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

Twelfth report of the Advisory Committee on Administrative and Budgetary Questions on the proposed programme budget for 2022

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 (A/76/323). During its consideration of the report, the Committee met online with representatives of the Secretary-General, who provided additional information and clarification, concluding with written responses dated 30 October 2021.
- 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 (A/72/393). 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. The report of the Secretary-General, submitted pursuant to General Assembly resolution 75/253 A, section XI, provides information on progress made since the previous report of the Secretary-General on the subject.

¹ The Advisory Committee provided related observations and recommendations in its report on the strategic capital review (A/72/7/Add.9). The Committee has addressed a number of specific matters in its previous reports on the ECLAC renovation project (A/75/7/Add.11, A/74/7/Add.11, A/73/457 and A/72/7/Add.8).





II. Progress on the implementation of the project

Collaboration with the host country Government and other Member States

- The Advisory Committee recalls that a host country agreement between ECLAC and the Government of Chile was signed in February 1948, providing for privileges 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 (A/75/7/Add.11, para. 3). The Secretary-General indicates that the host country has provided technical support on integrated building information modelling to the ECLAC project team and that, through its "Construye 2025" programme, the host country has provided technical support in the definition of guidelines for the development of a plan for reusing or recycling any components following the dismantling of the building (A/76/323, para. 19). The Committee recalls that building information modelling technology has been implemented since 2009, and that all buildings in the ECLAC compound are modelled with this technology, which uses three-dimensional models and simulations for engineering, architectural and refurbishment projects, and for cost control and structural assessments (A/75/7/Add.11, para. 17).
- 4. The Advisory Committee expresses its gratitude to the host country for its continued 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, including in-kind contributions, and other forms of support for the project.

Project governance

5. Information on project governance and management is provided in the report of the Secretary-General (A/76/323, paras. 5-6). The project owner remains the Executive Secretary of ECLAC, supported by a project executive and a project management team, and a stakeholders committee that includes staff who represent different levels of disabilities. Furthermore, coordination continues with the Global Asset Management Policy Service at Headquarters, which remains actively involved in overseeing the project, with an emphasis on risk management and alignment with lessons learned. The Advisory 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, to ensure proper oversight and governance in all aspects of the project, including seismic mitigation of the North Building and the three-level underground parking garage of ECLAC (see also A/75/7/Add.11, paras. 18-19).

Project staffing

6. Information on project staffing is provided in the report of the Secretary-General (ibid., paras. 7–8). The Advisory Committee was provided, upon request, with a table showing the required project staffing for 2022, as follows:

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Table 1

Economic Commission for Latin America and the Caribbean project staffing, 2022

Title	Grade	Status	Required for 2022	Notes			
Local project management team, Economic Commission for Latin America and the Caribbean							
Project Manager	National officer (special post allowance)	Position filled, operational since 2018	Yes	Position required until completion of construction			
Project Assistant	G-6 (temporary)	Position filled, operational since 2019	Yes	Position required until completion of construction			
Project Assistant	G-3 (temporary)	Position filled, operational since 2019	Yes	Position required until completion of construction			
Headquarters coordination							
Project Coordinator	P-3	Vacant	Yes	Will be recruited in 2022			

7. Upon enquiry, the Advisory Committee was informed that the position of Project Coordinator (P-3) will be cost-shared between the United Nations Office at Nairobi, which will cover 75 per cent of the cost, and ECLAC, which will cover 25 per cent of the cost. The Committee was further informed that the recruitment for the position had been intentionally delayed in order to limit possible cost overruns in view of the delays stemming from the coronavirus (COVID-19) pandemic, and that recruitment would commence in 2022 to coincide with the beginning of the construction phase of the project. The Advisory Committee recommends that the General Assembly request the Secretary-General to include updated versions of table 1, as presented in the Committee's report on the seismic mitigation retrofit and life-cycle replacements project at the premises of the Economic and Social Commission for Asia and the Pacific, as a matter of routine in future ECLAC progress reports, as well as in the progress reports of other United Nations construction projects in order to standardize the reporting format (see also A/76/7/Add.8, para. 7).

