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INFORMATION PAPER

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**Eighth Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG/8) Meeting**  
Miami, United States, 22 to 24 October 2024

**Agenda Item 4: Update of the E/CAR/CATG Work Programme and Activities**  
**4.2 ICAO NACC current projects and initiatives supporting the E/CAR region in ANS matters**

**UPDATE ON PIARCO AIRSPACE OPTIMIZATION**  
(Presented by Trinidad and Tobago)

<b>EXECUTIVE SUMMARY</b>	
This information paper presents an update on Piarco (TTZP) Airspace Optimization project.	
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air navigation capacity and efficiency</li><li>• Environmental protection</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• Second Meeting of the North American, Central American and Caribbean Working Group (NACC/WG) Airspace Optimization Task Force (AO/TF/2) (February 13-17 2023) Sixth Meeting of the CANSO IATA ICAO Free Route Airspace (CIIFRA/6) Team (AO/TF/2/ATFM/TF/4/CIIFRA/6) (February 13-17 2023)</li><li>• Second Meeting of Rapporteurs of the North American, Central American and Caribbean Working Group (NACC/WG/RAP/02) (March 28-31 2023)</li><li>• Seventh Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG/7) Meeting (26-28 July 2023)</li><li>• Third Meeting of the North American, Central American and Caribbean Working Group (NACC/WG) Airspace Optimization Task Force (AO/TF/3), Fifth Meeting of the NACC/WG Air Traffic Flow Management Implementation Task Force (ATFM/TF/5), and Seventh Meeting of the CANSO IATA ICAO Free Route Airspace (CIIFRA/7) Team (AO/TF/3/ATFM/TF/5/CIIFRA/7) (25-29 September 2023)</li></ul>

## **1. Introduction**

1.1 This information paper provides an update on the initiatives within the Piarco Flight Information Region (FIR) with regard to Airspace Optimization (AO).

## **2. Discussion**

### *2.1 Collaborative Decision Making (CDM) with Eastern Caribbean (ECAR) States*

2.1.1 On October 25, 2023, Trinidad and Tobago conducted briefings on AO and Performance-Based Navigation (PBN) for Antigua and Barbuda. This follows similar sessions held in February 2022 for Barbados, Grenada, Saint Lucia, and Saint Vincent and the Grenadines. These efforts are part of a larger initiative to optimize the lower airspace within the Piarco FIR and ensure smooth air traffic flow across the region. Trinidad and Tobago remains committed to offering additional briefings as needed to harmonize both the upper and lower airspace within the Piarco FIR, thereby improving Air Traffic Management (ATM) throughout the ECAR.

2.1.2 In April 2024, meetings took place with ECAR States, including Antigua and Barbuda, Guadeloupe, Martinique, Saint Lucia and Saint Vincent and the Grenadines. These discussions focused on integrating new upper-level routes with the relevant Terminal Control Areas (TMAs) to ensure effective coordination between entities.

2.1.3 In June 2024, a new waypoint was established on the boundary shared between the Martinique TMA and the Piarco FIR. This waypoint supports transatlantic aircraft entering the Martinique TMA from the New York (KZNY) FIR, allowing for continuous descent operations.

2.1.4 In October 2024, another waypoint is scheduled for establishment at the boundary between the Pointe-A-Pitre (Guadeloupe) TMA and the Piarco FIR. This waypoint will facilitate transatlantic aircraft exiting the Pointe-A-Pitre TMA and transitioning to the New York FIR, enabling continuous climb operations.

### **2.2 New Waypoints at the TTZP/KZNY FIR Boundary**

2.2.1 In July 2024, new waypoints were implemented along the common boundary between the Piarco FIR and the New York Oceanic FIR. These waypoints aim to improve routing precision and efficiency between the two FIRs, ensuring harmonized procedures and enhancing communication and coordination between the respective Air Traffic Services (ATS) units. The waypoints will also support ATS Inter-Facility Data Communication (AIDC) operations.

2.2.2 Trinidad and Tobago worked in collaboration with Delta Airlines (DAL) and United Airlines (UAL) to establish these waypoints along the Piarco and New York FIR boundary.

### **2.3 User Preferred Route (UPR)/Strategic Direct Routing (SDR) Update**

2.3.1 The full implementation of SDR has been delayed due to ongoing issues with the Very High Frequency (VHF) communication system. A project is currently underway to upgrade the VHF system, transitioning from analog to IP circuits.

2.3.2 On September 8, 2022, Trinidad and Tobago issued an Aeronautical Information Circular (AIC) to provide airline flight dispatchers with a series of UPRs for filing in Flight Plans (FPLs). These routes, identified as popular among airspace users, offer a standardized option for efficient flight planning and coordination between pilots and Air Traffic Control (ATC). By using these preferred routes, flight operations benefit from enhanced situational awareness, improved flight efficiency, reduced fuel consumption, shorter flight times and minimized environmental impact.

2.3.3 Since the publication of the AIC in 2022, Trinidad and Tobago has approved waypoint-to-waypoint filing requests from major airlines operating in the Piarco FIR, including American Airlines (AAL), Caribbean Airlines (BWA), Delta Airlines (DAL), JetBlue Airways (JBU), GOL Airlines (GLO), LATAM Airlines (TAM), and United Airlines (UAL).

## 2.4 Reduction of Lateral Separation in the Piarco Oceanic FIR

2.4.1 In 2015, a safety assessment determined that reducing lateral separation in the oceanic sector from one hundred (100) Nautical Mile (NM) to fifty (50) NM, using Controller-Pilot Data Link Communications (CPDLC), met the required Target Level of Safety (TLS). Following a recent ATM system upgrade, Trinidad and Tobago has resumed efforts to implement this reduction in lateral separation within the Piarco Oceanic Sector. CPDLC will facilitate effective communication between ATC and flight crews, with specific provisions in place to address convective weather, particularly during hurricane season.

2.4.2 The 2015 safety assessment was reviewed in 2024 and continues to meet the required TLS. Simulations and live traffic trials are scheduled for the last quarter of 2024, with full implementation expected by the end of the first quarter of 2025. This reduction in lateral separation is a significant advancement toward optimizing airspace utilization, increasing capacity, and enabling more efficient use of available airspace, potentially reducing flight distances and improving overall airspace efficiency.

## 3. Conclusion

3.1 Trinidad and Tobago will continue its initiatives in AO to enhance safety, increase capacity, and improve operational efficiency for all current and future airspace users. Ongoing efforts will also focus on maintaining smooth traffic flow in both the upper and lower airspace of the Piarco FIR and TMAs.

3.2 The Meeting is invited to note the content of the paper and discuss any relevant matters as appropriate.