AIRPORT INFRASTRUCTURE PROGRAM

Technical Annex BH-L1041

Economic Integration

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| **Abstract**The Bahamas is an insular state composed by a large number of small islands and cays. Residents, tourists, and business visitors mostly rest on the airways for inter-island and international transport. Therefore, air transport provides in The Bahamas essential connectivity services as roads provide in other countries. Moreover, considering the significant contribution of services (as tourism) to the national economy, it is evident that air transport works as a vital engine for economic development, creating direct and indirect employment, supporting tourism and local businesses, and stimulating foreign investment.  During the last years, the Bank has been supporting a comprehensive reform of the air transport sector in The Bahamas, in order to promote the development of safe, secure and efficient air transport in adherence with international standards. The Airport Infrastructure Program (BH-L1041) complements the ongoing institutional and regulatory reforms, by rehabilitating and upgrading selected airports in the Family Islands that will comply with international aviation security standards, and supporting the development of management schemes with private participation to operate and maintain the upgraded infrastructure. This document explains how the project supports the economic integration of The Bahamas by improving the connectivity between islands and with the rest of region/world, supporting global cooperation initiatives for international aviation security standards and potentially contributing to the attraction of foreign investment. According to the Results Matrix of the project, the improvement of the physical infrastructure of the Family Islands Airports will have the following positive outcomes related to economic integration: (i) an increase of 36% in the number of commercial international passengers traveling through the Marsh Harbour, Exuma, North Eleuthera and Treasure Cay airports. |

1. **Introduction**
	1. The Commonwealth of The Bahamas (here and forth The Bahamas) is one of the wealthiest countries in the Caribbean[[1]](#footnote-1), with a GDP per capita calculated in US$22.217 for 2014. Located in the northeastern Caribbean, The Bahamas comprises 700 islands and cays with a total land area of 5,383 square miles spread over 100,000 square miles. New Providence and Grand Bahama concentrates around 85% of the total population of the country, while the remaining 15% is scattered among the other 28 islands known as the Family Islands[[2]](#footnote-2) (FIs). The economic development of the country follows the same pattern of the population, with most of the economic activity and the wealth concentrated in the New Providence and Grand Bahamas[[3]](#footnote-3).
	2. As a service-based economy, the country has traditionally been dependent on the tourism sector, which accounts for 47% of GDP and supports around 55% of total employment (107,000 jobs)[[4]](#footnote-4). According to ALG, the Bahamas tourist market is one of the largest in the Caribbean (ranks 5th), receiving almost 1.5 million international tourists per year (2015) [[5]](#footnote-5). Financial services are the second largest contributor to the national economy, accounting for 17% of the GDP[[6]](#footnote-6). Both the manufacturing sector (4%) and agriculture and fisheries sector (2%) represent a marginal proportion of the economy. Given the geographic configuration of the country and the limited amount of land available for food production, The Bahamas is more likely to rely on imports for basic consumption[[7]](#footnote-7). International trade of goods is vital to ensure that imports are sufficient to satisfy domestic consumption and the country´s major industry (tourism).
	3. Considering the economic structure of the country, it can be argued that air transport is a fundamental pillar for economic integration, as it facilitates the development of the tourism sector and the attraction of foreign investment. This document analyzes the Airport and Infrastructure Program (BH-L1041), presenting the arguments that explain its contribution to the economic integration of The Bahamas, validating therefore its strategic alignment with the regional challenge of economic integration proposed in the Updated Institutional Strategy of the Bank (UIS) 2010-2020 (GN-2788-5). The document is organized in two sections: first, it presents the qualitative and quantitative arguments demonstrating that the project contributes to improve the physical and economic integration of the country; and the second section analyzes the validation of the operation’s alignment with the Economic Integration Challenge, in accordance with the UIS and the Bank´s Sector Strategy to Support Competitive Global and Regional Integration (GN-2564-4).
2. **Overview of the operation in terms of Regional Integration**
	1. Tourism is the main export industry of The Bahamas[[8]](#footnote-8), with access to regional and global markets through commercial air transport services[[9]](#footnote-9). Its competitiveness and development is to certain extent determined by the availability of air transport infrastructure and cost-efficient services. The country has a total of 53 licensed airports. One third of them (18 airports) serve as international ports of entry connecting the country with Canada, Jamaica, the United Kingdom, Cuba, the United States, Panama and France. The airports located in Grand Bahamas and New Providence[[10]](#footnote-10) concentrates 68% and 11% of the available domestic and international seats, while the airports in the Family Islands account for the remaining 13% of both domestic and international seats.

Figure 1: International market for Tourism (2015)



Source: ALG. Feasibility studies for the rehabilitation of a selection of Bahamian airports through a PPP scheme (2016).