Project schedule

- 8. Information on the overall project schedule is provided in the report of the Secretary-General (A/76/323, paras. 60–65 and figure III). It is indicated that the international request for proposal for construction, including the expression of interest process, is estimated to take up to 12 months, and therefore the contract award, as well as the start of construction, is scheduled for March 2022 instead of January 2022. It is expected that the project would be complete by the end of the fourth quarter of 2023. In addition, three months may be added to the schedule for the closeout phase, resulting in a project completion date of March 2024; however, that will not have an impact on the overall cost plan. The Secretary-General indicates further that the schedule will be confirmed once the tendering processes are completed, and information will be provided in the next progress report.
- 9. The Advisory Committee notes that the project schedule continues to be presented in the form of a Gantt chart, a commonly used project management tool for project management teams. The Committee, however, points out that there is a need to present more detailed information to Member States with regard to the project

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schedule, including consolidated detailed comparative information, such as the exact month of the start and end of a phase, as well as explanations and justifications in instances when the schedule is affected. The Advisory Committee recommends that the General Assembly request the Secretary-General to present in future progress reports the project schedule both as a Gantt chart and in tabular form, with dates for the individual stages and substages, explanations regarding any schedule delays and other pertinent information, as well as in the progress reports of other United Nations construction projects in order to standardize the reporting format (see also A/76/7/Add.8, para. 11).

10. Upon enquiry, the Committee received a detailed project schedule, as at 10 October 2021, as seen in the figure below.

Detailed project schedule as at 10 October 2021

Project schedule	Timeline							
Phase activities		2018	2019	2020	2021	2022	2023	2024
1 Pre-planning					- 1			
2 Planning					 			
Recruitment of project manager								
Recruitment of project management team					I			
Procurement of lead consulting firm								
3 Design					i			
Conceptual/schematic					_			
Detail								
Quantity surveying								
Space planning					-			
4 Tendering								
Construction document for tender								
Tender exercise (start May 2021 – end first quarter 2022) Temporary building								
(start April 2021 – end September 2021) Workstations and furniture								
(start September 2021 – end December 2021) Heating, ventilation and air conditioning components (start September 2021 – end December 2021)					<u> </u>			
Solar photovoltaic plant components (start September 2021 – end December 2021)								
Wastewater treatment plant and components (updated: start October 2021 – end February 2022)					-			
5 Construction				[-			
Construction of temporary building (start October 2021 – end January 2022)					Ė			
Construction process of North Building (start March 2022 – end October 2023)					I I			
6 Closeout					-			L

10 October 2021

Original project schedule, as set out in the report of the Secretary-General (A/75/347)
Actual schedule achievement as of October 2021

Post-October 2021 revised schedule

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- 11. Upon enquiry, the Advisory Committee was informed that the remaining stages, including procurement, of the ECLAC renovation project were as follows:
 - (a) Temporary building bidding process (April 2021 to September 2021);
- (b) Workstations and furniture procurement (September 2021 to December 2021);
- (c) Heating, ventilation and air conditioning components procurement (September 2021 to December 2021);
- (d) Solar photovoltaic plant components procurement (September 2021 to December 2021);
- (e) Wastewater treatment plant and components procurement (October 2021 to February 2022);
 - (f) Construction of temporary building (October 2021 to January 2022);
 - (g) Construction of North Building (March 2022 to October 2023);
 - (h) Closeout (August 2022 to the first quarter of 2024).

Planning and design

- 12. Information on planning and design activities is provided in the report of the Secretary-General (A/76/323, paras. 29–46). It is indicated that the design phase concluded on schedule in December 2020, and that further updates were made upon review and coordination by the project management team in January and February 2021 (see also table 1). Upon enquiry, the Advisory Committee was informed that lessons learned from the ongoing COVID 19 pandemic have been applied to the design requirements for the work areas and public spaces and have been included in the Commission's strategy on returning to work and its flexible workplace strategy, including with regard to:
- (a) Technical aspects, including improvements to the air circulation features, more efficient cleaning and sanitizing measures in workspaces and independent natural ventilation for each work area:
- (b) Spatial aspects, including the compartmentalization of working areas, the provision of independent entrance and exit routes and the creation of appropriate space between staff in open and enclosed workstations;
- (c) Building occupancy, which will remain unchanged with regard to ECLAC staff as part of the "next normal". Occupancy limits will be reduced for non-staff personnel (for example, interns and consultants), who will be located in flexible workspaces that have a maximum capacity of 30 people.
- 13. It is indicated in the report (ibid., paras. 47–49) that the project includes a number of accessible design features: (a) the layout will be oriented towards easily finding transit routes to encourage autonomous movement through the building; (b) all door widths are universally accessible, and the use of automated doors will be considered in all main accesses; (c) specially designed restrooms for exclusive use by persons with physical disabilities are planned; and (d) signage aligned with international standards is being developed.
- 14. The Advisory Committee looks forward to continued updates on design and planning activities, and any changes, if applicable, in future progress reports.

