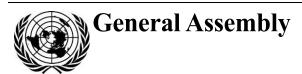
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Progress on the renovation of the North Building at the Economic Commission for Latin America and the Caribbean in Santiago, Chile

Twelfth report of the Advisory Committee on Administrative and Budgetary Questions on the proposed programme budget for 2020

## I. Introduction

- 1. The Advisory Committee on Administrative and Budgetary Questions has considered the report of the Secretary-General on progress on the renovation of the North Building at the Economic Commission for Latin America and the Caribbean (ECLAC) in Santiago, Chile (A/74/330). During its consideration of the report, the Advisory Committee met with representatives of the Secretary-General, who provided additional information and clarification, concluding with written responses dated 24 October 2019.
- 2. The renovation of the North Building is one of the near-term major construction projects identified in the report of the Secretary-General on the strategic capital review. Following the earthquake in Chile in 2010, ECLAC concluded in its seismic resistance assessment of the compound's buildings that the North Building, constructed as a temporary structure in 1989, was in need of mitigation measures. In its previous reports on the subject (A/72/7/Add.8 and A/73/457), the Advisory Committee addressed the proposed strategies and mitigation measures, cost implications and other related matters, including staffing, put forth by the Secretary-General at the time. The report of the Secretary-General, submitted pursuant to General Assembly resolution 73/279 A, section X, provides information on progress made since the previous report of the Secretary-General on the subject.

# II. Progress in the implementation of the project

Cooperation with the host country Government and other Member States

3. The Advisory Committee recalls that a host country agreement between ECLAC and the Government of Chile was signed in February 1948, providing for privileges

<sup>&</sup>lt;sup>1</sup> The Advisory Committee has provided related observations and recommendations in its most recent report on the strategic capital review (A/72/7/Add.9).







and immunities, including exemptions from local taxes and import duties, for entitled staff and for official purposes, as well as, inter alia, for construction materials, equipment and infrastructure materials. The Committee also recalls that the host country has provided significant support for United Nations operations in Chile and specifically for the ECLAC compound, with the land for the construction and expansion of the ECLAC compound donated by the Government of Chile in 1960 and 1997, respectively (see A/73/457, para. 3). The Secretary-General indicates that the host country has also provided technical support on integrated building information modelling to the ECLAC project team, as the North Building project will be based on that approach. Furthermore, through its "Construye2025" programme, the host country has provided technical support and guidelines to develop a plan for reusing or recycling any components following the dismantling of the building (see A/74/330, para. 32). With respect to other voluntary contributions, the Secretary-General indicates that discussions are under way with two Member States for the provision of technical expertise and assistance, as well as for in-kind contributions (ibid., paras. 29-31). Upon enquiry, the Committee was informed that the aforementioned voluntary contributions have not yet been formalized.

4. The Advisory Committee expresses its gratitude to the host country for its steadfast support to ECLAC and trusts that the Secretary-General will continue to engage with the host country to ensure the success of the project. Furthermore, the Committee encourages the Secretary-General to also continue to engage with other Member States to seek voluntary contributions and other forms of support for the project.

#### Project governance and management

- Details with respect to project governance and management, including the project team, are described in the report of the Secretary-General (ibid., paras. 8–16). The project owner is the Executive Secretary of ECLAC, and the project governance structure has remained unchanged, with the overall management of the project as follows: (a) the stakeholders committee has established a working group on occupational health and safety and on accessibility issues and a working group on sustainability; (b) coordination with the Global Asset Management Policy Service (formerly the Office of Central Support Services) at Headquarters is continuing through regular meetings, general project oversight, technical guidance and advice; and (c) an independent risk management firm, working on three United Nations construction projects, namely at ECLAC, the Economic Commission for Africa (ECA) and the Economic and Social Commission for Asia and the Pacific (ESCAP), is on board with the contract to continue until November 2024 (see also A/73/457, para. 5, and para. 8 below). Upon enquiry, the Advisory Committee was informed that the contract for the lead consulting firm for architectural and engineering services would be awarded in November 2019. The Advisory Committee trusts that an update on the status of the contract of the lead consulting firm will be provided to the General Assembly in the context of its consideration of the present report and in the next progress report.
- 6. With respect to the ECLAC project team, the Advisory Committee was informed, upon enquiry, that all team members were on board, namely, one Project Coordinator (P-3), located at Headquarters in New York, with ECLAC funding 25 per cent and the United Nations Office in Nairobi funding 75 per cent of the cost; one Architect (Local level); one Administrative Assistant (Local level); and one Project Manager (National Professional Officer). The Advisory Committee was informed, upon enquiry, that the sharing of the aforementioned Project Coordinator would reduce costs and that, should the needs for one or both projects change over time, the function's role and funding ratio would be amended.

