

# ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION



## SUSTAINABLE IS ATTAINABLE

ICAO'S RIO+20 BIOFUELS INITIATIVE

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STATE PROFILE: VENEZUELA

SPECIAL PREVIEW:  
12<sup>th</sup> AIR NAVIGATION CONFERENCE

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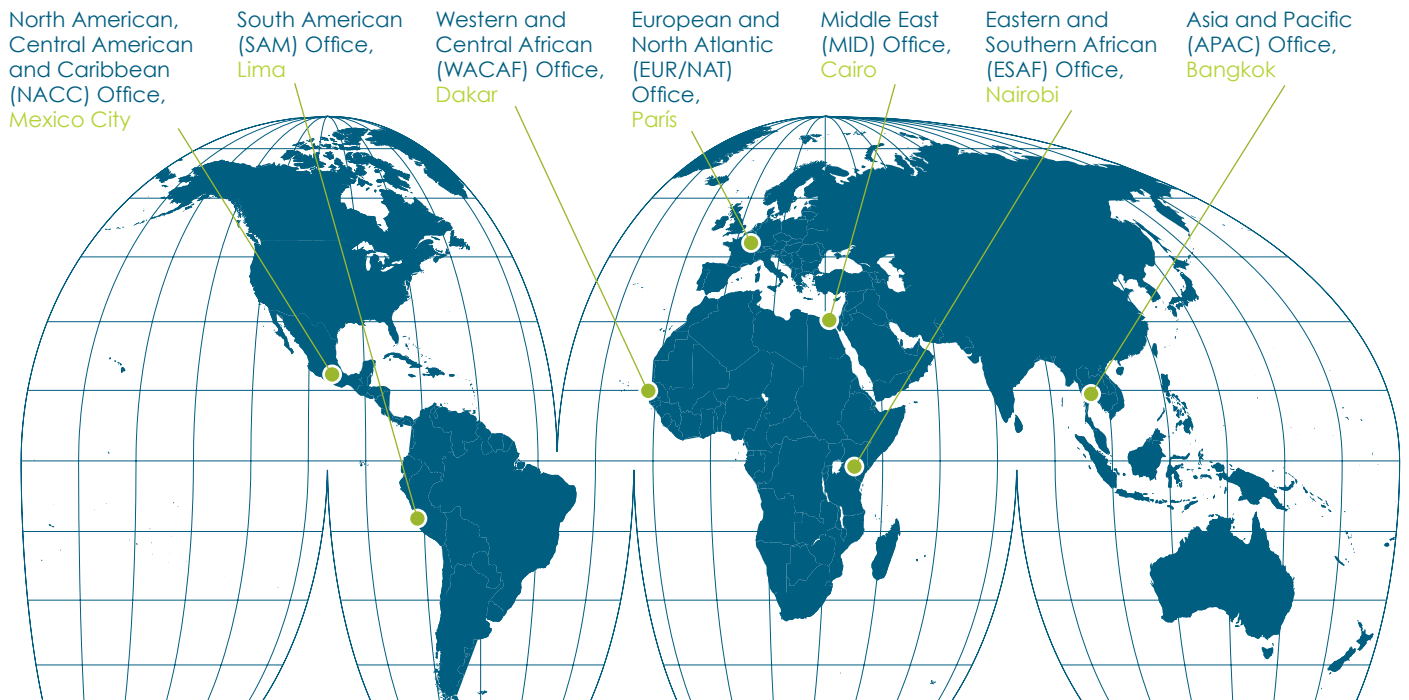
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## ICAO's Global Presence





# Performance-based Navigation (PBN) Symposium

**16–19 October 2012**  
**ICAO Headquarters, Montréal**

This unique event will bring together key stakeholders from the aviation industry including, international organizations, aircraft manufacturers, air navigation service providers, airlines, regulators, ATC system manufacturers, avionics designers, air traffic controllers, pilots, the military, aeronautical information companies and instrument procedure designers to share the latest developments relating to performance-based navigation applications.

The Symposium will provide an opportunity to:

- Discuss recent developments, strategies and guidance material.
- Review the status of global and regional implementation.
- Examine actual examples of procedures in use.
- Identify the challenges that need to be addressed in order to speed up the implementation process.
- Develop an action plan for presentation to the 12<sup>th</sup> Air Navigation Conference (16–30 November 2012).


For more information please visit:

[www.icao.int/Meetings/PBN-Symposium](http://www.icao.int/Meetings/PBN-Symposium)



**Raymond Benjamin, *ICAO Secretary General***

# HIGHLIGHTING OUR FLIGHTPATH TO A SUSTAINABLE FUTURE

 On 18 June, I left Montréal on the first of four successive commercial flights taking me to Rio+20, the United Nations Conference on Sustainable Development hosted by Brazil.

Highlighted as a 'Flightpath to a Sustainable Future', my journey from Montréal to Rio represented the first-ever series of connecting scheduled flights powered by sustainable alternative fuels – a pioneering achievement in aviation environmental progress. The fuels used on my flights specifically were blends produced from camelina, jatropha, inedible corn oil and used cooking oil, while one of two parallel biofuel flights to Rio+20 also employed a sugarcane based fuel blend.

Though it may sound simple enough to envisage an aircraft flying rather straightforwardly with a different type of fuel, the 'Flightpath' effort in fact required significant and extraordinary investment and cooperation amongst a wide range of aviation community stakeholders.

Leg 1 of my journey saw me flying on a Bombardier Q400 turboprop flown by Porter Airlines. We flew this 494 km segment on a blend of camelina and ordinary jet fuel.

On Leg 2 from Toronto to Mexico City, the Air Canada/Airbus A319 'Perfect Flight' employed a fuel blended with used cooking oil to power it along the full 3,243 km length of its route. Air Canada/Airbus also collaborated with respective air navigation service providers for this portion of the 'Flightpath' in order to employ the latest performance-based routes and take-off/landing trajectories.

Leg 3 was the longest segment flown and saw an Aeromexico Boeing 777-200 carry myself and 166 fellow passengers 7,423 km from Mexico City to São Paulo on a biofuel blend which included used cooking oil, jatropha and camelina. This flight also made use of optimized air traffic management to enjoy further fuel and CO<sub>2</sub> emissions savings.

The final leg of my journey was aboard a GOL Boeing 737-800. It took us to Rio's Santos Dumont International Airport on a fuel blended with inedible corn oil and used cooking oil. When we arrived in Rio we were met by a packed press conference coordinated as part of the Rio+20 'Aviation Day' activities, joined at the time by Brazil's Minister of Development, Industry and Foreign Trade, Fernando Pimentel, as well as the Chief Minister of the Brazilian Civil Aviation Ministry, Wagner Bittencourt. Several prominent industry representatives were also on hand to explain and share the achievement.

Taken together, the ICAO 'Flightpath' series of flights have demonstrated more clearly than ever before that sustainable alternative fuels can serve as an important cornerstone of



Raymond Benjamin, speaking to press and gathered officials at Montréal's Pierre Elliott Trudeau International Airport prior to the first leg of his 'Flightpath' journey.

aviation's broader emissions reduction efforts. As production processes are fine-tuned and ramped up to provide sufficient quantities for the global aircraft fleet, bio and alternative fuels should significantly and practically reduce air transport's CO<sub>2</sub> emissions.

It must be stressed, however, that world airlines currently have access to only very small quantities of sustainable alternative fuels, at an equally limited number of locations. Strategic government assistance can make it more viable for producers to deliver the required volumes at prices comparable to traditional jet fuel and at a much greater number of airports worldwide.

This serves to underscore the second vital message of the 'Flightpath': namely that focused collaboration amongst aviation's multiple States and stakeholders remains our most assured path to sustainable progress and improved emissions reduction.

Aviation today is relentlessly pursuing greater use of low-carbon technology, environmentally friendly materials, appropriate infrastructure, new aircraft systems, greener operational measures and sustainable energy sources. It remains the only sector to agree to a 2 percent annual fuel efficiency improvement and, amongst other targets, recently moved one step closer to an aircraft CO<sub>2</sub> Standard.

I am grateful to have been given the opportunity to showcase these successes with ICAO's collaborative 'Flightpath' biofuels initiative and wish especially to thank Jane Hupe and her team in our Environment Branch for the vision and hard work they provided with respect to initiating and realizing this unique achievement. ■



# SUSTAINABLE IS ATTAINABLE

## Highlighting ICAO's Rio+20 Biofuels Initiative

✈ When ICAO Secretary General, Raymond Benjamin, touched down in Rio de Janeiro on 19 June 2012, it signaled the completion of an unprecedented series of connecting international flights powered by sustainable alternative fuels.

The global initiative, entitled 'Flightpath to a Sustainable Future', was launched by ICAO with the support of the Air Transport Action Group (ATAG) as a special initiative to coincide with the United Nations Conference on Sustainable Development, known as Rio+20. This conference was expected to be a major event to address a green economy in the context of sustainable development and poverty eradication, with the participation of 50,000 people from governments and civil society.



Organized in close cooperation with numerous industry stakeholders, the journey included flights operated by Porter Airlines, Air Canada, Aeromexico and GOL. The flights, which utilized various blends of sustainable aviation biofuel, also involved the world's largest aircraft manufacturers, including Bombardier, Airbus and Boeing. The initiative was complemented by the first Azul Airlines and Embraer biofuel test flight, using a sugarcane blend, as well as another landmark flight, operated by KLM from Amsterdam to Rio, KLM's longest flight ever using biofuel.

