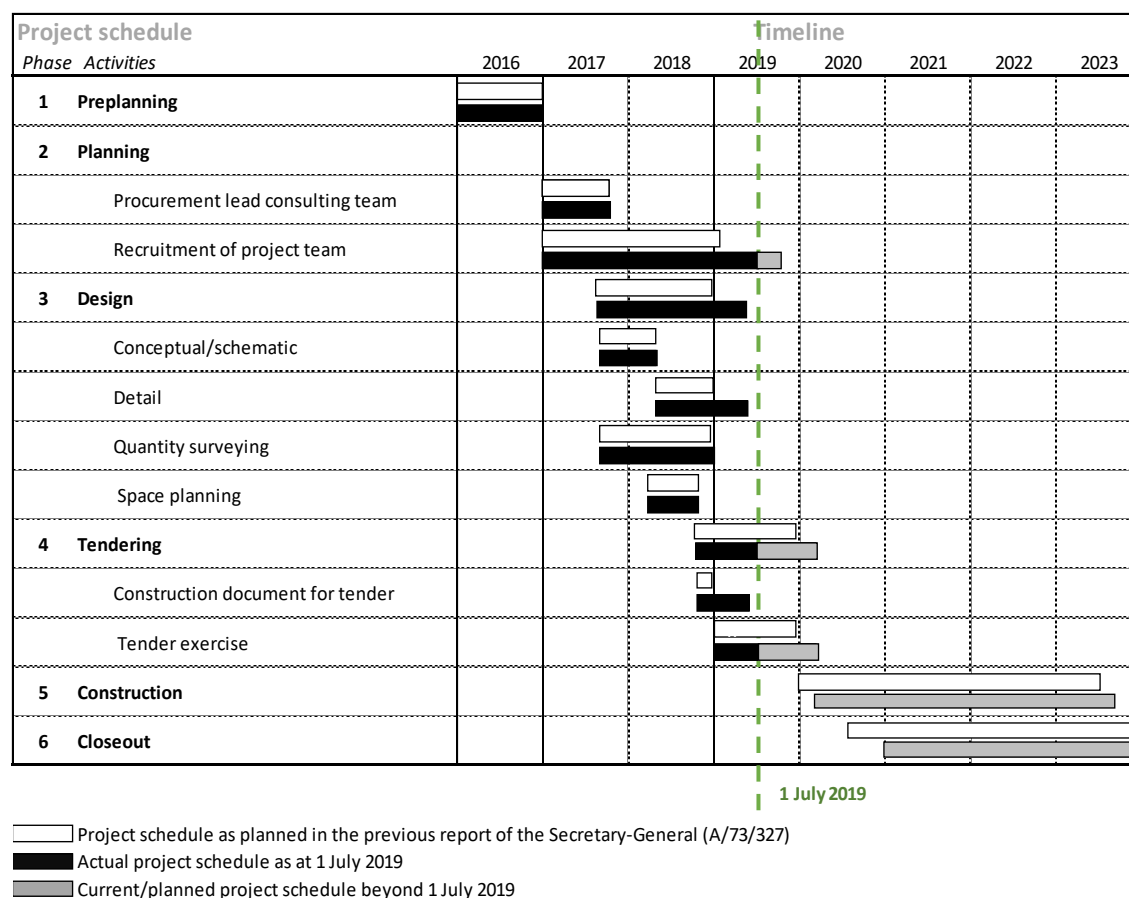
76. Overall, it is estimated that the project will be completed on schedule by the end of 2023. As explained above, finalizing the construction documents took longer than initially planned owing to the incorporation of quality assurance measures and the time needed to conduct further investigation of existing on-site conditions and to incorporate remedial measures into the final design. Consequently, bid documents for the general construction works were issued later than originally planned. It is expected that this will result in a slight shift in the start of construction works from the first quarter of 2020, as previously reported, to the second quarter of 2020, but any risks of an impact on the overall project schedule will be closely monitored.

77. The bidders are required to commit to the project schedule as part of their technical proposal. However, the bidders are encouraged to submit value engineering solutions which can reduce the construction time and cost.

78. The use of the new contract format of the International Federation of Consulting Engineers is also expected to support a shorter, more effective contract negotiation period.

79. There is no change to the five shorter staggered closeout phases mentioned in the previous report. ESCAP is planning for the early involvement of the Facilities Management Unit in the handover process following the substantial completion of each phase of work. It is not expected that the dedicated project team will be required beyond the originally approved project end date of December 2023.

Figure III
Project schedule as at 1 July 2019



J. Rental income

80. Rental income is primarily derived from the rental of office space to United Nations agencies, funds and programmes and other entities connected with the activities of the United Nations and is reported under income section 2 of the programme budget.