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#### Risk management and project schedule

- 7. Details with respect to risk management and the overall project schedule are described in the report of the Secretary-General (A/74/330, paras. 18–28 and 56–58). The overall timeline of the project remains unchanged, with construction to occur from 2021 to 2023, and completion of the project at the end of 2023. The Secretary-General indicates that, without impacting the duration of the project, an additional three months have been incorporated into the overall timeline, primarily to accommodate the development of the scope of work for the lead consulting firm. Upon enquiry, the Advisory Committee was informed that the three-month delay corresponds to the coordination by the project team, and the research conducted in order to refine the requirements for the definition of the multidisciplinary engineering services required to achieve a "net zero" building (see also paras. 18–21 below).
- 8. Following a risk management workshop in March 2019, a cost sensitivity analysis has been developed to measure the correlation between the overall estimated cost and the following top five risks: (a) owner-directed changes (late design requirements and optional scope additions); (b) interior renovations; (c) consultancy; (d) schedule delays; and (e) cost escalation (see also ibid., figure II). The Secretary-General also indicates that the aforementioned risks would be mitigated proactively by the project team.
- 9. The Secretary-General indicates that the first quantitative analysis of risks (Monte Carlo simulation)<sup>2</sup> shows that at the United Nations "P80" benchmark level, the project would be expected to come in at approximately \$14.9 million, or \$600,000 over budget. The cost histogram illustrates that there is a relatively low level of confidence, about 30 per cent, that the project will be completed within the approved budget of \$14.3 million, assuming that no further risk mitigation action is taken (ibid., figure I). Upon enquiry, the Advisory Committee was informed that the confidence level for project completion within the approved budget would likely increase once the lead consultant firm is on board and the project progresses further.
- 10. The Advisory Committee notes that the project is in its initial stages and trusts that the Secretary-General will closely monitor and mitigate project risks and take the necessary measures to ensure the delivery of the project within the scope, budget and timeline, as approved by the General Assembly. The Committee recommends that the General Assembly request the Secretary-General to include in the next progress report an update on risk management and the mitigation measures taken.

### Planning and design activities

11. Progress on the planning and design activities are described in the report of the Secretary-General (ibid., paras. 46–48). The Secretary-General notes that, in line with the strategic capital review, one key objective is to improve space usage efficiency by maximizing the use of available work areas, conference facilities and meeting rooms and introduce a more efficient, productive and inclusive work environment by applying a needs-based approach and aiming to provide various types of space tailored to diverse working requirements in ECLAC, including different approaches and solutions for each specific area (ibid., para. 4 (g)). During the reporting period, ECLAC conducted informal interviews for a better understanding of the work processes and space requirements of the substantive divisions and operational units

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<sup>&</sup>lt;sup>2</sup> A statistical analysis method used to better understand the impact of risks in a project, by using a range of minimum to maximum values with regard to time frames and cost estimates for stages and components, through a computer-based simulation that runs multiple random project scenarios (see A/73/457, para. 8 (footnote)).

in the North Building, so as to ensure that the flexible workplace strategies will adequately address local user requirements. The Secretary-General also indicates that the lead consulting firm would integrate this information into the design, expected to be completed by mid-2020. Concerning the purchase of furniture required for the flexible workspace, the Secretary-General indicates that it is envisaged to make such purchases jointly with ESCAP through a global contract, which is currently under negotiation (ibid., para. 15 (b)).

12. Upon enquiry, the Advisory Committee was informed that, in March 2019, ECLAC purchased from a local furniture distributor 10 ergonomic workstations (two models), featuring adjustable-height desks, dual monitor stands and pedestal cabinets with seating, to be tested by staff. The results of this pilot project would be reported to the stakeholders committee and the project owner to assess the final determination of furniture requirements for the North Building project. The Advisory Committee trusts that the project's flexible workplace arrangements will adequately address space and user requirements and looks forward to an update on the results of the pilot project in the next progress report.

