



Agenda Item 4 RASG-PA Projects
4.5 Bird Strike Reduction Programme Report

BIRD STRIKES RISK REDUCTION PROGRAMME

(Presented by ALTA/IATA)

SUMMARY

IATA and ALTA have been working closely on a Bird Strike Risk Reduction programme for airports based in the Latin America & Caribbean Region.

28 Airlines have provided IATA/ALTA their historical bird strike data in order to produce a data driven approach for the programme and create awareness of the problem in the region.

ALTA/IATA have partnered with the FAA and USDA to use their expertise in our region with a pilot programme that will last one year. Panama and Guayaquil Airports were selected for the pilot and the third of four visits took place on April 2013. Based on the pilot results, the model will then be exported to other airports in the region applying any lessons learned and best practices found.

***Strategic
Objective***

*This working paper is related to Strategic Objective:
A – Safety*

1. Introduction

1.1 During the 2011 ALTA Safety Summit held in Mexico City, airlines were presented with the compilation of historical bird strike data from 25 carriers to highlight the current situation. The collaboration programme between IATA and ALTA with the expert help of FAA and USDA was presented to the participants and after general discussion it was accepted by the airlines.

1.2 A Bird Strike Sub-committee was created to drive the programme, headed by IATA and ALTA with the participation of representatives from COPA, Avianca and LAN.

2. Programme Activities

2.1 The sub-committee met 4 times (conference call and as a group) to share experiences with bird strikes programmes and design the Bird Strike Risk Reduction Programme. The meeting was attended by representatives and bird strike experts from the FAA, USDA, Boeing, Airbus, IFALPA, ACI-LAC, LACSA, LAN Airlines, LAN Peru, LAN Ecuador, Avianca, Copa, Copa Colombia, ALTA and IATA.

2.2 After considering the proposal of the FAA/USDA and the available data, it was decided that a pilot programme would be initiated at Panama's Tocumen and Guayaquil Int'l Airports. They were chosen based on their high bird strike incidents rates, support from airlines and aeronautical authorities, and the similar situation of their natural environments.

2.3 A tentative schedule for the pilot programme was presented and accepted by the participants.

2.4 A team of local champions was created to help drive current and future initiatives in key airports that will benefit from lessons learned during the Pilot Programme.

2.5 The FAA and USDA allocated funds for this project in 2012 and letters signed by the FAA, USDA, ALTA, IATA & ACI-LAC were sent to Guayaquil and Panama DGAC's and Airport Concessionaires to present the programme.

2.6 The local DGAC's, Airport Concessionaires and local BAR's of Panama and Guayaquil approved the project in January 2012 and provided the necessary support and funding to carry out the first phase of the project

2.7 A team of Biologist from the FAA and USDA visited Panama and Guayaquil airports for 3 days each, the last week of June and second week of October. They met with local authorities and airline industry representatives. They also visited the airports and their surroundings to get to know the current conditions, plans in action and establish a relationship with their wild life personnel and local champion team. The FAA produced a detailed report on the visit that can be found as **Appendix** to this Information Paper.

2.8 IATA and ALTA asked their airlines members for a second time to share with them bird strike incident reports from 2008 to 2011. The collated will be used by the Sub-Committee to identify what airports would benefit from this programme in the future once the PTY and GYE pilot projects are finished.

2.9 The sub-committee team met for the second time in Miami on Thursday September 27th at the IATA Miami Headquarters to review the on-going bird strike mitigation assessment at the Tocumen International Airport in Panama City- Panama and at the Jose Joaquin de Olmedo International Airport in Guayaquil –Ecuador and discuss the future of the project. The meeting was attended by Avianca, Copa, Copa Colombia, LACSA, LAN Ecuador, TAM, TACA and organizations such as Airbus, FAA, USDA and ACI-LAC (represented by Tocumen International Airport). Volaris, KLM, IFALPA and Boeing continue to provide support to the programme, but were unable to attend.

2.10 The sub-committee decided to name the programme WIN-CAP: Wildlife Incident Neutralization Cooperative Action Plan. The idea is that the same collaborative model will be used in the

future for different initiatives using the acronyms “CAP”, and this particular bird strike initiative is called “WIN” for “Wildlife Incident Neutralization”.