81. The rental rate for 2018–2019 is \$264 per annum per square metre for United Nations agencies, funds and programmes and \$279.60 for commercial tenants. In July 2019, United Nations agencies, funds and programmes were informed that the rate to be applied in 2020 and 2021 would remain at \$264 per annum per square metre.

82. Table 2 shows the estimated rental income per year during the proposed construction period and after the completion of the project. The 20 per cent space efficiency gains expected in the secretariat building at the end of the project in 2023 is equivalent to 1,800 m² of additional rental space, which translates into \$475,200 in additional annual rental income for 2024.

Table 2
Estimated rental income

(United States dollars)

	2018	2019	2020	2021	2022	2023	2024
Rental rate (per annum per square metre)	264	264	264	264	To be evaluated in 2020	To be evaluated in 2020	To be evaluated in 2022
Rental income	3 507 300	3 507 300	3 507 300	3 507 300	3 507 300	3 507 300	3 982 500

Note: Figures in the table are based on current rental rate. Rental income may change due to changes in areas occupied while in swing space, during construction.

83. However, the move from primarily closed office space with more clearly defined boundaries, to an open-plan office environment with shared workspace and resources, requires a new model for measuring rentable space and estimating rental costs. To this end, ESCAP is undertaking a study and has contracted a consultant to provide recommendations, based on industry best practices, to determine a fair rental rate, taking into consideration factors such as building grade, rentable space, floor plate efficiency rates and common area costs. This would ensure that the future ESCAP rental rate covers all benefits offered through the new open-plan office environment and is aligned with commercial rental rates for comparable office space in Bangkok. The results of this study are expected in the fourth quarter of 2019 and will be provided in the next progress report.

Rental income from the swing space after construction works

84. The on-site swing space that is currently under construction will have a total area of 1,250 m² to be repurposed at the end of the project, as required. While 800 m² of the total area is suitable for standard office space, 450 m² is on a mezzanine level, which has a slightly lower than typical floor-to-ceiling height. Once a new rental cost estimating model for ESCAP is in place, it would be possible to more accurately determine the potential rental income from the space, should it be decided to repurpose the space for that function.

85. The second on-site swing space is the ground floor of block A of the secretariat building (540 m²). With a floor-to-ceiling height of 5.8 m, it is not particularly well suited for long-term office space. Its final use after the project has been completed is currently under review. It is very likely that the space will be repurposed as a shared common area with functions that would provide value added services such as short-term rental spaces for project-related work and for temporary clients.

III. Project accountability

86. In section IV, paragraph 13, of its resolution [71/272 A](#), the General Assembly requested the Secretary-General to entrust OIOS with providing oversight of the project and to include information on key findings in the context of the annual reports of OIOS on its activities. In line with the Assembly's request, OIOS conducted its third audit of the project in March 2019.

87. After the initial entry conference, OIOS conducted a series of remote interviews with the Project Executive, the Project Manager and other key persons related to the project to gather the information required. OIOS was provided with direct access to the project design documentation server and other documentation requested was also shared electronically by ESCAP.

88. OIOS noted that ESCAP was cognizant of the need to deliver the project within the approved budget and that it was continuously monitoring the risk of potential cost overruns. That risk was mitigated as part of the project risk management process and OIOS did not make any recommendations in that regard. OIOS made three recommendations, related to: (a) strengthening project governance; (b) formally reviewing lessons learned from the design phase to help to improve the efficiency and effectiveness of subsequent phases; and (c) conducting systematic fraud and corruption risk assessments to safeguard against potential risks as ESCAP proceeds into the construction phase. All recommendations from the previous OIOS audit of 2018 were addressed by 31 December 2018. Implementation of the recommendations from the 2019 audit is currently under way.

IV. Project expenditure and anticipated costs

A. Status of expenditure and projected expenditure up to the end of 2019

89. In its resolutions [71/272 A](#) (section IV), [72/262 A](#) (section XIII) and [73/279 A](#) (section VII), the General Assembly appropriated a total of \$9,419,100 for the project for the period 2017–2019. The cumulative expenditure as at 30 June 2019 was \$4,869,500 and the projected expenditure for the remainder of 2019 amounts to \$3,596,300, as detailed in table 3.

