Document of the Inter-American Development Bank

**THE COMMONWEALTH OF THE BAHAMAS**

**Airport Infrastructure Program**

**(BH-L1041)**

**monitoring and evaluation plan**

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4. **Introduction**
   1. The main objective of the program is to contribute regionally and globally to the sustainable integration of The Bahamas through secure air transport infrastructure improvements in the Family Islands (FI) airports. Specifically, the program aims to improve air transport connectivity and flow of people to the FI. Such connectivity will be done through infrastructure improvements and climate change resilience by upgrading, rehabilitating and maintaining selected airports to comply with international aviation standards taking into account climate change considerations. The operation is expected to generate travel time savings.
   2. The monitoring and evaluation plan includes field visits, administration missions, 2 progress reports per year, technical meetings, an annual operations plan, multi annual execution plan, and annual external audits.
5. **Monitoring**
   1. **Indicators**
   2. The monitoring of Component I will be based on verifiable product milestones, directly related to the civil works and its output per airport programmed for the operation, with monthly and annual measuring during execution. These milestones are associated with the fulfillment of goals and realization of investments in the planned period of time.
   3. For Component II assessments will be conducted by the execution agency in a semiannual basis and will include the evaluation of the following indicators: (i) number of trainings to GoBH staff; (ii) number of management contracts drafted; (iii) Program Implementation Unit created and operating; (iv) audits performed to evaluate the compliance of each airport with the Standards and Recommended Practices of ICAO.
   4. Annex II of the POD – Results Framework, includes the detailed annual program with outcome and output indicators considering the current base line to measure the development of the operation throughout its execution period, the units of measurement, and associated annual and end of project costs and milestones.
   5. All outcome and output indicators, specific products, milestones, goals and associated costs, and lessons learnt will be considered in the Project Monitoring Reports of this operation.
   6. The monitoring indicators are contained in the results matrix. Presented below are the indicators identified for monitoring progress in the implementation of the main outputs of the project and its milestones.

**Table 1**

**Monitoring Indicators**

|  |  |  |
| --- | --- | --- |
| **PRODUCTS & *Milestones*** | **Frequency of Measurement** | **Source of Verification** |
| **COMPONENT I: Civil Works and Equipment** | | |
| **North Eleuthera airport** upgraded and operating in compliance with ICAO standards and including climate change adaptation designs | **Monthly** | **Final Report with the acceptance of the execution of civil works and equipment by MTA and MWUD** |
| *Square meter of new passenger terminal area created* | *Monthly* | *Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| *Square meter of runaway, apron and taxiway rehabilitated or constructed* | *Monthly* |
| *Number of new airport fire stations and service building* | *Monthly* |
| *Number of firefighting equipment* | *Monthly* | *Equipment installation will be verified through Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by the executing agency* |
| **Exuma airport** upgraded and operating in compliance with ICAO standards which includes climate change adaptation designs | **Monthly** | **Final Report with the acceptance of the execution of civil works and equipment by MTA and MWUD** |
| *Square meter of new passenger terminal area created* | *Monthly* | *Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| *Square meter of runaway, apron and taxiway rehabilitated including hazard lights and marking* | *Monthly* |
| *Number of new airport fire stations and service building* | *Monthly* |
| *Number of firefighting equipment* | *Monthly* | *Equipment installation will be verified through Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| **Marsh Harbour airport** upgraded and operating in compliance with ICAO standards which includes climate change adaptation designs | **Monthly** | **Final Report with the acceptance of the execution of civil works and equipment by MTA and MWUD** |
| *Square meter of new passenger terminal area repaired or refurbished* | *Monthly* | *Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| *Square meter of runaway, apron and taxiway rehabilitated including hazard lights and marking* | *Monthly* |
| *Number of new airport fire stations and service building* | *Monthly* |
| *Number of firefighting equipment* | *Monthly* | *Equipment installation will be verified through Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| **Treasure Cay Airport** | **Monthly** | **Final Report with the acceptance of the execution of civil works and equipment by MTA and MWUD** |
| *Square meter of new passenger terminal area repaired or refurbished* | *Monthly* | *Equipment installation will be verified through Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| *Square meter of runaway, apron and taxiway rehabilitated including hazard lights and marking* | *Monthly* |
| *Number of new airport fire stations and service building* | *Monthly* |
| *Number of firefighting equipment* | *Monthly* | *Civil Works and Equipment Advance Reports developed by the supervision of the operation and approved by the executing agency, and through Inspection Visit Reports by executing agency* |
| **COMPONENT II: Implementation support and institutional strengthening** | | |
| **Number of trainings to GoBH staff** | **Semiannual** | **Report by Executing Agency** |
| **Number of management contract drafted** | **Semiannual** | **Report by Executing Agency** |
| **Program Implementation Unit created and operating** | **Semiannual** | **Report by Executing Agency** |
| **Audits performed to evaluate the compliance of each airport with the Standards and Recommended Practices of ICAO** | **Semiannual** | **Report by Executing Agency** |