2.11 The FAA and USDA participated in the 2012 CARSAMPAF annual meeting in Jamaica and present the advancements of the WIN-CAP. While IATA and ALTA participated in the RASG-PA 5 and present the advancement there.

2.12 The third visit to PTY and GYE took place on the third week of March. The visit included a training component for the airport personnel in charge of their bird strike programmemes, that included techniques to collect evidence and how to keep statistical tract of the events.

3. Next Steps

3.1 As a result of the last Sub-Committee meeting, the following actions will be taken to keep driving the project forward:

- IATA and ALTA will survey which airports have mandatory bird strike reporting, like Colombia has implemented
- IATA and USDA will explore the possibility of hiring a full time Biologist to perform airport assessments for the next stage of the programmeme
- Copa Airlines, FAA and USDA will explore the possibility of an agreement with the Smithsonian Institute in Washington DC and a local PTY Institute to provide bird strike remains analysis for the region

3.2 The last visit to the airports will take place the second week of July. After this visit, a final report will be prepared by the USDA and FAA and presented to the airports to aid in their establishment of a wild life management plan for the airport.

3.3 The group is looking into the possibility of choosing two airports from Colombia and Brazil as the next places to continue the programme.

4. Suggested Action

4.1 The Sixth Regional Aviation Safety Group – Pan America (RASG-PA/6) Meeting is requested to:

- a) take note of the information provided in this information paper; and
- b) provide assistance and/or identify potential resources in order to ensure the success of this RASG-PA initiative in the future when new airports are chosen.

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Wildlife Incident Neutralization-Cooperative Action Project

Tocumen/Panama International Airport Site
Visit #2

10/1/2012

The International Air Transport Association, Latin American and Caribbean Air Transport Association, Airport Council International-Latin America and Caribbean, US Federal Aviation Administration, and US Department of Agriculture have come together to help airports, local governments, and the International Civil Aviation Organization address bird strike issues in the Latin American and Caribbean region. The initial phase of the project includes the conduct of year-long wildlife hazard assessments Tocumen/Panama International Airport and José Joaquín de Olmedo/Guayaquil International Airport. This report summarizes the second site visit at Tocumen/Panama International Airport.

USDA Report for Tocumen/Panama International Airport Secondary Site Visit

The second site visit for the Pilot Project Wildlife Hazard Assessment at Tocumen International Airport (PTY) occurred Monday, October 1 and Tuesday, October 2nd, 2012. The purpose of this visit was to provide PTY personnel with undivided attention. Several of the goals were to make sure data collection was being conducted properly and to observe the team performing surveys. We also wanted to discuss PTY's future plans for vegetation management and drainage canal management. In addition to completing project goals at PTY a meeting was scheduled with the Smithsonian Tropical Research Institute (STRI). The meeting was to determine if STRI had the capability to conduct feather and DNA identification of wildlife/bird remains found on airplanes and if the Institute was interested in conducting such identification for PTY.

Observations began on October 1, 2012. Upon observation of the data and correspondence with the bird survey team, we found inadequacies in the data collection. We quickly made corrections and moved forward with the data collection. Due to the corrective action, data will not be compromised.



Lic.Yenny Liz Gomez M. conducting bird survey at Tocumen S.A.

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On Monday afternoon we met with Mr. Daniel Ciniglio, Maintenance Manager at PTY to discuss the importance of vegetation management and maintenance of the canal system at PTY as it pertains to the management of wildlife species deemed hazardous to flight safety. Mr. Ciniglio described the new management efforts that would begin in early 2013 to address the green spaces and the canal systems at PTY. These new efforts would be aimed at minimizing the amount of standing water and the amount/height of vegetation throughout the airfields at PTY. This in turn will help with the mitigation of wildlife/bird strike threat at PTY as it relates to flight safety.



Tall vegetation at/near the departure end of the runway.

On Tuesday, October 2, 2013 we met with STRI to introduce the project to Dr. Matthew Miller Postdoctoral Fellow at STRI and to take a tour of the STRI campus. Melissa Hinds and the PTY wildlife team, Carol Dominguez of COPA Airlines-PTY, Arleene Fabrega Conte, Asesora de Peligro Aviario y Fauna of Tocumen and Michael Pacheco of USDA APHIS Wildlife Services were present at the meeting. We expressed to Dr. Miller the importance of airports having the ability to identify wildlife/bird remains found on aircraft after a collision has occurred. The identification of wildlife/bird species involved in these collisions is paramount in helping manage the threat and helping create a safer flying environment. Dr. Miller expressed his interest in the project and informed us that STRI indeed had all the equipment necessary to identify remains.