* 1. The Government of The Bahamas is promoting[[11]](#footnote-11) the development of the tourism industry in the Family Islands[[12]](#footnote-12) as a mean to diversify the sector. Increasing connectivity for international passengers into and out family islands has become a priority for the government. To date, FIs´ airports offer international flights to the main touristic markets, United States and Canada. In fact, FI account for 10% of the international traffic in The Bahamas, being Marsh Harbour, Exuma, and North Eleuthera the three largest airports in FIs. Table 1 shows the main features of the tourism industry in the FIs.

**Table 1: Touristic Offer in the Family Islands**

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| **Touristic Features** | **Abaco Island** | **Exuma Island** | **Eleuthera and Harbour Island** |
| **Main Airport seats supply (2015)** | 340.910[[13]](#footnote-13) (4,96%) | 256.794[[14]](#footnote-14) (3,74%) | 180.278[[15]](#footnote-15) (2,63%) |
| **Total Hotel Rooms (2013)** | 921 (6,2%) | 755 (5,1%) | 563 (3,8%) |
| **Stopover Visitors (2013)** | 91.804 (6,7%) | 41.062 (3%) | 35.510 (2,6%) |
| **Average length of stay (2013)** | 10,1 | 8,2 | 8,8 |
| **International Destination Offer** | 6 destinations to the United States | 5 destinations to the United States and Canada | 4 destinations to the United States |

Source: ALG (2016) “Feasibility studies for the rehabilitation of a selection of Bahamian airports through a PPP scheme”