The ICAO Journal recently spoke with Jane Hupe, ICAO's Chief, Environment Branch, who conceived and coordinated this initiative, about the challenges and cooperation behind the event, the significance of the biofuel flights and what it means for the future of sustainable aviation.

### ICAO JOURNAL: WHY WAS THIS PARTICULAR INITIATIVE CHOSEN FOR RIO+20?

**Jane Hupe:** Rio+20 was a meeting of 50,000 people. From the seven priority areas identified for the conference (decent jobs, energy, sustainable cities, food security and sustainable agriculture, water, oceans and disaster readiness), sustainable energy seemed to be the one of more direct relevance for aviation. If we wanted to have an ICAO event among the myriad high level issues being discussed at Rio, it had to stand out. So the challenge was: how could we pass on a message about our environmental activities in a way that people would really notice? We needed something concrete, something tangible. We needed something unique that would get the attention of the media, the participants and the public in general.

### HOW DID THE INITIATIVE EVOLVE?

We started with the idea of one day dedicated to aviation that would include a biofuel flight in Rio. We were aware of many ongoing initiatives by local air carriers and we began exploring it. Then, as the meeting of the G20 that immediately preceded Rio+20 was being held in Los Cabos, Mexico, and recognizing that the Mexican Government had a quite advanced programme in biofuels for aviation, we started to consider the possibility of a flight from Mexico to Rio. This would definitely gain the attention of the international media and high level Government officials present at the G20 meeting. Then we thought about Porter Airlines in Canada which had operated some flights using alternative fuels from Montréal to Toronto a few months earlier. So the possibility of a flight path from Montréal all the way to Rio started to emerge. The remaining link was Air Canada (Toronto-Mexico) and that flight became their first flight using alternative fuels and, through coordination with the United States, it was operated on a fully optimized trajectory. Suddenly, in less than three months, we started to pull it together. ATAG and ACI and many other partners were involved throughout the project. We had to involve technical people, operational people, fuel supply specialists, alternative fuel specialists, regulatory officials and many others. On the

## ABOUT THE FLIGHTS

The flights carrying the ICAO Secretary General included:

1. Porter Airlines flight 414, from Montréal to Toronto, on a Bombardier Q400 using fuel derived in part from camelina.
2. Air Canada flight 991, from Toronto to Mexico City, on an Airbus A319 using fuel derived from used cooking oil, supplied by SkyNRG.
3. Aeromexico flight 014, from Mexico City to São Paulo, on a Boeing 777-200 using fuel derived from used cooking oil, jatropha and camelina, supplied by ASA.
4. GOL flight from São Paulo to Rio Santos Dumont, on a Boeing 737-800 using fuel derived from inedible corn oil and used cooking oil, supplied by UOP, a Honeywell company.

Two related flights:

1. Azul Airlines test flight to Rio Santos Dumont, on an Embraer 195 using fuel derived from sustainable sugar cane, supplied by Amyris.
2. KLM flight 705 from Amsterdam to Rio de Janeiro International, on a Boeing 777-200 using fuel derived from used cooking oil, supplied by SkyNRG.

## ABOUT THE PARTNERS

The flights were coordinated through collaboration involving, among other partners: Aeromexico, Air Canada, GOL and Porter Airlines; Airbus, Boeing and Bombardier; Aeropuertos y Servicios Auxiliares (ASA), Curcas, SkyNRG and UOP; Aéroports de Montréal and Infraero; ANAC and the Air Transport Action Group (ATAG). Additionally KLM, as well as Amyris, Azul and Embraer were involved in other sustainable biofuel flights on 19 June 2012.

## ABOUT THE DECLARATION

The biofuel flights to Rio carried a message from the aviation industry itself as the ATAG Aviation & Environment Summit's Declaration was delivered to leaders at Rio+20. Signed by the heads of associations representing the world's airports, airlines, air navigation service providers and manufacturers, the declaration reiterates the air transport sector's commitment to environmental responsibility while ensuring that it can continue to bring enormous benefits to communities and economies around the globe. The industry declaration can be downloaded from: [www.aviationbenefitsbeyondborders.org](http://www.aviationbenefitsbeyondborders.org)

financial side, the Inter-American Development Bank, a big supporter of aviation biofuel initiatives, was there from beginning to end. As the project developed, I think we involved close to 400 people from all areas.

It was particularly challenging on the technical side because we were working with many 'firsts' and a wide range of different stakeholders. We saw tremendous support from the airlines in showcasing the importance of sustainable alternative fuels through this initiative. It underscores that this is a vital issue for the industry and we proved that, from the technology perspective, aviation is ready. We used different fuels on different airlines. We proved that it's a global movement, not just one local initiative. We proved that it is possible to deliver a drop-in replacement for conventional Jet A using different feedstocks, sustainably. You can create it from completely different sources around the world – but the end result is a drop-in fuel that does not require any modification of the aircraft or engines.

#### WAS THERE ANYTHING THAT SURPRISED YOU ABOUT THE EVENT?

Yes. In order to be very transparent and inclusive, we invited a broad cross-section of stakeholders to provide their views on the issues including representatives from the agriculture sector in Canada. We were expecting some backlash because of the issue of food production versus biofuel production, but the message received was strongly supportive. From an agriculture perspective, the feedstocks being considered for biofuel can easily cohabitate with existing crop production, and support for the industry initiatives was expressed.

#### WHAT WAS THE KEY TO SUCCESS OF THE RIO+20 EVENT?

Cooperation. The collective support of all involved and commitment to success made it a reality. That cooperation from such a large number of partners resulted in the first internationally connected biofuel flights, across two continents, including the first green corridor through the United States. ICAO was able to bring this broad range of stakeholders together to facilitate a common message. The passengers were also very receptive and excited to be part of the initiative.

Of course, there was an element of luck, since we did not experience any schedule disruptions due to weather events or mechanical problems. When you plan such a large undertaking, there are a lot of opportunities for something to go wrong. In the end, we had a perfect series of flights.

#### WHAT'S THE MOST IMPORTANT THING TO TAKE AWAY FROM THIS EVENT?

I would like people to remember that ICAO and the entire aviation industry have common objectives when it comes to addressing climate change. Because of that, the industry is truly able to collaborate, which is an important message. I don't think any other industry would have been able to coordinate an

undertaking of this magnitude in such a short time frame. We know that our messages were clearly communicated, since we saw the political representatives in Rio discussing what the sector needs to make sustainable fuels a reality.

#### WHAT'S THE NEXT LOGICAL STEP IN TERMS OF AVIATION AND SUSTAINABLE FUELS?

Beyond communicating the importance of sustainable fuels for aviation, there must also be the political will for their development. Regulatory barriers should be addressed and policies are needed which recognize that, unlike other sectors that could use solar, wind or nuclear sources of renewable energy, aviation is dependent on liquid fuels. Additional incentives should be explored along with sources of financing such as through the Inter-American Development Bank which has identified sustainable biofuels as a priority area. With those funds, governments should invest in research, in creating the infrastructure and in those industries that will process feedstock for biofuel. ■

## AN APP-PROPRIATE ENVIRONMENTAL INITIATIVE



ICAO has launched an iPhone and iPad app of its Carbon Emissions Calculator.

The ICAO Carbon Emissions Calculator is an impartial and internationally approved tool that computes the amount of carbon dioxide (CO<sub>2</sub>) emissions from a given flight for use in carbon-offsetting programmes. The methodology used takes into account a range of variables such as aircraft type, route specific data, passenger load factors and cargo carried.

"As of today, anyone with a mobile device can calculate his or her carbon footprint on the go. The new ICAO Carbon Emissions Calculator app is the perfect tool to allow all of us to become more aware of our environmental footprint and of how we can individually and collectively make a difference," said Raymond Benjamin, Secretary General of ICAO.

Available on the Internet since 2008, the ICAO Carbon Emissions Calculator is used worldwide by the general public and all UN agencies to compute their carbon footprint, whether from personal or work-related air travel.

The app for iPhones and iPads was launched in June and is available through iTunes. An android version will be available shortly.

LEG 1: Montréal - Toronto

LEG 2: Toronto - Mexico City

porter

AIR CANADA 

**BOMBARDIER**  
the evolution of mobility

 **AIRBUS**  
AN EADS COMPANY

AÉROPORTS DE  
**MONTRÉAL**

 **SkyNRG**  
Sky Energy | The Fuel Future



 **AEROMEXICO** 

**GOL**  
Linhas aéreas inteligentes

 **BOEING**

 **BOEING**

 **BIO turbosina** ✈️  
Aeropuertos y Servicios Auxiliares

 **INFRAERO**

Additional test flight conducted by:

 **Azul**  
Lufthansa Group

 **EMBRAER**

 **AMYRIS**

LEG 3: Mexico City - São Paulo

LEG 4: São Paulo - Rio

# FUEL QUALITY CONCERNS FUEL ICAO SAFETY INITIATIVES

✈ Although fuel quality has not received much attention in the past, it can have a big impact on aviation safety and that's why ICAO is championing the issue, teaming up with the International Air Transport Association (IATA), Airlines for America (A4A) and Airports Council International (ACI) to collaboratively address safety concerns.



John Armbrust, President of Armbrust Aviation Group (AAG), presents Distinguished Service Award to Yong Wang, Chief, Aerodromes Section, ICAO Air Navigation Bureau

ICAO's involvement was originally spurred by a safety recommendation from the Civil Aviation Department of Hong Kong, China, arising from an investigation of an A330 accident in 2010, where fuel contamination caused aircraft damage and resulted in passenger injuries during a subsequent emergency evacuation.