Dr. Miller provides a tour of STRI.



A small section of the STRI lab.

Following the meeting, we received a tour of the STRI campus. During the tour we discussed moving forward with an additional meeting the following morning with PTY leadership to discuss the plan and possible cooperative relationship with STRI.



Museum Specimens at the STRI feather ID lab collection.

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A meeting with PTY leadership took place Wednesday, October 3, 2012 to introduce the STRI project to Mr. Claudio Dutary, Operations Manager at PTY. Carol Dominguez of COPA Airlines-PTY, Licda. Arleene Fabrega Conte Asesora de Peligro Aviario y Fauna of Tocumen, Dr. Miller of STRI and Michael Pacheco of USDA APHIS Wildlife Services were present at the meeting. We discussed the importance of the identification of strike remains to flight safety and the lack of wildlife/bird strike information for PTY. In addition, Dr. Miller explained the capability of STRI to conduct the data analysis needed. Mr. Dutary expressed an interest in the feather ID and DNA identification project and a keen interest in developing a relationship with STRI. At the end of our meeting, Mr. Dutary asked for bottom line numbers for the cost of analysis and Dr. Miller suggested he would draft a proposal and submit to PTY.

At the end of the visit at PTY, we summarized what we had observed and experienced. We talked about properly collecting data for at least the full year from when we started and beyond. We spoke of possible scenarios in working with STRI in Panama to help them identify species of birds involved in bird strikes. We spoke of future plans for managing the vegetation and standing water found throughout the airfields. We spoke of utilizing cooperators outside PTY to help with addressing threats found outside the boundary of PTY property.

Specific goals that we will be working on through the next visits are as follows:

Site Visit #3-February/March 2013

- Conduct dawn and dusk wildlife surveys with wildlife management staff
- Meet with STRI and PTY staff to discuss a protocol with STRI for identification of bird remains
PTY and STRI should coordinate meeting time and place
- Determine the appropriate grass heights for the airport and recommend a habitat management plan that will address the overgrown vegetation issue (this will be an ongoing discussion as more data is collected)
- Discuss the new plan for the PTY drainage improvements project and discuss the future measures of controlling standing water adjacent to the PTY runways (this will be an ongoing discussion as more data is collected from PTY Maintenance Department)
- Determine which current wildlife management techniques work and which are ineffective at PTY and train on new techniques with wildlife management staff
- Conduct a wildlife management training program for PTY operations and maintenance staff

Site Visit #4-June 2013

- Conduct final dawn and dusk wildlife surveys with wildlife management staff
- Meet with wildlife management staff to discuss initial results of collected data and how it will be incorporated into final report
- Meet with stakeholders from initial meeting and present a summary of work conducted, general results of collected data, accomplishments-to-date, and what can be expected in final report

The goals listed above may change and new ones may be added as the project evolves.

For additional information, please contact Amy Anderson, FAA Wildlife Biologist at amy.anderson@faa.gov or Michael J. Begier, National Coordinator, USDA Airports Wildlife Hazards Program at mike.begier@aphis.usda.gov.

Wildlife Incident Neutralization-Cooperative Action Project

José Joaquín de Olmedo/Guayaquil International
Airport Site Visit Report
Visit #2

10/4/2012

The International Air Transport Association, Latin American and Caribbean Air Transport Association, Airport Council International-Latin America and Caribbean, US Federal Aviation Administration, and US Department of Agriculture have come together to help airports, local governments, and the International Civil Aviation Organization address bird strike issues in the Latin American and Caribbean region. The initial phase of the project includes the conduct of year-long wildlife hazard assessments at Tocumen/Panama International Airport and José Joaquín de Olmedo/Guayaquil International Airport. This report summarizes the second site visit at José Joaquín de Olmedo/Guayaquil International Airport.

USDA Report for José Joaquín de Olmedo/Guayaquil International Airport (GYE) Second Site Visit

The second site visit for the Pilot Project Wildlife Hazard Assessment at José Joaquín de Olmedo/Guayaquil International Airport (GYE) occurred Thursday, October 4th 2012 and Friday, October 5th, 2012. The purpose of this visit was to verify that data collection was being done properly and to observe the wildlife team performing surveys and provide guidance. We also wanted to discuss GYE's future plans for vegetation management, harassment techniques and identification of bird strike remains. Monica Chevez, Jefe de Control de Fauna, from TAGSA was our contact person.