#### Seismic mitigation

- 13. The General Assembly, in its resolution 73/279 A, requested the Secretary-General to provide more detailed information regarding the planned seismic mitigation measures in future progress reports on the ECLAC renovation project. In his report, the Secretary-General states that the objective of the project pertaining to seismic mitigation is to meet local and international codes, including Chilean seismic code requirements related to preparedness and structural design against potential seismic events (ibid., para. 4 (a) (i)).
- 14. The ECLAC renovation is one of the major construction projects identified in the report of the Secretary-General on the strategic capital review (A/70/697 and A/69/760), where it was concluded that there is a need for seismic mitigation measures for the North Building to ensure compliance with the minimum standards for seismic resistance, as the metallic ceilings in the building are non-compliant with the latest seismic codes (see also para. 2 above). The Committee recalls furthermore that the safety concerns with respect to the North Building also pertain to fire protection and egress and that, following the 2010 earthquake, a number of seismic improvements, repairs and maintenance were performed on all ECLAC buildings, with the exception of the North Building (see A/73/457, para. 13). Concerning the totality of the potential structural requirements for the North Building, the Committee recalls that it was informed in 2017, upon enquiry, that the three-level underground parking garage, built in 2004 and located underneath the North Building, was designed in accordance with various codes which were applicable at that time, but that this underground structure had not been included in the scope of work of the renovation project.<sup>3</sup> The Advisory Committee trusts that the three-level underground garage structure continues to adhere to current seismic safety codes.
- 15. The Secretary-General indicates that the scope of the structural engineering services to be provided by the lead consulting firm would include modelling simulation software for a detailed analysis of the behaviour of the existing base building structure during a high-intensity seismic event (A/74/330, para. 50). It is planned to share information and lessons learned with the seismic mitigation project management team of ESCAP (ibid., para. 15 (b)). Upon enquiry, the Advisory Committee was informed that the current estimate of \$200,000 for the seismic

<sup>3</sup> In the context of its consideration of the report of the Secretary-General on the proposal for the renovation of the North Building at the Economic Commission for Latin America and the Caribbean in Santiago (A/72/367).

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mitigation measures in the North Building is a tentative figure, as the possible structural engineering solutions would be known only once the lead consulting firm has been contracted and after the engineering team is in place.

16. The Advisory Committee trusts that detailed information with respect to the planned seismic mitigation measures will be included in future progress reports on the renovation of the ECLAC North Building. The Committee welcomes the fact that lessons learned have been shared with other capital projects facing similar challenges, such as the ESCAP and ECA projects, and trusts that this effort will continue. The Committee continues to stress the importance of close coordination between ECLAC and the Secretariat in New York, in particular the Global Asset Management Policy Service (formerly the Office of Central Support Services), to ensure proper oversight and governance in all aspects of the project, including seismic mitigation.

#### Procurement and use of local materials and knowledge

17. Details with respect to procurement activities, and the use of local materials and knowledge are described in the report of the Secretary-General (ibid., paras. 34–41). The Advisory Committee was informed, upon enquiry, that once the architectural and engineering drawings are finalized and the lead consulting firm has provided the technical specifications, every effort will be made to ensure that local materials and knowledge are incorporated into the project. The Committee was also informed that a preliminary review had shown that, while some materials are available domestically, for example, steel, copper and wood, it may be necessary to import other materials, such as glass, aluminium, and certain technological components. The Advisory Committee reiterates the importance of ensuring the use of locally sourced and manufactured materials, as well as labour, and looks forward to updates thereon in future progress reports, as requested by the General Assembly (see resolution 73/279 A, sect. VIII, para. 6).

#### Energy efficiency strategy and related cost savings

18. The Secretary-General indicates that, pursuant to General Assembly resolution 73/279 A (sect. X, para. 9), an additional project objective has been added, namely, to further develop an energy efficiency strategy to redirect energy to the ECLAC compound, including returning surplus energy, if any, to the national grid (see A/74/330, para. 5). Details with respect to the project's energy efficiency strategy are described in the report of the Secretary-General (ibid., paras. 6 and 7 and 52–55). The Advisory Committee recalls that the North Building renovation project would result in a "net-zero" building, defined as a building where the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy generated on site, often producing excess energy for use elsewhere. The Committee also recalls that the elements needed to achieve a net-zero building include on-site energy production, intelligent building through the use of building automation and high-efficiency building equipment (see also A/73/457, para. 15).

19. The renovation project comprises passive and active strategies aimed at achieving energy efficiency, energy generation and wastewater treatment, while reducing greenhouse gas emissions, as follows: (a) a 40 per cent reduction in the North Building's current electrical load; (b) a projected reduction, equivalent to 104.7 tonnes of carbon dioxide, of the North Building's annual greenhouse gas emissions, in accordance with General Assembly resolutions 70/205 and 71/228, whereby the Assembly requested the Secretary-General to plan significant actions aimed at integrating sustainable development practices into United Nations operations and facilities management; (c) construction of a photovoltaic plant on top of the North Building (see also para. 20 below); and (d) installation of a wastewater

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treatment plant resulting in the reuse of 100 per cent of the North Building's wastewater for irrigation purposes (A/74/330, paras. 6 and 7 and 52–55). The Secretary-General also indicates that energy storage through lithium batteries has not been included in the project owing to the high acquisition and maintenance costs of such storage elements, which require costly battery replacement (ibid., para. 53 (d)). Regarding any surplus energy to be returned to the national grid, as requested by the General Assembly, the Advisory Committee was informed, upon enquiry, that related credits would be reflected by the local energy provider on the following month's invoice at a discounted rate of 50 per cent of the standard rate.