"In order to address the emerging issue of aviation jet fuel quality, which may have an adverse impact on aviation safety, ICAO decided to work with the industry to develop provisions

on the proper receipt, storage and distribution of aviation fuel at airports for commercial transport aircraft," said Yong Wang, Chief, Aerodromes Section, ICAO Air Navigation Bureau (ANB).

Contamination of fuel can take the form of particulates or water, microbiological growth or cross contamination by other products, including other fuel grades or additives, along the fuel supply chain.

"It's complicated," said Wang. "The provision and supply chain includes refining, transportation, storage, the airport hydrant system and the refueling process itself."

The problem is compounded by the fact that there are many new entrants in the fuel supply industry, with varying levels of training and knowledge of industry standards.

"We wanted to get the message out as quickly as possible that this problem could be a nuisance – and it could also be catastrophic," added Wang.

ICAO teamed up with IATA, A4A and ACI. Within the ANB, the Aerodromes Section took the lead on the project, and a consultant was employed in the short term to provide assistance. A task force, comprising experts from both petroleum and aviation industries, was established within the IATA Technical Fuel Group (TFG) to draft technical material for inclusion in an ICAO manual.

That collaborative work resulted in an ICAO Manual on Civil Aviation Jet Fuel Supply (Doc 9977) which was developed and posted on the ICAO-NET in March 2012. The aim of the manual is to inform the aviation and petroleum industries around the world about the existence of internationally-accepted petroleum and aviation industry fuel practices and to reinforce the need for compliance.

The manual acts as a 'signpost' document, summarizing and directing readers to relevant industry policies, standards and procedures (PSPs) that cover all matters related to aviation fuel quality control, operations and training across the entire supply and distribution system, from the refinery to aircraft refueling.

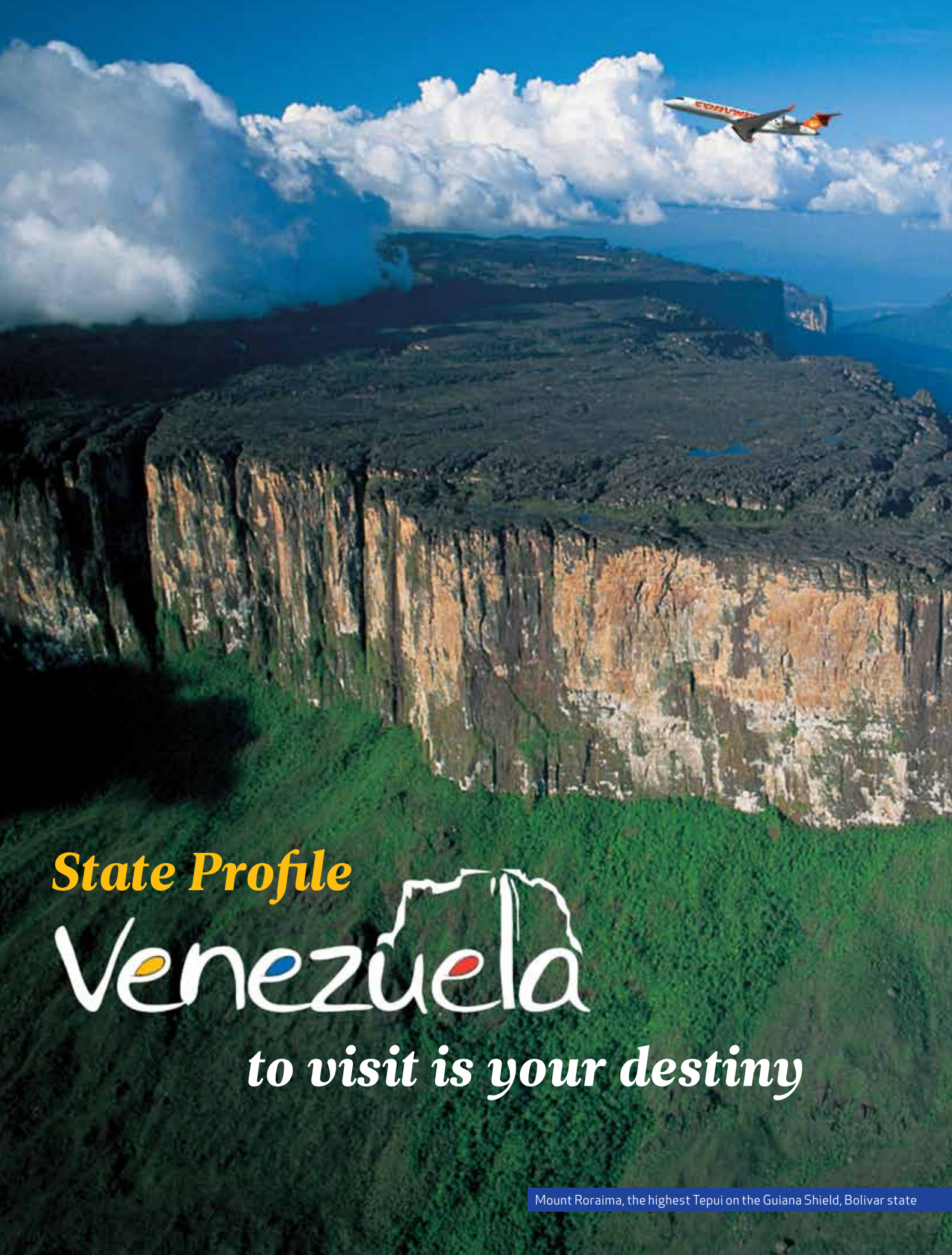
"The beauty of the manual is that it brings together, in one document, all accepted industry standards," said Wang. "It's the first time that the industry has accepted one set of standards for aviation fuel quality and the first time that aviation stakeholders have a common document to follow."

To date, positive feedback has been received from the industry on the collaborative effort and ICAO has been highly commended for its leadership. At the China International Aviation Fuel Conference & Exhibition in April 2012, co-hosted by the Armbrust Aviation Group (AAG) and the China National Aviation Fuel Group Corporation (CNAF), ICAO received a "2012 Distinguished Service Award."

"We honour those individuals, companies and organizations that have made significant contributions to the aviation fuel industry," said AAG President John Armbrust at the awards ceremony. ■

## FUEL FOLLOW UP

- A State letter (AN 4/26-12/28) dated 25 April 2012 has been sent out announcing the ICAO Manual on Civil Aviation Jet Fuel Supply (Doc 9977) and seeking information from States that would assist ICAO in further work on fuel quality issues.
- Rollout of the ICAO manual is planned through industry seminars/workshops (conducted mainly by industry, with ICAO assisting when and if possible).
- Emphasis will be placed on training and on ensuring that new entrants have a check list.
- Development of Standards and Recommended Practices (SARPs) will be considered, as necessary.
- Continued work is planned with industry. The ICAO manual will be updated to include new industry standards and regulatory practices.



*State Profile*

Venezuela

*to visit is your destiny*

Mount Roraima, the highest Tepui on the Guiana Shield, Bolivar state



*Speech at the Regional Conference of Aviation Security, Caracas-February 2012.*

## **Rear Admiral Elsa Gutierrez Graffe Minister of the Popular Power for Air and Aquatic Transport**

“Venezuela welcomes you with open arms, joyfully and enthusiastically by virtue of your invaluable participation in this event that joins, commits and strengthens us to collaborate in a joint and collective manner on an issue of great importance for human life, the efficient and effective mobility of people and merchandise, the interconnection among countries and the promotion of realistic actions to be taken against terrorism, within the complex aeronautical world. In this context, and with all delegations, observers and authorities present, I do declare, as the Minister of the Popular Power for Air and Aquatic Transport and in the name of the Bolivarian Republic of Venezuela, that we will continuously fight against terrorism and the unlawful acts within the aviation sector. All efforts shall be made for due respect and devotion to human beings, as well as to turn the aeronautical activity, especially the airport facilities, into a process that is invaluable and necessary for security, the integral development of our beloved nations and our economic systems.”

The Bolivarian Republic of Venezuela is a tropical country on the northern coast of South America. Its federal capital, Caracas, is officially called *Santiago de León de Caracas*. It is the country's largest city and the seat of the federal government and public administration.

With a surface area of more than 916,445 square kilometers (including its continental shelf) and a magnificent coastline of 3,000 kilometers, Venezuela possesses an extremely varied biodiversity with beautiful beaches, tropical forests, jungles, mountains, snowcapped peaks, extensive plains and national parks, as well as a highly developed metropolis packed with fascinating attractions.

Many different factors contribute to the tourism potential of Venezuela, including the country's aviation sector which contributes to the social, cultural and economic development of the Nation. In 2012, as Venezuela marks 100 years of civil aviation, the Nation is proud to highlight the essential role of civil aviation in the economic, social and cultural development of the country, fulfilling its responsibilities under the Chicago Convention and implementing ICAO Standards and Recommended Practices. In this way, Venezuela ensures that a safe and sound aviation sector continues to benefit its citizens and visitors for years to come.

Over the past decade, the Government of the Bolivarian Republic of Venezuela has implemented policies focused on macro



Honourable President of the Council of ICAO, Mr. Roberto Kobeh González, and President of INAC, Divisional General Francisco Paz Fleitas.

projects in the areas of training, technology, telecommunications, airport infrastructure and commercial air agreements. These policies and projects are designed to provide the country with an air transport service consistent with the global industry, while promoting friendship and mutual understanding among nations, a fundamental principle of the Chicago Convention.