* 1. **Data Collection and Instruments**
  2. The main source of information to provide data for the monitoring process of component 1 of this operation will be the reports developed by the supervision of the operation and inspection visits performed by the execution agency. Data for Component 2 will be collected through the execution agency that will be in charge of reporting the execution of its outputs. The execution agency will provide the above mentioned progress reports and others means of data collection and monitoring that will be described in the Program Operating Manual including the administrative and contract documents such as: (i) final consulting reports; (ii) service contracts; (iii) contracts for the purchase of goods; (iv) contractual conditions; (v) final audit reports; (vi) evaluation reports.
  3. The PIU will use the following instruments to facilitate project monitoring:
  + **Annual Operating Plans (AOPs)**. The AOP consolidates all of the activities to be conducted during a specific execution period by output, and has a physical and financial schedule. The AOP is an integral part of the monitoring reports that the MTA will submit every six months. These will include the activities, schedules, and estimated budgets for the projects financed during the previous year and those proposed for the following year. The AOP and the Pluriannual Execution Plan (PEP) for the first year will be included in the initial program report. The AOP and the PEP will include at least the following information: (i) program execution status, broken down by component; (ii) the procurement plan for works, goods, and services, as well as the procurement plan for consulting services, including budget and disbursement projections; (iii) progress in meeting the program's targets and outcomes; (iv) progress in achieving the output indicators for each component of the program, according to the program's results matrix and implementation schedule; (v) problems encountered; and (vi) solutions implemented.
  + **Project Execution Plan (PEP)**. The PEP establishes the schedule of disbursements (number and amount of disbursements) according to the performance indicators, already included in the results matrix, and the project execution period. The PEP should be updated at least every six months or when necessary.
  + **Procurement Plan (PP)**. The purpose of this instrument is to present to the Bank and publicize the details of all procurements that will take place during a specific program execution period. The procurement plan will be delivered together with the AOP as an integral part of the semiannual monitoring reports for the Bank's consideration, and should be updated at least annually, or when necessary, throughout the program execution period.
  1. **Reporting**
  2. During program execution, semiannual monitoring reports will be delivered to provide information on the status of the works and other projected outputs. Such reports will be prepared by the MTA and delivered to the Bank’s Transport Division, through the Bank’s project team leader, no later than 60 days after the end of each semester. The objectives of these evaluations will be: (i) to verify the degree of progress and compliance of the program’s objectives based on the indicators of the Results Matrix; (ii) report the products achieved with the activities financed by the program; and (iii) identify risks that arise in the execution of the program, and propose mitigation measures, among others. These reports will be delivered within 60 days after the end of each six-month period.
  3. The semiannual reports will include, at least: (i) descriptions of the executed activities per component; (ii) description of the procurement processes carried out during the reported period; (iii) updated schedule of progress and disbursements; (iv) level of compliance with the performance indicators; (v) identification of new risks/events that may potentially affect the future implementation of the program; and (vi) execution plan to be completed in the following two six-month periods.
  4. In addition, the executing agencies will deliver an annual progress monitoring report to the Bank at the end of each calendar year with the information for the period that has elapsed. Finally, the Bank will capture all progress information in the PMR platform.
  5. The monitoring reports will cover not only the progress on the works and the other outputs identified in the results matrix but also all relevant information for recognizing progress in the measurement of the indicators and identifying needs for improvement in the gathering, processing, analyzing, and reporting of data.
  6. **Monitoring Coordination, Work Plan and Budget**
  7. The program monitoring and evaluation process will be coordinated by the PIU and especially through its Monitoring & Evaluation specialist. The PIU in coordination with MWUD will be responsible for verifying the progress and impact of program activities.
  8. For its part, the Bank, through the project team and project team leader, is responsible for coordinating and ensuring that the monitoring plan complies with the established technical quality requirements and deadlines. Accordingly, it will hold periodic meetings with those responsible for executing this plan and, if necessary, will request reports or presentations on unexpected results.
  9. The outcomes of the indicators at the end of program execution will be included in the Project Completion Report (PCR).

**Table 2**

**Monitoring Work Plan**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Key Monitoring Activities | Year 1 | | | | Year 2 | | | | Year 3 | | | | Year 4 | | | | Year 5 | | | | Responsible | Cost  (USD) | Funding |
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Annual Operating Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU | Included in Project Administration | Program’s budget |
| Project Execution Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU |
| Procurement Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU |
| Semiannual Monitoring Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU |
| Results Matrix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU |
| Financial Audits |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU |
| Annual Progress Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | PIU |
| Project Completion Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | IDB |  |  |
| Inspection Missions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | IDB | $13,176 per year[[1]](#footnote-1) | IDB funds |
| **Total Cost:** | | | | | | | | | | | | | | | | | | | | | | **$65,880** | |

* 1. **Evaluation**

The purpose of this section is to detail the evaluation methodology and the implementation of the evaluation.