Members of the GYE Wildlife Mitigation team.

Due to the Environmental Impact Study (EIS) study conducted from March 2008 to February 2009, the wildlife management staff at GYE was well versed in the operational aspects of conducting the bird surveys. The wildlife management team was doing a great job in conducting the GYE wildlife surveys and collecting the necessary data. Methodologies used for data collection were consistent with those used during the initial site visit. The team was efficient with their time and paid close attention to detail.



Iguana observed during the wildlife survey at GYE

During this site visit, the wildlife staff demonstrated the various forms of pyrotechnics they use to deter/harass wildlife at the airport. The pyrotechnics available for use at GYE are fire crackers and bottle rockets. Although these basic pyrotechnics used at GYE are relatively effective, I would recommend that GYE provide the wildlife management team with pyrotechnics and pyrotechnic launchers specifically developed for wildlife control. For safety purposes, the wildlife management team should transport (via vehicle) and store all pyrotechnics in approved containers for pyrotechnics. Also, I would recommend that personnel using pyrotechnics utilize eye and hearing protection at all times.

Observations of the vegetation at GYE during the site visit were favorable. Vegetation was maintained at a manageable height, drainage ditches were continually being maintained with netting, and cleared of vegetation. Vegetation which provided roosting sites and shelter for various bird species observed during our 1st visit had been removed. This action minimized roosting and loafing locations on the airfield.



GYE Site visit 1



GYE Site visit 2

Potential perching sites had been observed on the airfield during the initial site visit. Piles of construction debris and dirt were located on some portions of the airfield where the perimeter road was being built. This debris provided cover and foraging sites for various bird species. It was noted during the second site visit that the construction piles and mounds of dirt had been removed as recommended. This action eliminated perching areas used by hawks and other birds.



Large construction piles and mounds of dirt removed along canal

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On Oct 5th, I received a tour of the GYE trash and recycling area. The trash collection area and recycling transfer station were very well maintained. Two large roll off dumpsters used for trash collection were located under a covered shelter and were free of birds and other wildlife.



Trash Receptacles under covered structure

The recycling area was just as well maintained and free of wildlife and birds. The area was very clean and orderly. The recycling station was in an enclosed area and the cardboard recycling collection station was designated in an enclosed trash bin.



Trash/Recycling transfer station



Card Board Recycling Station

At the end of the visit, we summarized what we had observed and prioritized some of the issues. We talked about continuing the data collection for at least the full year from when we started. We also spoke of continuing data collection beyond the initial pilot project. The wildlife management staff expressed an interest in learning how to use ARC View and I informed them we would address that in future visits. We spoke of the importance of identifying bird strike remains and the possibility of utilizing STRI as their source for bird strike identification. In addition, plans for continuing vegetation management and developing a preferred standard for vegetation height at GYE were discussed with GYE staff. Finally, the importance of coordinating with cooperators outside GYE to help with addressing wildlife threats outside the boundary of GYE property was stressed and encouraged.

Specific goals that we will be working on through the next visits are as follows:

Site Visit #3-February/March 2013

- Conduct dawn and dusk wildlife surveys with wildlife management staff
- Conduct training for GYE operations and maintenance staff on habitat and wildlife management
- Determine roles and responsibilities for data input and development
- Determine best methods for managing data (i.e. Excel, ArcGIS etc.)
- Determine which current wildlife management techniques work and which are ineffective at GYE and discuss new techniques and tools with wildlife management staff
- Strategize with LAN and TAGSA on additional ways to work with local government authorities on the wildlife attractants located off airport property Collect more information on how and when mitigation activities can be conducted on Isla la Palmar (this will be an ongoing discussion throughout the project)Conduct a wildlife management training program for PTY operations and ground maintenance staff

Site Visit #4-June 2013

- Conduct final dawn and dusk wildlife surveys with wildlife management staff
- Meet with wildlife management staff to discuss initial results of collected data and how it will be incorporated into final report
- Meet with stakeholders from initial meeting and present a summary of work conducted, general results of collected data, accomplishments-to-date, and what can be expected in final report

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