## Achieving Goals and Increasing Flights

# Avior Airlines *Si Va!*



### Domestic Flights

Maracaibo	Barinas
Santa Elena de Uairén	Barcelona
Puerto Ordaz	Barquisimeto
Porlamar	Caracas
Valencia	

### International Flights

Aruba	Miami
Curaçao	Panamá



Aviation Safety Inspections



### Aeronautical Structure

To strengthen the organizational structure required to implement the commercial air policy determined by the Executive Branch, Venezuela established the Ministry of the Popular Power for Air and Aquatic Transport (MPPTAA)\* through Presidential Decree No. 8559 published in the Official Gazette of the Bolivarian Republic of Venezuela No. 3979, dated 2 November 2011. The decree sets out the regulation of maritime and air activities by the formulation, implementation, monitoring (as well as the assessment of policies, strategies, programs and projects) to guarantee the provision of services and balanced development of the national infrastructure, in order to become a mechanism for development, social inclusion, improvement of



Playa Medina, Sucre State



ICAO Regional Aviation Security Conference in Caracas – Venezuela (February 2012)

quality of life and integration among countries. This objective was articulated by the Head of State and Head of Government and outlined in the United Nations Millennium Development Goals of 2000, for the eradication of hunger and poverty.

Since the creation of the MPPTAA, the National Institute of Civil Aeronautics (INAC)\* of Venezuela has worked closely with the new body of the Executive Branch, given that the INAC was operating under the auspices of the Executive Vice presidency of the Bolivarian Republic of Venezuela until May 2012.



The investigation of accidents within the civil aviation sector is the responsibility of the Aeronautical Accidents Prevention and Investigation General Direction, an independent agency of INAC. This ensures compliance with ICAO provisions under Annex 13 (Accident Investigations) to the Chicago Convention; it also guarantees impartiality in all processes.

This organizational structure, enshrined within the public administration, was primarily designed to ensure due respect for sovereign principles and to safeguard Venezuelan interests, since the aeronautical sector is considered a matter of national security.

### Venezuelan Civil Aviation Authority – INAC

A new milestone in Venezuelan civil aviation was established in 2000 when the former General Sectorial Direction of Air Transport of the Ministry of Infrastructure (created in 1977) was replaced with a new organization responsible for the efficient management of the national aeronautical system, according to the provisions of the Constitution and applicable laws of the Republic. The Venezuelan Executive Branch created the National Institute of Civil Aviation, through the Law Rank Decree of 28 September 2001. Three years later, the name of the Institute was changed to National Institute of

Civil Aeronautics, as recorded in the Official Gazette of the Bolivarian Republic of Venezuela No. 38333 dated 12 December 2005. A partial amendment was made on 17 March 2009 and published in the Official Gazette of the Bolivarian Republic of Venezuela No. 39140. The amendment recognized a specific Aeronautical Authority that has performed the supervision, oversight and regulation of the aeronautical sector during the past 11 years.

INAC is an autonomous, technical institution with legal authority for the oversight and regulation of aeronautical activity, the development of commercial civil aviation and the supervision of air navigation services. Its organizational structure consists of three levels:

- Coordination level: coordinate activities among all parties involved in air traffic control operations; close collaboration with ICAO; joint defense activities with military authorities; implementation of learning and training processes for technical personnel; strengthening of operational and administrative units within the Institute.
- Support level: contribute to key activities performed by INAC.
- Substantive level: ensure that all General Managers effectively perform the fundamental activities of regulation, surveillance and supervision.

## AEROPOSTAL: 83 YEARS CARRYING VENEZUELA BENEATH ITS WINGS



Aeropostal, Alas de Venezuela is proud to be one of most long-lasting airlines in the world and one of the leading references in Venezuela. In 2012, Aeropostal keeps its mission of becoming the main leader in the air transport industry, besides supporting the commercial, social and touristic sectors of the country.

This passenger and cargo airline is devoted to its users by providing a high level standard of safety and quality, based on a highly qualified staff and state-of-the art technology.

Now, together with the Government of the Bolivarian Republic of Venezuela, Aeropostal Alas de Venezuela consolidates its commitment with the Revolutionary Project through the Ministry of Peoples Power for Air and Aquatic Transportation, under the direction of the Special Management Board. Aeropostal has centered its policies in fundamental actions such as the improvement of the labor conditions and benefits for all the employees, the payment of past labor dues to former employees, as well as the ongoing training and certification to the technical and operational staff, besides a Program of Maintenance, Renewal and Expansion of the existing fleet.

Aeropostal has been executing three development strategic lines: "Punctuality of the Schedules", attaining a rate of 82.3% during the first semester of the year, certified by the National Institute of Civil Aviation (INAC). At the end of June 2012, almost 560 thousand passengers were transported by Aeropostal, hence representing a high index in the factors of occupation of 80.81%.

The second line comprises in the "Quality of Service to Passengers". Our main objective is to ensure an efficient service on land and aboard through a comprehensive assistance to our passengers, with the help of a professional staff devoted to achieve a safe, disciplined and ordered operation, aimed to provide a service of quality, while fully complying with the rights and duties set forth by the Civil Aviation Authorities, safeguarding the users of our services throughout the country, and hence earning the acceptance and preference of the frequent travelers.

The third strategic line is comprised by the "Compliance to Safety Standards" in the air industry; the airline faithfully complies with all the regulations set forth in the Venezuelan Air Regulations.

Currently, Aeropostal Alas de Venezuela features a fleet of five aircraft (3 McDonnell Douglas MD-82 and 2 DC-9-50), which transports over 3,200 passengers a day and operates from Caracas to Porlamar, Barquisimeto, Puerto Ordaz, Maracaibo, Valencia and Maturin.

Our immediate goal is to consolidate ourselves as a reliable company under high levels of efficiency and competitiveness, and thus keep our leading position in the market and earn the preference of the users.





ATC towers in Venezuela meet ICAO standards in the field



Ramp inspection



VOR in Cabo Codera, Miranda state



Jetway at "Simón Bolívar" International Airport in Maiquetía

## AIR NAVIGATION

In accordance with the ICAO Strategic Objectives for 2005-2010 generally and Strategic Objective A-9 specifically, and based on close coordination between INAC and the Direction of Air Navigation Services (SNA)\*, the current President of INAC, Division General Francisco José Paz Fleitas, carried out the Modernization of Airports and Air Traffic Management Project (MAGTA)\*. The Project was developed in conformity with the recommendations of ICAO's Technical Co-operation Bureau for transparency within administrative procedures. This expedited the installation of state-of-the-art equipment and systems, the remodeling and upgrading of airport infrastructure, as well as the financing of telecommunications projects, with a total investment of more than 220 million dollars.

With particular attention focused on areas like airspace surveillance, air navigation aids, search and rescue, aeronautical communications and training, the MAGTA covers the hiring of civil staff and the acquisition of equipment, vehicles, basic systems and supplementary contracts, as set out in Annexes 3, 10, 11, 12, 14 and 15 to the Chicago Convention. These initiatives will help Venezuela meet its responsibilities as a Member State under the Air Navigation Plan for the Caribbean and South America Region (CAR/SAM), Volume I, Basic ANP, in accordance with article 28 of the Chicago Convention.

## Interconnection in pursuit of effectiveness

In order to modernize its telecommunications systems, Venezuela implemented (beginning in 2005) the WAN network, called AERONET, which facilitates a seamless and efficient interconnection among the operational units of INAC, extending to 53 airports nationwide and resulting in greater value-added improvements to the national aviation system.

The AERONET network supports a wide range of voice and data services: COSPAS-SARSAT systems, aeronautical message handling through AFTN (Aeronautical Fixed Telecommunication Network) and AMHS (Aeronautical Message Handling System), intranet, billing, INAC web site, institutional email system and facility access controls in different areas.

Based on ICAO recommendations related to the separation of administrative and operational networks (Annex 10, Volume II) and the commitment of Venezuela to modernize its systems consistent with rapid changes within the sector, the separation of administrative applications from the AERONET network was undertaken in 2011, through the creation of the Metropolitan Area Network (MAN), called ADMINET, supported by MetroEthernet links, which offer greater bandwidth and availability.

## Efficient and timely safeguarding of lives

In Venezuela, the provision of COSPAS-SARSAT satellite search and rescue services ensure that alert signals transmitted by maritime, aviation and personal beacons are received according to established standards and procedures.