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Risk management

15. The first quantitative analysis of risks (Monte Carlo simulation)² was generated in 2019 and showed that at the United Nations benchmark "P80" level,³ the project was expected to come in at approximately \$14.9 million, or \$0.6 million over budget, with a confidence level of 30 per cent (A/75/7/Add.11, para. 9). The third and most recent Monte Carlo analysis, conducted in May 2021, concluded that the confidence level had increased to 49 per cent, and that the project was expected to come in at approximately \$14.6 million, or \$0.3 million over budget. The Secretary-General also indicates in his report that it is expected that the confidence level will continue to increase once the general construction documents are issued through a formal bid tender process and bids are received (A/76/323, paras. 11–12, and figure I). The Advisory Committee trusts that the Secretary-General will continue to closely monitor and mitigate project risks to ensure the delivery of the project within the scope, budget and timeline, as approved by the General Assembly.

16. Information on project risk management is provided in the report of the Secretary-General (ibid., paras. 14–17). A comparison of the most recent top five ECLAC project risks is summarized in table 2.

Table 2
Comparison of the top five Economic Commission for Latin America and the Caribbean project risks

Previous top five risks (A/74/330, para. 28)	Previous top five risks (A/75/347, para. 24)	Current top five risks (A/76/323, para. 17)			
1. Owner-directed changes (late design requirements and optional scope additions)	1. Schedule delay in the start of construction owing to the COVID-19 pandemic	Schedule delay (pre-construction phase)			
2. Interior renovations	2. Owner-directed changes (late design requirements and optional scope additions)	2. Owner-directed scope changes			
3. Consultancy	3. Schedule delay relating to the availability of materials	3. Cost increases (availability of materials)			
4. Schedule delays	4. Labour strike	4. Schedule delay (unavailability of materials due to COVID-19)			
5. Cost escalation	5. Seismic event	5. Seismic event			

17. The Advisory Committee recommends that the General Assembly request the Secretary-General to present in future progress reports updated versions of

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² A Monte Carlo simulation is 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/75/7/Add.11, para. 9 (footnote)).

³ The "P80" benchmark is a target confidence level that the project cost will not exceed the total cost 80 per cent of the time.

table 2 above, showing a comparison of the top five ECLAC project risks together with an explanation of the latest changes. The Committee trusts that other United Nations construction projects will also present such standardized tables in their future progress reports (see also A/76/7/Add.8, para. 16).

18. With respect to the current fifth risk, seismic event, the Secretary-General indicates that this risk will likely remain until project completion, as the region in which ECLAC is located has experienced a major earthquake every seven years, and that it is likely that an earthquake will occur during the project. The structural engineering design includes structural reinforcement, insulation and dissipation technologies that are fully compliant with current national regulations. The Secretary-General also indicates that the structural engineering firm has extensive experience in seismic mitigation and is managed by the lead consulting firm, and that the project is based on an analytical three-dimensional model assessment of the existing structural components as well as the reinforcement of existing structures. An independent structure to support the solar photovoltaic plant was designed for the rooftop, reducing loads on the existing structure, and all structural components, comprising concrete, steel or mass timber frames, have been validated according to the seismic codes (A/76/323, paras. 35–39).

Procurement and use of local materials and knowledge

- 19. Details with regard to procurement activities and the use of local materials and knowledge are described in the report of the Secretary-General (ibid., paras. 21–25). The Secretary-General indicates that the use of locally sourced materials has been emphasized in the implementation of sustainable alternatives in order to diminish the project's carbon footprint, including the implementation of a certified solution based on organic fibres, produced entirely with local vegetation materials, for thermal and acoustic insulation; the use of alternative gravel in the reinforced concrete mix; and the use of local recycled steel, a requirement which was included in the scope of work to attract local suppliers. The Advisory Committee was provided, upon enquiry, with information on the use of Chilean consultants and other local labour with expertise in local market conditions. The Advisory Committee continues to emphasize the importance of ensuring the use of locally sourced and manufactured materials, as well as local labour and expertise, and trusts that updates thereon will continue to be provided in the next progress reports.
- 20. Upon enquiry, the Advisory Committee was informed that the following procurement activities were planned for September 2021: (a) workstations and furniture; (b) heating, ventilation, and air conditioning components; (c) solar photovoltaic plant components; and (d) a wastewater treatment plant and its components. The Advisory Committee trusts that an update on the status of all ECLAC procurement activities will be provided to the General Assembly at the time of its consideration of the present report, as well as in the next progress report.