- 20. The Secretary-General indicates that, of the annual energy of 478,600 kWh estimated to be produced by the North Building's photovoltaic plant, 75 per cent (358,950 kWh) would be used for that building, 22 per cent (105,292 kWh) would be used by the ECLAC compound and 3 per cent (14,358 kWh) would be placed into the national power supply grid (ibid., para. 53). However, upon enquiry, the Advisory Committee was informed that the North Building would, in fact, use 87 per cent (416,180 kWh) of the energy, which would leave a combined 13 per cent (62,420 kWh) both for use in the ECLAC compound and for placement into the national power supply. Upon further enquiry, the Committee was informed that the projected annual energy requirements of the North Building of 416,180 kWh comprises two elements: (a) energy usage during regular operating hours, amounting to 358,950 kWh, as indicated in paragraph 53 of the report of the Secretary-General; and (b) energy usage during the building's after-hours operations and on cloudy days, amounting to 57,230 kWh, which was not included in the amount presented in the report of the Secretary-General. The Committee notes that, at this early stage of the project, the figures that have been estimated in order to model the benefits of photovoltaic energy should be considered preliminary. All related calculations would be clarified once the lead consultant firm for architectural and engineering services was on board.
- 21. The Advisory Committee welcomes the planned renovation of the ECLAC North Building as a sustainable and energy-efficient, net-zero building. The Committee notes that, as the project is in its initial stages, more precise information on energy production and usage will be available only after the lead consultant firm has commenced its activities in November 2019. The Committee recommends that the General Assembly request the Secretary-General to include in the next progress report detailed information on the energy to be produced, used and redirected by the North Building's photovoltaic plant.
- 22. With respect to the sharing of best practices and applicable lessons learned in all aspects of the project, including the ECLAC energy efficiency strategy, the Advisory Committee reiterates that knowledge gained should be shared among other United Nations construction projects (see also A/73/457, para. 17).

# III. Project expenditures and anticipated costs

- 23. Details with respect to project expenditures and anticipated costs are provided in the report of the Secretary-General (A/74/330, paras. 60–63). The ECLAC renovation project is recorded under a multi-year construction-in-progress special account, approved by the General Assembly in resolution 73/279 A, whereby funding does not expire at the end of a financial period and, upon the completion of the project, expenditures are to be reported, with any unused amounts to be returned to Member States.
- 24. The Secretary-General indicates that the overall cost of the project has been revised down from \$14,380,200 to \$14,330,200 for 2020, a decrease of \$50,000, due to an expected decrease under swing space costs, in accordance with section X,

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paragraph 14 of the aforementioned resolution. As at 31 December 2019, a projected unused balance of \$59,700, as a result of lower estimated costs with respect to the project team, would be carried forward according to the stipulation of the multi-year construction-in-progress special account. The net funding requirements for 2020 would amount to \$389,100, comprising projected expenditures of \$448,800 less the aforementioned projected unused balance from 2019, comprising:

- (a) \$345,500 under section 21, Economic and social development in Latin America and the Caribbean, related to the cost of the project management team for the continuation of the project management and support team (see para. 6 above); and
- (b) \$103,300 under section 33, Construction, alteration, improvement and major maintenance, for professional services related to the lead consulting firm, the independent risk management firm, travel costs and the provision for contingency.

# IV. Other

25. During its consideration of various reports pertaining to United Nations construction projects, the Advisory Committee observed inconsistent language pertaining to the actions to be taken by the General Assembly. For example, in the present report, the Assembly is requested "to take note of the progress made since the issuance of the previous report of the Secretary-General", while in other construction reports, the Assembly is requested "to take note of the report of the Secretary-General". The Advisory Committee trusts that language with respect to the requested actions of the General Assembly will be standardized, when applicable, in future reports pertaining to United Nations construction projects.

## V. Conclusion

- 26. The recommendations of the Secretary-General on proposed actions to be taken by the General Assembly are set out in paragraph 65 of his report. Subject to its recommendations and observations above, the Advisory Committee recommends that the General Assembly:
- (a) Take note of the progress made since the issuance of the previous report of the Secretary-General;
  - (b) Take note of the revised cost plan;
- (c) Appropriate an amount of \$389,100 for the project in 2020, comprising \$285,800 under section 21, Economic and social development in Latin America and the Caribbean, and \$103,300 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.

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