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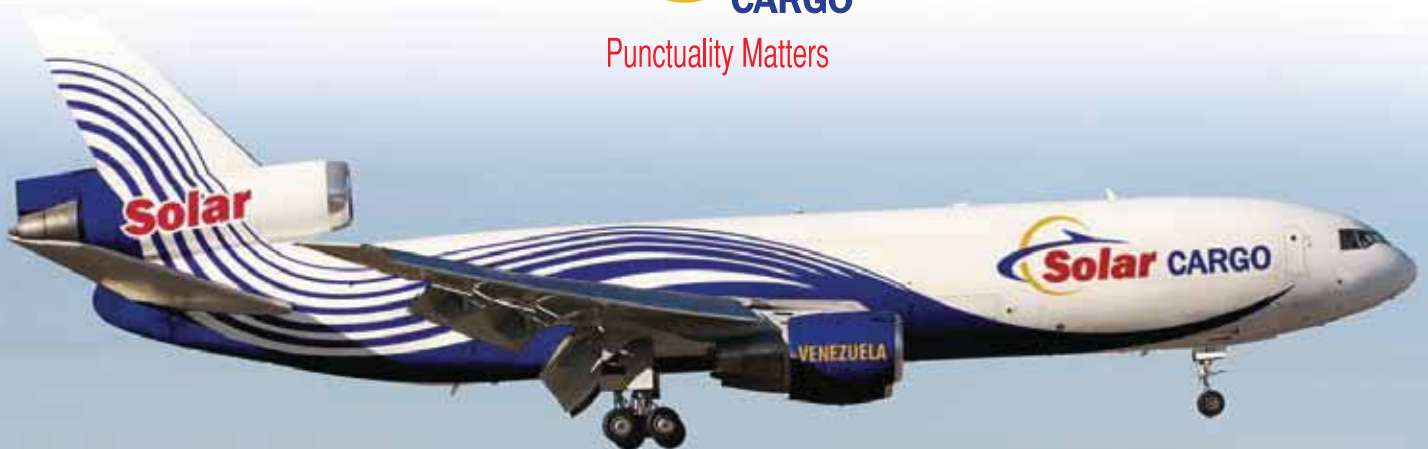
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Radar at “El Libertador” Air Base, Aragua state

The main benefits are: a 50 to 70 per cent reduction in the cost of Search and Rescue (SAR) operations; more effective use of available resources; more rapid localization of aircraft and an increase in the operating life of related equipment. The improved efficiency of work performed by SAR officials leads to more lives being saved and more aircraft recovered.

The National Registry for Emergency Locator Transmitters (ELTs) was created and updated while requirements were established for the implementation of the User Segment of the COSPAS-SARSAT Satellite-Aided System, through Complementary Rules to Venezuelan Aeronautical Regulation (RAV) No. 279 (NC 64-279). These rules cover the installation, codification, registry, certification, inspection and data base of ELT transmitters, operating on a frequency of 406 MHz. Identification and deactivation of false alarms and/or interference procedures are available in Venezuela, according to provisions set up in RAV No. 279, Section 279.11-13. In addition, ongoing training of the personnel in charge of the system is included.

#### **AIR TRANSPORT SYSTEM**

In order to handle the consistent growth in passenger traffic – 50 per cent over the past decade - the Venezuelan Aeronautical Authority set and achieved a goal of 80 per cent on-time

performance, a goal it will strive to maintain and improve in line with its commitment to passenger rights (customer service).

Enhancing the security, efficiency and orderly development of the air transport system also means expanding airport infrastructure. Venezuela today has 10 international airports among its 34 controlled aerodromes, plus 19 interconnected air terminals. There are 11 national commercial airlines operating in Venezuela, as well as 27 American, European and Caribbean carriers. Venezuela expects the number of carriers to grow, including special service operators.

#### **LINKS AND COOPERATION FOR INTERNATIONAL EVOLUTION**

Given that air transport contributes to the economic progress of nations, the Venezuelan State has participated through INAC as guest and host at numerous bilateral and multilateral meetings. Venezuela maintains commercial air agreements with many Latin American countries, as well as others in North America, Europe, Asia and Africa. Moreover, since the second half of 2011, Venezuela has developed closer relations with African countries through technical and goodwill meetings, in order to achieve greater south-south regional integration. These commercial agreements and cooperative initiatives are designed to expand commercial opportunities and develop international air navigation principles and techniques conforming to ICAO guidelines.

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## SAFETY MANAGEMENT

As the technical body responsible for the implementation of Venezuelan aviation policy, INAC is also charged with overseeing the operation of the State Safety Programme (SSP) and the Safety Management System (SMS).

The SSP-Venezuela was officially launched in October 2011, with the participation of an Implementation Group consisting of more than 50 officials ascribed to several functional areas of INAC and to the Aeronautical Accidents Prevention and Investigation General Direction. The SSP includes 16 specific safety activities to be performed by the State and contains regulations and guidelines to ensure that responsibilities regarding the safe and efficient operation of aviation activities are met.

### Training

The Venezuelan Civil Aviation Authority has offered a variety of SMS seminars to more than 2,000 internal and external participants. The seminar material covered all phases of the systems: planning; reactive, proactive and predictive response processes and compliance with safety provisions.

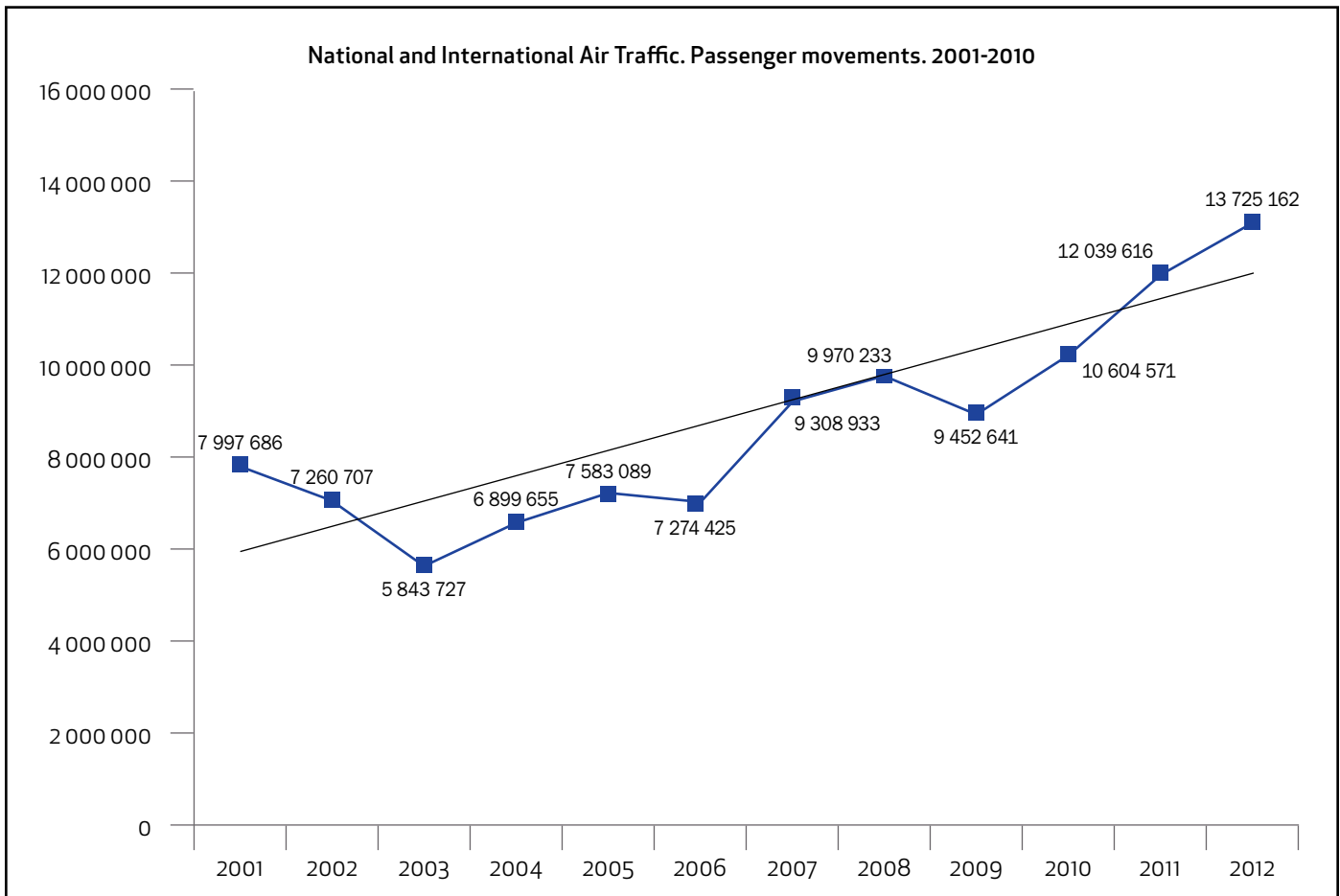
SSP seminars were also conducted for INAC administrative personnel. Venezuela is the only country within the Caribbean and South American Region (CAR/SAM) with three ICAO-led

sessions on SSP and SMS – for INAC’s executive and senior management, as well as for members of the SSP-Venezuela Implementation Group.

Venezuela has served as host country for four international events that have generated greater synergy between the Administration and the general public and fostered compliance with safety provisions:

- November 2011, 3rd Conference on Aviation Safety in Venezuela.
- December 2011, Regional Aviation Safety Group – Pan America Workshop.
- February 2012, Regional Conference on Aviation Security.
- February 2012, Airline Planning Seminar & Aviation Crisis Communication Seminar.

It is important to note that the Bolivarian Republic of Venezuela is also a pioneer in long distance learning. In April 2012, SMS Online Courses began for aeronautic inspectors, jointly taught with the Instituto Universitario de Aeronáutica Civil “May. Miguel Rodríguez” (IUAC)\*, with the objective of rapidly implementing SMS surveillance. This new methodology will be reinforced with on-site learning. More seminars will be given in 2012 with a target of training more than 2,500 participants. It is also expected that air navigation service providers and air operators will file SMS Implementation Plans.