* 1. Passenger’s demand of the FIs airports is projected to increase by 2.4% annually in the next 20 years, reaching 1.7 million passengers by 2033. In order to capitalize this opportunity, it is crucial that the islands gateway airports offer the highest possible level of safety and quality of aviation services (ALG, 2016). Recent studies[[16]](#footnote-16) showed that FIs airport infrastructure requires a wide range of aviation and infrastructure upgrades in order to offer a more efficient service. Given the current state of the infrastructure, immediate actions are needed in order to maintain the airports operating national and international flights. The Airport Infrastructure Program (BH-L1041) will finance the investments required to upgrade selected[[17]](#footnote-17) FIs airports to comply with international aviation standards, and will also provide the necessary technical and legal support to prepare a contract management for the upgraded airports. The economic evaluation of the Program concludes with a Net Present Value (NPV) of US$162.3 million and an Internal Rate of Return (IRR) of 31.7%. These results are robust to the sensitivity analysis and the program is economically viable even in a scenario where capital expenditure cost increases by 20% and traffic falls by 20%.
	2. Airport infrastructure is a key part of an integrated tourism system. The rehabilitation of selected airports in the Family Islands will contribute to improve national and international air transport connectivity of the FIs, contributing also to generate catalytic effects[[18]](#footnote-18) on tourism and foreign investment. On the one hand, the connectivity provided by international air transport facilitates the fast-growing global tourism[[19]](#footnote-19) industry by increasing the relative attractiveness to leisure travelers. Khadaroo and Seetanah (2007) using a gravity model of trade to the tourism services industry[[20]](#footnote-20) for 28 countries[[21]](#footnote-21) analyzed the role of transportation infrastructure in tourism flows. The authors conclude that airport infrastructure, measured through the total number of terminals in international airports, seems to have been a relatively important element in tourism generation, in particular in European and American touristic destinations. Also, research conducted by Seetanah and Khadaroo (2009) about the link between transport capital (air and road infrastructure) and tourism arrival for the small island state of Mauritius, found that a 10% increase in transport capital stock is seen to be associated with a rise in the number of tourist arrivals to the order of 2.8% in the long run. In particular, better airport infrastructure has accommodated wider-body passenger jets with more intercontinental travel and has also enhanced the tourism experience through a more comfortable transition to and within the airport. The study highlights the importance of transport infrastructure for island economies, which are on the whole only accessible by air.
	3. In addition, an ex post evaluation on the Project for Busuanga Airport Development in the Philippines, based on qualitative and quantitative research, confirmed that aviation safety has been improved after the implementation of the project. Since the project was completed, the airport has been able to be operated throughout the whole year, and as a result a sharp increase in the number of passengers has been observed. Average annual increase has skyrocketed to 58.1 percent from 2009 to 2012. Airlines’ aviation capacity was improved from 19-seaters to 50~70~80-seaters and even to 90-seaters in peak season. Also, more airlines than before have provided service to the airport since the implementation of the project. The tourism industry has also benefited from the improvements in the airport, as now the tourism business can receive clients all year around even in the rainy season, which has resulted in an increase in the number of hotels, restaurants and resorts by about 1.5 times from 2010 to 2012, and tax revenues in 2012 were up by 2.3 times compared to 2006 before the project was implemented. In the case of Bahamas, visitors arriving by air are most likely to stay overnight[[22]](#footnote-22), which reports more benefits for the tourism’ value chain in comparison with cruise tourist[[23]](#footnote-23).
	4. On the other hand, viable air transport links are one of the factors influencing international firms’ decision to invest in a country[[24]](#footnote-24). Improved connectivity and reduced travel cost can attract foreign direct investment (FDI), by contributing to create a more favorable business environment for foreign firms to operate in[[25]](#footnote-25). In addition, supporting the development of management contract with private participation for the upgraded airports might attract inflows of foreign direct investment into the country. Seetanah and Khadaroo (2010) analyzed the role of transport infrastructure availability as a determinant of FDI inflows in Mauritius and they found that a 1% increase in transport capital is associated 0.54% increase in FDI inflows.
	5. The investments in infrastructure and equipment financed by this program will contribute to continue complying with the standards and recommended practices for aviation security defined by the International Civil Aviation Organization (ICAO). Complying with ICAO standards reduces flights restrictions because of security concerns and might also motivate the operation of new international airlines. As argued above, the tourism industry depends largely on a modern air transport infrastructure that provides the more efficient service.
	6. In addition, it is noteworthy to highlight the country is working towards creating tourism circuits with other islands in The Caribbean. The Ministry of Tourism, through its multi destination unit, is working to coordinate marketing, product development, and investment strategies for the Caribbean as one destination, while continuing to develop The Bahamas as a unique attraction. This initiative has initially been focused in Cuba, by promoting multi-destination vacation packages with mutual benefits for each destination. Air transport, with intraregional routes, can act as a spur to innovation by encouraging effective networking and collaboration between tourism companies located in different islands of the Caribbean.
	7. Finally, The Bahamas as member of the Caribbean Community (CARICOM) is committed with the regional integration of the Caribbean. In the last Strategic Plan for 2015-2019[[26]](#footnote-26), the CARICOM established as a priority the development of air and maritime transport infrastructure and services; in order to improve accessibility and mobility for people and goods; enhance competitiveness at a global level; improve access to traditional and non-traditional markets; improve maritime and air transport reliability, efficiency, safety and security; establish a single/integrated airspace; and harmonize the regulatory, institutional and administrative environment. Moreover, the countries agreed to take specific actions to address cost and sustainability of transport in the region. The CARICOM recognizes the region will benefit from more intra-regional air connections as they would support the further growth of the tourism industry and businesses links.