Table 3

Status of expenditure as at 30 June 2019 and projection for the remainder of 2019

(Thousands of United States dollars)

	<i>Appropriated project funding for the period 2017–2019</i>	<i>Cumulative expenditure as at 30 June 2019</i>	<i>Projected expenditure from 1 July to 31 December 2019</i>	<i>Total projected expenditure for 2017–2019</i>	<i>Projected unused balance at the end of 2019</i>
	(a)	(b)	(c)	(d)=(b)+(c)	(e)=(a)-(d)
Section 33, Construction, alteration, improvement and major maintenance					
1. Construction costs	4 008.0	1 098.7	2 669.3	3 768.0	240.0
2. Professional services	2 193.2	2 028.2	173.0	2 201.2	(8.0)
3. Escalation	272.3	—	266.9	266.9	5.4
4. Contingency	759.5	22.8	—	22.8	736.7
Subtotal, section 33	7 233.0	3 149.7	3 109.2	6 258.9	974.1
Section 19, Economic and social development in Asia and the Pacific					
5. Project management	2 186.1	1 719.8	487.1	2 206.9	(20.8)
Subtotal, section 19	2 186.1	1 719.8	487.1	2 206.9	(20.8)
Total	9 419.1	4 869.5	3 596.3	8 465.8	953.3

90. As shown in table 3, a balance of \$953,300 is projected to remain unused at the end of 2019, consisting of \$974,100 under section 33 offset by overexpenditure of \$20,800 under section 19, attributable to the factors below:

(a) An unused balance of \$240,000 under construction costs, consisting of \$50,000 for moving costs and \$190,000 for the installation of on-site security infrastructure, both of which will be utilized in early 2020 instead of 2019 as originally planned;

(b) Over-expenditure of \$8,000 under professional services and an unspent balance of \$5,400 under escalations, reflecting slight variations from original estimates;

(c) An unused balance of \$736,700 under contingency. During 2018 and the first half of 2019, only \$22,800 was spent under contingency, related to the survey of non-structural elements in the secretariat and service buildings to determine their performance in a seismic event. Although not included at the time of developing the original cost plan, the survey and the resulting revisions to the design were determined to be necessary to meet life-safety codes. The use of \$22,800 under contingency was submitted to and approved by the project change control board. No other use of the contingency is expected for the remainder of 2019;

(d) A projected increase of \$20,800 for project management costs attributable to actual staff costs being slightly higher than standard rates.

B. Resource requirements for 2020

91. The resource requirements for 2020 are shown in table 4. The total projected expenditure for 2020 amounts to \$7,364,000, comprising:

(a) \$886,400 under section 19, Economic and social development in Asia and the Pacific, for the project management team, including the continuation of six project team positions (1 P-5, 1 P-4, 2 National Professional Officer, and 2 Local level), 50 per cent of the cost of one Project Coordinator (P-4) at Headquarters, cost-shared with the Africa Hall renovation project at ECA, as well as three new positions (Local level) proposed to be established effective from 1 January 2020, as follows:

(i) One Safety Project Officer (Local level) is proposed for the planning, oversight and management of health and safety matters related to the main construction works;

(ii) One Information Technology Assistant (Local level) is proposed for technology-related support to occupants moving to and from the swing space throughout the construction phases;

(iii) One Security Officer (Local level) is proposed to coordinate security in the swing place. The incumbent of the position would report to the Chief of the Safety and Security Section. It is envisioned that a second Security Officer (Local level) would be requested in 2021;

(b) \$6,477,600 under section 33, Construction, alteration, improvement and major maintenance, for the main construction works, including furniture and fixtures, professional services, escalation and contingency. Escalation and contingency have been separated from the base costs.

Table 4

Resource requirements in 2020

(Thousands of United States dollars)

	<i>Projected expenditure in 2020</i>	<i>Projected unused balance at the end of 2019</i>	<i>Net funding requirement in 2020</i>
	<i>(a)</i>	<i>(b)</i>	<i>(c)=(a)-(b)</i>
Section 33, Construction, alteration, improvement and major maintenance			
1. Construction costs	5 002.0	240.0	4 762.0
2. Professional services	318.1	(8.0)	326.1

	<i>Projected expenditure in 2020</i>	<i>Projected unused balance at the end of 2019</i>	<i>Net funding requirement in 2020</i>
	<i>(a)</i>	<i>(b)</i>	<i>(c)=(a)-(b)</i>
3. Escalation	568.6	5.4	563.2
4. Contingency	588.9	736.7	(147.8)
Subtotal, section 33	6 477.6	974.1	5 503.5
Section 19, Economic and social development in Asia and the Pacific			
5. Project management	886.4	(20.8)	907.2
Total	7 364.0	953.3	6 410.7

92. Since the project funding is recorded under a multi-year construction-in-progress special account, approved by the General Assembly in its resolution [71/272 A](#), the anticipated unused balance of \$953,300 at the end of 2019 will be carried forward to offset part of the resource requirement of \$7,364,000 in 2020. Consequently, the net resource requirement for 2020 amounts to \$6,410,700, comprising: (a) \$907,200 under section 19, Economic and social development in Asia and the Pacific; and (b) \$5,503,500 under section 33, Construction, alteration, improvement and major maintenance, of the proposed programme budget for 2020.