TWO AIRLINES ONE WAY

CARACAS BARCELONA BARQUISIMETO ARUBA  
VALENCIA TENERIFE STO. DOMINGO DEL TÁCHIRA  
PUERTO ORDAZ LAS PIEDRAS MARACAIBO  
PORLAMAR MIAMI MATURIN PANAMÁ



Venezuelan Search and Rescue Service (SAR)



Zenithal view of Roraima Tepui, in the south of the country

### Technology

Early in 2012, the Events Notification System (SINEA) was made available to service providers and air operators through the Venezuelan Civil Aviation Authority website ([www.inac.gob.ve](http://www.inac.gob.ve)). It is supported by the ADREP/ECCAIRS platform, acquired through ICAO, to report on accidents as well as operational incidents, so as to compile real and meaningful data without any threat of sanctions. The objective is to build a database that will assist in establishing minimum acceptable levels of safety (ALOS) for Venezuela. This will expedite progress on SSP implementation and the development and publication of aviation safety news bulletins designed to inform the aeronautical community.

Relationships with other State Agencies, such as the military and the Aeronautical Accidents Prevention and Investigation General Direction – both with access to SINEA – have been reinforced to encourage more effective feedback.

As part of an online training strategy, a Moodle digital platform was developed for use as an instructional tool within the CAR/SAM region. A project to modernize and renew current working tools and equipment used during the training of aeronautical inspectors was undertaken.

### Regulatory framework

Specific regulatory instruments for SMS surveillance have been developed to guarantee a high level of aviation safety for all operations. Published instruments are:

- In January 2009, the Venezuelan Aviation Regulation (RAV) No. 5 regarding the “Safety Management Control System”
- In September 2009, the Complementary Norm No. 56-05 related to “System Planning”.

Legislation to enforce the implementation of SMS and SSP in Venezuela is in the approval stage, i.e. the pertinent legal instrument for Phases II, III and IV regarding the reactive, proactive and predictive response processes, and compliance with safety provisions.

### Media

The main communication instruments available to INAC for aviation safety are:

- Internal publications: notice boards located at INAC facilities nationwide; widely distributed biweekly news bulletins; online publications sent to all INAC personnel through the institutional e-mail system.
- External publications: the INAC institutional website and a quarterly magazine sent to all members of the aeronautical community nationwide as well as to other State bodies involved in the sector.

An exclusive link regarding SMS and SSP will be created on the INAC website. It will feature all available information, promotional and educational material, informative leaflets geared to the general public and a bulletin on SMS.





### PIONEERS IN AERONAUTICAL EDUCATION

The Civil Aviation University Institute "May. Miguel Rodríguez" (created by Decree No. 6732, dated 2 June 2009) is the only educational institution in the Caribbean and Latin America Region that grants Advanced Technical Degrees (TSU)\* in air traffic control, search and rescue, radio aids and aeronautical station operations. Such studies ensure the availability of appropriately trained personnel in charge of key aviation areas.


Through IUAC, more than 100 students per year have access to free education to become technical specialists and/or professional pilots. Aeronautical personnel also have the opportunity to be continuously trained based on the ICAO TRAINAIR Programme. TRAINAIR was recently expanded to TRAINAIR PLUS to make the programme more widely available to the aviation community and more responsive to the needs of the Next Generation of Aviation Professionals (NGAP).

### THE AERONAUTICAL FUTURE OF THE NATION

The Administration of President Hugo Chávez is committed to carrying out the policies, strategies and measures necessary to the integrity of the Venezuelan air transport system, so that it continues to foster economic, social, cultural and tourism development. Progress in these areas will contribute to the evolution and consolidation of the CAR/SAM Region in its drive



**Vensecar International C.A.**  
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**as part of Venezuelan Aviation,**  
**celebrates together with INAC**  
**the 100 th anniversary**  
**of Venezuelan Civil Aviation**



**100 años**  
**Aviación Civil Venezolana**





The Venezuelan Aviation Fire Brigade is provided with latest generation equipment to deal with emergencies



English language training at IUAC in accordance with ICAO Linguistic Competence requirements

ICAO Council (Group II) jointly with the Republic of Colombia. All of these actions are aimed at contributing to the progress of international civil aviation and the development of the Venezuelan aviation and air transport sector, as well as the realization of the strategic guidelines proposed in the Simón Bolívar National Project.

*\*indicates acronym in Spanish.*

for safe, regular, economical, efficient and environmentally friendly air transport services.

As it celebrates its centenary of flight in 2012, Venezuela is proud of its progress and success and eager to begin a new century with major improvements to its air transport system, in line with efforts of other Member States, to enhance civil aviation throughout Latin America. Under the leadership of ICAO, the Nation will continue to devote resources to the modernization process with investments in leading-edge technologies, the expansion of airport infrastructure and the continuous training of personnel. This comprehensive commitment is dedicated to strengthening the Venezuelan air transport system.

Next year, Venezuela intends to meet new challenges as it prepares to file nomination papers for membership on the



Stone Chapel dedicated to the Holy Virgin of Coromoto in San Rafael de Mucuchíes, Venezuelan Andes

*Text prepared by INAC's Communication and Image Office*

# 100 YEARS OF VENEZUELAN CIVIL AVIATION

On September 29<sup>th</sup>, 1912, US pilot Frank Boland operated the first airplane flight over Caracas. This event prompted European and US commercial aviation operators to develop international routes by the end of the 1920s. Over a period of five decades, between the 1930s and the 1980s, Venezuela: strengthened a group of air transport carriers, e.g. Aeropostal Venezolana (LAV), Avensa, Taca, Viasa and RANSA; nationalized the airports; opened international routes and executed a Master Plan to enlarge, build and inaugurate an air traffic control tower and a second runway at the main airport terminal in Venezuela (Maiquetía) as well as purchase airplanes.

In 2006, Venezuela's safety rating was upgraded to Category 1 status and domestic airlines began to operate to the United States with their own equipment and crews. In 2007, Venezuela became a Member of the ICAO Council, Group II, for a three-year period. In 2009, the State was audited by ICAO with respect to aviation safety, security and facilitation. In all cases, Venezuela exceeded 85% of compliance. Ever since, the country has experienced dynamic growth within the sector and has achieved

significant progress towards the modernization of the whole aviation system in terms of technology, infrastructure and training. All these initiatives place Venezuela in the vanguard of best practices within the sector.



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**Venezuela: Territory of warm and kind people**



Gobierno Bolivariano de Venezuela

Ministerio del Poder Popular para Transporte Acuático y Aéreo



# Venezuela's Flag Airline

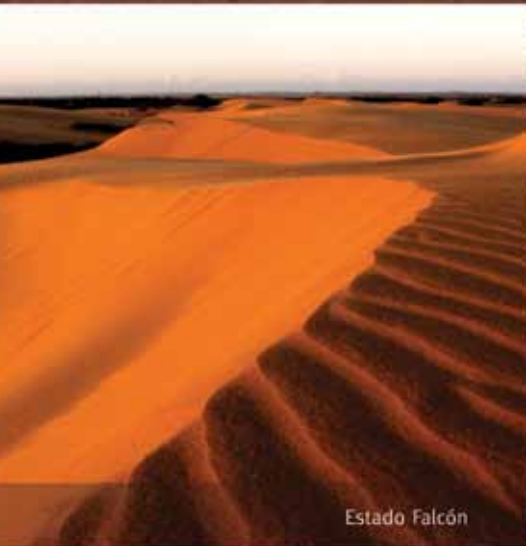
## Born in Revolution



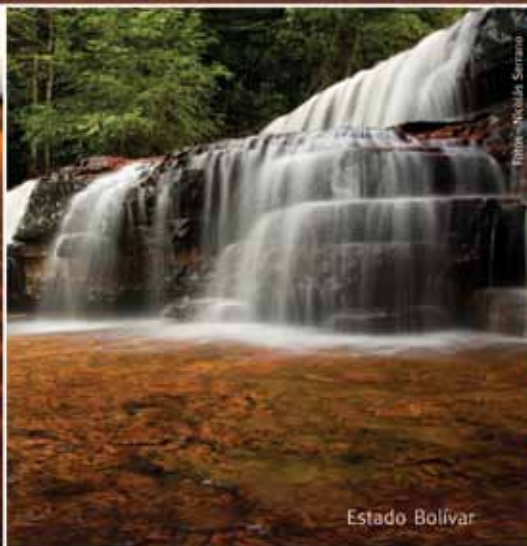
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# A PRACTICAL STRATEGY SUPPORTING A SHARED VISION

The 2012 12<sup>th</sup> Air Navigation Conference (ANConf/12) will provide ICAO Member States with a once-in-a-decade opportunity to endorse a new and industry-aligned strategy addressing global aviation's pressing capacity and sustainability challenges.

In this special look-ahead to the November event, the *Journal* reviews the specific outcomes ICAO will be seeking at the ANConf/12, including endorsement of the Fourth Edition Global Air Navigation Plan and its modular Block Upgrade methodology—a systems engineering solution developed by ICAO and industry stakeholders that will serve to cost-effectively enable global Air Navigation system harmonization and investment certainty, even as it respects and adjusts to each State's unique airspace requirements.

Over the last several years, ICAO has embarked on an unprecedented collaborative course – one whose challenges and targets are now set to converge this coming November at the Organization's prestigious 12<sup>th</sup> Air Navigation Conference.

As once-in-a-decade events, ICAO Air Navigation Conferences attract hundreds of high-level participants from every world region and serve to uniquely concentrate Member States and industry planners on the aviation community's most pressing global planning and strategic CNS/ATM development targets.