Sustainability, energy efficient construction and related cost savings

21. Information on the ECLAC project's energy efficiency strategy is included in the report of the Secretary-General (ibid., paras. 4, 20, 32 and 50–53). The Secretary-General states that current calculations indicate that the photovoltaic plant will comprise 972 solar panels to be housed on the roof of the North Building. Furthermore, the electrical engineering design developed by the lead consulting firm includes an additional medium voltage cell room adjacent to the North Building to allow for the distribution of the clean energy produced to the other buildings in the compound. The updated strategy for the use of this energy shows that: (a) 55 per cent of the estimated total annual energy production would be used to power the operations

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of the North Building, covering all required hours of building operation; (b) 40 per cent of the annual energy produced would be transferred to the ECLAC internal electrical grid, meeting part of the energy supply needs of other facilities in the ECLAC compound; and (c) 5 per cent of the annual energy supply would be produced on weekends, non-working hours and holidays and would be transferred to the national power grid. Upon enquiry, the Advisory Committee was informed that the energy produced by the photovoltaic plant would not be stored, because the batteries required for the storage of electricity are not cost-effective and are not an environmentally responsible solution, as they require recurrent maintenance and periodic replacement, and their disposal is costly and not environmentally sustainable. The Advisory Committee notes that the estimation of energy to be produced has varied since the inception of the project in 2018 and trusts that, as the construction phase commences, the projected amount of energy to be produced will become more defined. The Committee looks forward to continued updates in future progress reports on the annual energy to be produced, used and redirected by the North Building's photovoltaic plant (see also A/75/7/Add.11, para. 21 and A/74/7/Add.11, paras. 18–20).

- 22. The Advisory Committee recalls that the ECLAC renovation project would result in a "net-zero" building, whereby 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, including redirection to the national grid. Furthermore, the renovated ECLAC North Building would be the first net-zero building within the United Nations system (A/75/7/Add.11, para. 21). The Advisory Committee welcomes the planned renovation of the ECLAC North Building as a sustainable and energy-efficient, net-zero building.
- 23. With regard 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/75/7/Add.11, para. 23).

III. Project expenditures and anticipated costs

- 24. Information with regard to project expenditures and anticipated costs, as well as estimated rental income, is provided in the report of the Secretary-General (A/76/323, paras. 66–70 and annex). The ECLAC renovation project continues to be 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.
- 25. The Secretary-General indicates that the overall cost of the project has remained unchanged at \$14,330,200 and that a projected unused balance of \$348,500 would remain at the end of 2021. The net funding requirement for 2022 would amount to \$5,590,100, comprising projected expenditures of \$5,938,600 less the aforementioned projected unused balance from 2021. The projected expenditures comprise the following:
- (a) An amount of \$470,200 under section 21, Economic and social development in Latin America and the Caribbean, for the continuation of the staff of the project management team (1 National Professional Officer and 2 Local level posts) and 25 per cent of the cost of one Project Coordinator (P-3) at Headquarters, cost-shared with the project to replace blocks A–J at the United Nations Office at Nairobi:

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- (b) An amount of \$5,446,400 under section 33, Construction, alteration, improvement and major maintenance, for construction costs; professional services related to resources for consultancy, risk management and travel costs; escalation costs; and the provision for contingency.
- 26. Upon enquiry, the Advisory Committee was informed that the cost plan as presented in the annex of the report of the Secretary-General has remained unchanged at \$14,330,200 and had not been updated since the previous progress report (A/75/347). The Committee was further informed that the cost plan would be updated in the next progress report, once ongoing tendering processes had been completed and contracts awarded. The Committee requested but did not receive information on actual monthly expenditures from 2018 up to the time of writing, or on projected expenditures for the remainder of 2021 and for 2022. The Advisory Committee notes that the cost plan has not been updated and recommends that the General Assembly request the Secretary-General to include information on the evolution of the cost plan since the inception of the ECLAC project, showing variances and explanations, as well as monthly expenditures since the inception of the project, and projected expenditures in future ECLAC progress reports, and include similar updates in the progress reports of other United Nations construction projects in order to standardize the reporting format (see also A/76/7/Add.8, para. 25).

Contingency

27. Upon enquiry, the Advisory Committee was informed that contingency funding was established at the beginning of the ECLAC project at 10 per cent of the required trade costs and distributed proportionally each year according to anticipated annual expenditures. The Committee was further informed that the total available contingency of \$120,300 remained intact but would likely be drawn down in order to absorb potential cost impacts as a result of higher costs for construction materials, and to cover the cost of the project management team in the event of any schedule delays. The Advisory Committee trusts that an update on the use of contingency funds will be provided in future progress reports.

IV. Conclusion

- 28. The recommendations of the Secretary-General on proposed actions to be taken by the General Assembly are presented in paragraph 72 of his report. Subject to its recommendations and observations above, the Advisory Committee recommends that the General Assembly:
 - (a) Take note of the report of the Secretary-General;
- (b) Appropriate an amount of \$5,590,100 for the project in 2022, comprising \$431,300 under section 21, Economic and social development in Latin America and the Caribbean, and \$5,158,800 under section 33, Construction, alteration, improvement and major maintenance, of the proposed programme budget for 2022, which would represent a charge against the contingency fund.

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