V. Next steps

93. Among the actions to be undertaken during the next reporting period are:

- (a) Continuing the recruitment of the remaining members of the dedicated project management team;
- (b) Moving occupants into temporary swing space, in preparation for the first phase of the construction;
- (c) Completing the tendering of the general construction contractor for the main works and beginning construction works on the secretariat building;
- (d) Continuous monitoring of issues related to occupational health and safety to ensure the safety and well-being of staff and visitors to the ESCAP premises throughout the construction phase;
- (e) Continuing the change management and business readiness process with ESCAP staff and tenants;
- (f) Continuing the value engineering exercises throughout the construction phase to ensure that project costs stay within the approved budget;
- (g) Continuing to manage the project risks, using both independent and integrated risk management strategies; updating the Monte Carlo model on the basis of project progress, with the aim of increasing the confidence level of completing the project within budget;
- (h) Continuing future office space planning and conducting outreach to attract additional tenants to the ESCAP premises.

VI. Recommended actions to be taken by the General Assembly

94. The General Assembly is requested:

(a) To take note of the progress made since the issuance of the previous report of the Secretary-General;

(b) To take note of the revised cost plan for the project;

(c) To approve the establishment of three temporary positions (Local level), effective from 1 January 2020, in the project team, under section 19, Economic and social development in Asia and the Pacific, of the proposed programme budget for 2020;

(d) To appropriate an amount of \$6,410,700 for project activities in 2020, comprising \$907,200 under section 19, Economic and social development in Asia and the Pacific, and \$5,503,500 under section 33, Construction, alteration, improvement and major maintenance, of the proposed programme budget for 2020, which would represent a charge against the contingency fund.

Annex

Revised cost plan

(Thousands of United States dollars)

	2017 ^a	2018 ^a	2019	2020	2021	2022	2023	Total	Reported in A/73/327	Change
Section 33, Construction, alteration, improvement and major maintenance										
1. Construction costs										
1.1 Building costs	—	—	—	4 712.0	7 371.0	5 401.9	2 873.2	20 358.0	20 358.0	—
1.2 Swing space costs	—	—	3 768.0	100.0	150.0	150.0	100.0	4 268.0	4 268.0	—
1.3 Physical security system	—	—	—	190.0	—	—	—	190.0	190.0	—
Subtotal, construction costs	—	—	3 768.0	5 002.0	7 521.0	5 551.9	2 973.2	24 816.0	24 816.0	—
2. Professional services										
2.1 Lead consulting firm	201.8	1 366.3	99.2	228.9	228.9	228.9	168.7	2 522.8	2 522.8	—
2.2 Seismic design	134.4	—	—	—	—	—	—	134.4	134.4	—
2.3 Risk management	—	7.5	94.9	43.9	74.6	19.8	—	240.7	233.2	7.5 ^b
2.4 Other services	125.8	57.0	114.3	45.2	—	—	—	342.2	349.7	(7.5) ^c
Subtotal, professional services	462.0	1 430.8	308.4	318.1	303.5	248.7	168.7	3 240.2	3 240.2	—
3. Escalation	—	—	266.9	568.6	1 189.9	1 135.6	728.1	3 889.1	3 889.1	—
4. Contingency	—	—	22.8	588.9	901.4	693.6	987.7	3 194.5	3 194.5	—
Subtotal, section 33	462.0	1 430.8	4 366.1	6 477.6	9 915.9	7 629.8	4 857.7	35 139.7	35 139.7	—
Section 19, Economic and social development in Asia and the Pacific										
5. Project management										
5.1 Dedicated project management and support team	474.8	613.9	799.8	785.0	800.0	663.2	290.0	4 426.6	4 437.2	(10.6) ^d
5.2 Dedicated Coordinator at Headquarters (cost shared with the Economic Commission for Africa)	14.2	135.6	130.3	90.8	32.9	—	—	403.8	403.8	—
5.3 Travel of project management team	24.7	—	13.6	10.6	—	—	—	48.9	38.3	10.6 ^e
Subtotal, section 19	513.7	749.5	943.7	886.4	832.9	663.2	290.0	4 879.3	4 879.3	—
Total	975.7	2 180.3	5 309.8	7 364.0	10 748.8	8 293.0	5 147.7	40 019.0	40 019.0	—

^a Reflects actual expenditures incurred in 2017 and 2018.^b An increase of \$7,500 under risk management reflects the latest estimated costs for the independent risk management firm.^c A decrease of \$7,500 under other services reflects lower requirements for services related to change management.^d A decrease of \$10,600 under project management team is based on the latest estimates of project staff costs.^e An increase of \$10,600 under travel of project management team, relates to travel of staff from New York or other duty station to provide technical support to the risk management activities and tender action for the main construction works, as is common practice for all global capital projects, both scheduled for early 2020.