This year the Conference's challenges are perhaps more complex and more urgent than they have ever been before, as Member States will seek to agree on solutions that both address aviation's need for a safe and globally-harmonized means of mitigating its increasingly urgent capacity concerns, while simultaneously seeking to meaningfully contribute to the range of operational, technological and alternative fuels efforts now being pursued in order to cap aviation carbon emissions at 2020 levels by 2050.



# 12th Air Navigation Conference

ICAO Headquarters, Montréal, Canada  
19–30 November 2012

The 2012 12th Air Navigation Conference will provide ICAO Member States with a once-in-a-decade opportunity to endorse a new and industry-aligned strategy addressing global aviation's pressing capacity and sustainability challenges.

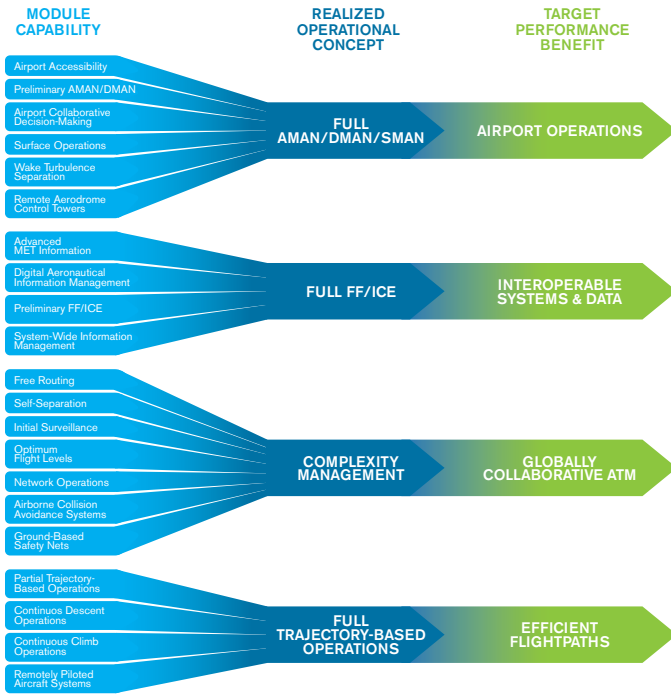
The purpose is to gain consensus, obtain commitments and formulate recommendations to achieve a harmonized global Air Navigation system for international civil aviation and optimize the opportunities in technology and maturing work programmes toward common global objectives.

ICAO will be seeking endorsement at this event of the Fourth Edition Global Air Navigation Capacity & Efficiency Plan and its modular Block Upgrade methodology—a systems engineering solution developed within the ICAO framework together with industry stakeholders.

For more information please visit:

[www.icao.int/Meetings/ANCONF12](http://www.icao.int/Meetings/ANCONF12)





Block Upgrade capability Modules and the specific operational concepts and performance benefits they support.

Throughout the long build-up to the ANConf/12, ICAO has reinforced its recognition that working more closely with both States and industry, whose investment decisions are closely interdependent, is an essential and constructive requirement when developing proposals for the strategic direction of international civil aviation.

“One of the key outcomes being sought at the ANConf/12 will be the endorsement of the 2013–2028 Global Air Navigation Capacity & Efficiency Plan (2014–2016 Edition) as a unified planning mechanism to ensure harmonization and interoperability,” commented ICAO Air Navigation Bureau Director, Nancy Graham. “Endorsement of the Global Plan will drive more coordinated regional planning and the results of these efforts will now be aggregated and measured in annual ICAO Global Air Navigation Reports and scorecards, starting in 2014, in order to demonstrate progress.”

Another key outcome being sought by ICAO through the ANConf/12 process will be agreement on the means and methodologies to promote and implement its new Block Upgrade systems engineering methodology through a more integrated work programme, including the division of responsibilities for development of related Standards and Recommended Practices (SARPs) and technical specifications with other aviation standards bodies.

Closer coordination and cooperation in these efforts will again be key to near- and longer-term Block Upgrade success.

“The development of the Block Upgrades is significant in that the global Air Navigation community now has a common vision and

strategy that will continue to evolve, but on a very transparent and collaborative basis,” stressed Graham. “We’ll be looking to come out of the ANConf/12 with clear recommendations regarding the implementation of Block 0, the content of Block 1 which will drive the technical work programme, and we’re also looking for notional agreement on the Block 2 and 3 technologies and capabilities as the strategic direction to support longer-term planning.”

An important step in developing a more effective Block Upgrade work programme, and therefore another important outcome being sought by ICAO at the ANConf/12, will be the rationalization on a much more project-by-project oriented basis of the Panels, Task Forces and Study Groups that together comprise aviation’s ‘Voluntary Work Force’.

In all, the participants to the ANConf/12 will be reviewing 25 Working Papers and 15 Information Papers from the ICAO Secretariat pertaining to the Block Upgrades and their supporting technologies and capability evolutions, in addition to an expected 300 Working Papers to be submitted from ICAO Member States.

Taken together, these outcomes will help ICAO to realize a cost-effective and unambiguous strategic direction for future civil aviation infrastructure modernization that provides certainty of investment for both States and Industry while improving upon current Safety and emissions outcomes. ■

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# ANATOMY OF AVIATION MEDICINE TODAY

✈ Call it a change of direction. Aviation medicine is undergoing a transformation as the industry encounters new issues and new demands which require the support and leadership of ICAO. The ICAO Journal recently spoke with Dr. Anthony Evans, Chief, Aviation Medicine Section, about some of the emerging issues in aviation medicine and the changing role of ICAO in this area.

## ICAO JOURNAL: HOW IS AVIATION MEDICINE CHANGING?

**Dr. Evans:** The traditional role of aviation medicine focuses on medical assessments of licence applicants and licence holders – pilots, air traffic controllers and so on, as specified in Annex 1. But over the past few years there has been a distinct change and a lot of interest has developed concerning the impact of public health emergencies on aviation, and how aviation is potentially involved in the global spread of disease. I'll come back to this in a few moments.

With respect to medical fitness standards, we find that mental health issues are becoming more important as risks

of heart disease in the licence holder age group become better treated and statistically less important, while at the same time we see relatively more mental and behavioural problems, including drug and alcohol misuse – there have recently been some high-profile cases of apparent mental incapacitation of crew members on commercial flights. As an industry, we have to deal with these different challenges. Just as mental health is increasingly recognized as important in society, so too is it a key medical issue in aviation that requires ICAO's involvement and leadership.

## WHAT IS THE ROLE OF ICAO IN DEALING WITH THESE ISSUES?

Earlier this year, ICAO published the third edition of the Manual of Civil Aviation Medicine (Doc 8984). Its main purpose is to assist and guide designated medical examiners and licensing authorities in decisions relating to the medical fitness of licence applicants. However, this latest edition is completely revised with increased emphasis on mental health. It's a resource which is accessible on the ICAO public website ([www.icao.int/publications/Documents/8984\\_cons\\_en.pdf](http://www.icao.int/publications/Documents/8984_cons_en.pdf)) and therefore widely available to the global community. In addition to improved content on mental health, we have new chapters which address HIV, cancer, fatigue, training of medical examiners and the management of public health emergencies in the aviation sector, such as pandemics.

## WITH THE ADVENT OF SARS AND SIMILAR HEALTH RISKS WHICH CAN QUICKLY TRANSCEND BORDERS, ARE THERE INCREASING DEMANDS ON THE AVIATION SECTOR?

Definitely. Over the past ten years, we have seen SARS, the H5NI and H1N1 influenza viruses and the after-effects of the Fukushima nuclear accident. These were all public health emergencies that involved a global risk and we are seeing an increasing demand for aviation to better manage the risks to public health, and to the aviation sector itself, of such events. We find that while the aviation sector is generally quite well prepared to deal with emergencies such as an aircraft accident, bomb threat or terrorist act, the same cannot always be said concerning preparedness for public health emergencies. One reason is that such preparedness can't be achieved without working with other stakeholders and effective multi-sector coordination is a challenge for many governments, organizations and businesses. That's why ICAO is collaborating closely with the World Health Organization (WHO) and several other UN agencies as well as private sector partners, especially the International



Public health emergencies like SARS, the H5NI/H1N1 influenza viruses and the after-effects of the Fukushima nuclear accident pose global risks. ICAO is seeing an increasing demand for aviation to better manage risks to public health.



Air Transport Association (IATA) and Airports Council International (ACI), to develop new Standards and Recommended Practices (SARPs) and guidance material.

#### HOW ARE YOU HELPING STATES AND TERRITORIES IMPLEMENT NEW SARPS AND GUIDANCE MATERIAL?

In 2006 we started a project called the Cooperative Arrangement for the Prevention of Spread of Communicable Disease through Air Travel (CAPSCA) which brings together international, regional, national and local organizations to combine efforts and develop a coordinated response to public health events such as pandemics. This is an important initiative for ICAO, funded principally by the UN Central Fund for Influenza Action (CFIA), a Fund administered from New York by the UN Development Programme.