1. **Validation Criteria under the Integration Strategy**
	1. The Airport Infrastructure Operation (BH-L1041) is strategically aligned with the development challenge of economic integration included in the Bank's Institutional Strategy 2010-2020 (GN-2788-5). The investments in FIs airports will contribute to improve national and regional air connectivity enabling the catalytic effects on the tourism sector, to support global cooperation initiatives by maintaining an efficient level of airport service in compliance g with international aviation security standards, and to attract promote the attraction of foreign direct investment into the Family Islands; thereby contributing to improve the economic integration of the country into global and regional markets.
	2. The project is also aligned with the Corporate Results Framework (CRF), through the following indicator reflected in the Framework Results: number of FI airports in compliance with ICAO Standards and Recommended Practices, which is aligned with the CRF indicator of “airports built or upgraded”.
	3. Finally, according to Sector Strategy to Support Competitive Global and Regional Integration (GN-2565-4), a regional integration operation is classified as such when it incorporates one of the following non-mutually exclusive indicative criteria: (i) a cross-country focus, (ii) national subsidiarity, (iii) regional additionality, and (iv) compensation of coordination failures. This operation meets the criteria for **Cross-Country Focus**, as it supports a national investment by the Government of The Bahamas aimed at improving the air transport connectivity and the integration of the family islands into the national and regional economy, so as to contribute to increase the competitiveness of the country, to support the diversification of the tourism sector and to attract foreign direct investment..
1. GDP per capita in Trinidad and Tobago (US$21.317,45), Barbados (US$15.366,29), Suriname (US$9.680,12), Guyana (US$4.028,16), and Jamaica (US$5.119,22). Source: World Development Indicators 2014, World Bank. [↑](#footnote-ref-1)
2. The population of the Family Islands (all islands other than New Providence and Grand Bahama), is largely concentrated in four islands: Abaco, Andros, Eleuthera and Exuma. These islands account for 74% of the remaining population. [↑](#footnote-ref-2)
3. Poverty rates in New Providence (12,58%) and Grand Bahama (9,69%) are smaller in comparison with other Family Islands like Abaco where the poverty rate is around 20%. [↑](#footnote-ref-3)
4. These values include the direct, indirect and induced contributions. For further details on the disaggregated data, see: World Travel and Tourism Council. Economic Impact 2016 Bahamas [↑](#footnote-ref-4)
5. Source: ALG (2016) “Feasibility studies for the rehabilitation of a selection of Bahamian airports through a PPP scheme” [↑](#footnote-ref-5)
6. Data corresponds to 2014. Source: ALG. Feasibility studies for the rehabilitation of a selection of Bahamian airports through a PPP scheme (2016). [↑](#footnote-ref-6)
7. The country is characterized as a net food-importing developing country, as the total imports of food (US$ 531,15 million) exceeds the total exports (US$ 172,86 millions). [↑](#footnote-ref-7)
8. According to The Bahamas´ Central Bank, currency earnings from tourism totalized around $2.2 billion in 2013, accounting for 77% of total export earnings. [↑](#footnote-ref-8)
9. Through its speed, convenience and affordability air transport is indispensable to connect tourists and business travelers with the Bahamas [↑](#footnote-ref-9)
10. As mentioned above, the main centers of economic activity are located in Grand Bahamas and New Providence. [↑](#footnote-ref-10)
11. The Government of Bahamas through its Ministry of Tourism in collaboration with the National Geographic Society has created a co-branded MapGuide and interactive website of the Bahamas Family Islands, offering information that identifies natural, cultural and historic attractions. [↑](#footnote-ref-11)
12. The unique natural sites and culture of Family Islands translates into a great potential for the tourism industry. Abaco Island is well known for its world famous natural parks and beaches. Eleuthera and Harbour Island has been ranked as “The Best Island in the Caribbean” by Travel Leisure magazine because of its pink beaches. Exuma Island is considered one of the most beautiful islands in the Caribbean. [↑](#footnote-ref-12)
13. Data for Marsh Harbour Airport [↑](#footnote-ref-13)
14. Data for Exuma George Town Airport. [↑](#footnote-ref-14)
15. Data for North Eleuthera Airport. Seats supply in Rock Sound Airport was 150,184 (2.19%), in Governor’s Harbour Airport was 111,928 (1.63%) [↑](#footnote-ref-15)
16. ALG estimates that Tier 1 & Tier 2 FIs airports would require more than 100m USD in the short term to comply with ICAO requirements and solve capacity concerns. Source: ALG. Feasibility studies for the rehabilitation of a selection of Bahamian airports through a PPP scheme (2016). [↑](#footnote-ref-16)
17. Mash Harbour (MHH), Exuma George Town (CGT), North Eleuthera (ELH), and Treasure Cay (TCB). [↑](#footnote-ref-17)
18. Because air transport affects the performance of many industries across the whole spectrum of economic activity, the literature refers to these effects as catalytic or “spin-off” benefits. [↑](#footnote-ref-18)
19. In 2013 around 1.28 million passengers arrived in The Bahamas by air. [↑](#footnote-ref-19)
20. Tourism is essentially a form of international trade. [↑](#footnote-ref-20)
21. The sample included the following countries: Australia, Austria, Brazil, Canada, China, Egypt, France, Germany, Greece, Hong Kong, India, Italia, Jamaica, Japan, Kenya, Malaysia, Mauritius, Maroc, Nigeria, Poland, Singapore, South Africa, Spain, Switzerland, Tunisia, Thailand, United Kingdom and United States. Countries were analyzed over the decade 1990–2000. [↑](#footnote-ref-21)
22. Air stopover arrivals in The Bahamas reached 1.343 million in 2014. [↑](#footnote-ref-22)
23. Tourist arriving by cruise ship spend less time in the destination country as if they stay overnight, which could translate into less hotels, food, beverages and tourism services consumed [↑](#footnote-ref-23)
24. Hong (2007) state that foreign investors from manufacturing firms value cheap labor and convenient airway transport when making location decision. Source: Hong J. (2007). Firm-specific effects on location decisions of foreign direct investment in China's logistics industry. Regional Studies 41: 673-683 [↑](#footnote-ref-24)
25. Research conducted by [Bannò](http://link.springer.com/article/10.1007/s12544-014-0136-2#author-details-1), M. and Redondi, R. (2014)., evidences that improved air connectivity in Italy increased overall FDIs by 33.7 % in the 2 years after opening of the new routes. Source: [Bannò](http://link.springer.com/article/10.1007/s12544-014-0136-2#author-details-1), M. and Redondi, R. Air. (2014). “Connectivity and Foreign Direct Investments. The economic effects of the introduction of new routes”. [↑](#footnote-ref-25)
26. Strategic Plan for the Caribbean Community 2015 – 2019: Repositioning CARICOM [↑](#footnote-ref-26)