1. **Main Evaluation Question(s)**
   1. The activities included in the program, its Civil Works and acquisition of equipment joint to the implementation support and the institutional strengthening, will contribute to the integration and connectivity of The Bahamas through more flow of passengers in North Eleuthera, Exuma, Marsh Harbour and Treasure Cay airports.
2. **Existing Knowledge (previous evaluations, ex ante economic analysis)**
   1. The intervention has previous studies that define the quality and quantity of infrastructure needed at each airport in order to improve safety as well as to increase demand and quality of service. A study conducted by ALG through the Technical Cooperation BH-T1044, and previous studies by STANTEC analyzed the current air transport market in The Bahamas, reviewed the available Airport Master Plans to assess the infrastructure upgrades needed for ICAO compliance, and conducted preliminary designs and socio-economic analysis of the proposed investments.
   2. The economic analysis conducted by ALG concludes that the operation will have a positive economic and social impact, considering an internal rate of return of 12%, since the main economic activity in The Bahamas is tourism. Investing in safer airports and expanding their infrastructure will attract more tourists into the country.
3. **Key Outcome Indicators**
   1. The impact/results indicators of the intervention are associated with the number of air passengers, both domestic and international. The following table summarizes the indicators.

**Table 3**

**Key Impact/Results Indicators**

|  |  |  |
| --- | --- | --- |
| **Indicator** | **Formula / Definition** | **Frequency of Measurement** |
| Number of passengers traveling through the Marsh Harbour, Exuma, North Eleuthera and Treasure Cay airports | Air passengers database MTA | Monthly and Annual |
| Number of commercial international passengers traveling through the Marsh Harbour, Exuma, North Eleuthera and Treasure Cay airports | Air passengers database MTA | Monthly and Annual |

1. **Evaluation Methodology** 
   1. **A before and after evaluation of the results will be conducted. Number of passengers**: Each airport keeps records of domestic and international passengers that land/depart on a daily basis. The data is shared with MTA, which compiles and produces monthly summary reports. Results Matrix includes the baseline data which will be actualized annually through MTA records to analyze the achievements in the number of passengers.
2. **Technical Aspects of Selected Methodology**
   1. The following table summarizes the technical aspects of the selected methodology.

**Table 4**

**Technical aspects of the selected methodology**

|  |  |
| --- | --- |
| Indicator | Technical aspects of the methodology |
| Number of passengers traveling through the Marsh Harbour, Exuma, North Eleuthera and Treasure Cay airports | The Air passengers database from MTA will be updated monthly to monitor the progress of the indicator |
| Number of commercial international passengers traveling through the Marsh Harbour, Exuma, North Eleuthera and Treasure Cay airports |

1. **Reporting Results**
   1. The MTA will request the data from the relevant government office to keep a record of progress of the indicators, including monthly and annual reports for each of the 4 airports, for both domestic and international passengers. This information will be entered directly by the executing agency or by the Bank into a Convergence module. At the end of the operation, the MTA will request the certification of the airports regarding safety and climate change adaptation standards.
2. **Evaluation Coordination, Work Plan and Budget**
   1. Two evaluations will be carried out. The first evaluation will take place upon disbursement of forty percent (40%) of the loan resources. The evaluation shall document, pursuant to the Project Results Matrix, the Project’s results and elaborate on factors impacting its performance, based on the methodology and in accordance with the guidelines included in this document. The final evaluation will be performed upon disbursement of ninety percent (90%) of the loan resources in line with the methodology described in this document and shall document progress on achieving the impact targets agreed upon and the lessons learned on the Project’s performance.
   2. An expert in impact evaluation of airport infrastructure will be hired to do these evaluations at a total cost of USD 80,000. The executing agency will be responsible for this hiring. Officials from the Transport Division of the Inter-American Development will produce the terms of reference for the consultancy, provide the non-objection in accordance with the Bank’s policies, oversee her/his work, and review and approve the delivered outputs.

**Table 5**

**Evaluation Work Plan**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Key Evaluation Activities | Year 1 | | | | Year 2 | | | | Year 3 | | | | Year 4 | | | | Year 5 | | | | Responsible | Cost  (Currency) | Funding |
| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Operation Performance Measures and Ex-post Evaluation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Consultancy throughPIU | $ 57.000 | Included in Component 2 |
| Analysis and approval of report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | IDB | 30 days x 1 person $600=  $18.000 | IDB |
| Project Completion Report (PCR) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | IDB | 10 days x 1 person USD $ 500 = $5.000 | IDB |
| **Total Cost PIU:** | | | | | | | | | | | | | | | | | | | | | | $ 57.000 | |
| **Total Cost IDB Supervision:** | | | | | | | | | | | | | | | | | | | | | | $ 23.000 | |

1. Project team estimates 2 missions per year with 3 IDB officers. $800 plane tickets x 6 = $4,800 + (24 nights per diem x $349) = $13,176 [↑](#footnote-ref-1)