To date, 74 States have joined the CAPSCA programme globally and 34 international airports have received assistance visits – details can be found on the CAPSCA website ([www.capsca.org](http://www.capsca.org)). Our main CAPSCA partner is the WHO and, while funding from CFIA is currently assured only until the end of 2012 – when the fund reaches the end of its mandate – we believe that CAPSCA has proven itself to be an invaluable part of the global response to international health threats. We are therefore currently searching for additional funding sources to support the programme beyond the end of this year. ■

#### CAPSCA OBJECTIVES

- Public Health Protection – general public, air travellers and aviation personnel.
- Assistance to States/Territories to establish national aviation pandemic preparedness plans, and:
  - adherence to Article 14 of the Convention on International Civil Aviation;
  - compliance with ICAO SARPs (Annexes 6, 9, 11, 14 and 18) and Procedures (PANS-ATM);
  - compliance with WHO International Health Regulations (2005); and
  - implementation of ICAO, WHO, ACI and IATA guidelines.
- Cooperation amongst civil aviation authorities, public health authorities, airports, air traffic services, and airlines.
- Regional cooperation amongst States and Territories – a mechanism for pooling and sharing expertise and resources.
- Training of airport technical advisers, assistance visits to airports, development of core capacities for public health emergency planning, and provision of advice to States and Territories.
- Further development and improvement of public health emergency response guidelines for the aviation sector.



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# NEWS IN BRIEF



## ROBUST TRAFFIC GROWTH EXPECTED UNTIL 2014

ICAO expects global air traffic, expressed in passenger-kilometres performed (PKPs), to grow by 5.4 percent during 2012, representing a slight slowdown from 2011.

The lower-than-projected air transport numbers are due primarily to continuing high oil prices and reflect a similar impact on global Gross Domestic Product (GDP) during the same period. According to IHS/Global Insight, a major economic forecasting organization, world GDP at Purchasing Power Parity (PPP)\* in real terms will grow by just 3.4 percent during 2012, down from 3.7 percent in 2011.

In terms of regional impacts, the European Union (EU) is expected to be hardest hit during 2012 as it continues to

deal with sovereign debt and austerity burdens. The Asia/Pacific, meanwhile, is expected to perform strongly in 2012 with regional GDP at PPP growing over 5.8 percent and air traffic growth climbing by 8 percent.

Looking further forward, current expectations see a 4.3 percent annual GDP at PPP growth rate for the world economy over 2013–2014, with world air traffic growth projected to expand by 6.0 and 6.4 percent, respectively.

\*Purchasing Power Parity (PPP) is an economic theory linking currency exchange rates to prices paid for goods and services in any two countries.

## REGIONAL GROWTH IN PASSENGER-KILOMETRES PERFORMED (PKPs) (% change from previous year)

Region of airline registration			Average annual growth	Forecast		
	2001 (PKP in billions)	2011 (PKP in billions)		2001-2011 (%)	2012 (%)	2013 (%)
Europe	774	1385	6.0	4.2	4.4	4.8
Africa	66	118	6.0	5.5	6.2	6.0
Middle East	100	383	14.4	9.5	10.2	11.0
Asia/Pacific	806	1496	6.4	8.0	8.6	8.8
North America	1110	1434	2.6	2.3	3.1	3.5
Latin America and Caribbean	156	246	4.7	7.0	7.7	8.2
World	3011	5062	5.3	5.4	6.0	6.4

## NEW PROGRESS ON AIRCRAFT CO<sub>2</sub> STANDARD

On 11 July 2012, global aviation moved an important step closer to establishing a worldwide Aircraft CO<sub>2</sub> Emissions Standard when ICAO's Committee on Aviation Environmental Protection (CAEP) reached unanimous agreement on a new system of CO<sub>2</sub> metrics applicable across different aircraft types, weights and other variable criteria.

"The new system of CO<sub>2</sub> metrics agreed by States, as well as intergovernmental and non-governmental organizations, addresses emissions from a wide variety of aircraft on a fair and transparent basis," commented ICAO Council President, Roberto Kobeh González. "It includes factors which account for fuselage geometry, maximum take-off weight, and fuel burn performance at three different cruise conditions and is a major move forward."

The intent of the CO<sub>2</sub> metric system is to equitably reward advances in aircraft technologies (i.e. structural, propulsion-related, and aerodynamic) which contribute to reductions in aircraft CO<sub>2</sub> emissions. It also differentiates between aircraft with different generations of these technologies. As well as accommodating the full range of technologies and designs which manufacturers can employ to reduce CO<sub>2</sub> emissions, the new system of metrics has been designed to be common across different aircraft categories, irrespective of purpose or capability. It accomplishes this by utilizing three criteria associated with aircraft technology and design: cruise point fuel burn performance; aircraft size and aircraft weight.

The new CO<sub>2</sub> metric system is a critical step toward the full Aircraft CO<sub>2</sub> Emissions Standard now under development and

is based on extensive and consensus-based technical analyses and discussions over the past three years within the CAEP. The Standard's primary aim is to reduce aircraft CO<sub>2</sub> emissions by encouraging the integration of fuel efficient technologies into aircraft design and development. It has been developed such that effective improvements observed through the CO<sub>2</sub> Standard will correlate with reductions of CO<sub>2</sub> emissions by aircraft during day-to-day operations.

"This metric system is a very important milestone which comes after extensive technical discussions," commented ICAO's Environment Branch Chief, Jane Hupe. "That ICAO was able to achieve consensus between the States who serve on the CAEP, in addition to the major airlines, aircraft manufacturers, environmental NGOs and other stakeholders who serve as observers to this process, highlights that there is a great deal of motivation in every quarter of our sector to achieve real progress on aviation environmental performance."

The next stages in the CO<sub>2</sub> Standard's development include the definition of certification procedures for each of the parameters in the agreed system of CO<sub>2</sub> metrics, as well as the determination of the new Standard's scope of applicability. An appropriate regulatory limit for the CO<sub>2</sub> Standard will then be identified using the ICAO criteria of technical feasibility, environmental benefit, cost effectiveness and the impacts of interdependencies.

Once these steps are complete, the new CO<sub>2</sub> Standard will go through a formal review and approval process by relevant ICAO bodies and Member States, ultimately leading to its incorporation into national regulatory frameworks. Official approval of the new system of CO<sub>2</sub> metrics is expected from the ICAO Council next year.



# ICAO ONLINE



## ICAO website

[www.icao.int](http://www.icao.int)

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## ICAO on YouTube

[www.youtube.com/icaovideo](http://www.youtube.com/icaovideo)

More than 28 ICAO videos and counting... including "Sustainability: your future, our responsibility", a powerful message highlighting aviation's contribution across the economic, environment and social pillars of sustainable development. The video also notes progress on initiatives including States' Action Plans, sustainable biofuels, market based measures, a CO<sub>2</sub> standard and global aspirational goals.

Watch for more ICAO videos on issues and topics of interest to the global aviation community.



## ASSAD KOTAITE FUND TO ASSIST PROSPECTIVE AVIATION PERSONNEL IN DEVELOPING NATIONS

✈ Established in March 2006, the objective of the Assad Kotaite Graduate and Postdoctoral Fellowship Fund (Assad Kotaite Fund) is to promote the safety and development of civil aviation by strengthening the capabilities of national civil aviation personnel in developing countries. This will be achieved through the provision of bursaries for students in high-level training programmes, as well as graduate and postdoctoral studies, conducted at internationally-recognized academic institutions, training centres and universities.

The main beneficiaries of the Assad Kotaite Fund shall be eligible candidates from developing countries that are most in need of assistance, especially in the area of aviation training. ICAO, through its Technical Co-operation Bureau shall administer the Assad Kotaite Fund.

This year, the Assad Kotaite Fund will be awarding bursaries to candidates who meet the required criteria. National civil aviation authorities are encouraged to promote the Assad Kotaite Fund to personnel willing to submit applications.

For further information on how to apply for a bursary from the Assad Kotaite Fund, please consult the ICAO website at [www.icao.int](http://www.icao.int) and look for the Assad Kotaite Fund link, or contact the ICAO Fellowships Unit directly via [fsu@icao.int](mailto:fsu@icao.int). The deadline for applications is November 15<sup>th</sup>, 2012. ■

# FORUM

## REFLECTIONS ON WINNING A UNIQUE AVIATION AWARD

The email about the selection results of the “Assad Kotaite Graduate and Postdoctoral Fellowship Fund” arrived just as I was chasing my two youngsters during playtime. I still remember it now. When I checked the email attachment and learned that I had been chosen as a recipient of a fellowship bursary, it set my heart racing.

Being selected for this award has put me in the spotlight. It complements my “aviation branded personality” as this adds value to both the PhD research I am pursuing in civil aviation strategic planning and to my career in the field of air transport.

Since my selection as the first ICAO-Assad Kotaite fellowship fund recipient, I have been working on my PhD research with a view towards designing a framework for the formulation of civil aviation strategies for countries of the Middle East and North Africa (MENA) region.

My latest output is a journal article which will be published in the Journal of Transport Geography discussing the impact of emigrants’ homeland relations on air travel demand in security volatile markets. Currently, I am developing a paper on specifying the factors of national competitiveness which might affect air transport output.

“I am keen to contribute, through my research work, to the development of civil aviation in the MENA region.”

As for the award, I see it as a source of pride to me and to the Lebanese aviation community especially since it comes from the International Civil Aviation Organization and specifically since it bears the name of Dr. Assad Kotaite, who participated in the enhancement of international aviation throughout his long years of effective leadership of the ICAO Council.

I am so thankful to the committee for the confidence they have placed in me. I am keen to contribute, through my research work, to the development of civil aviation in the MENA region.

It is indeed a privilege to receive international recognition in the field of aviation. So, I would love to call on all women in aviation to consider this award as motivation and inspiration towards an effective involvement in all the fields of the air transport sector. ■



### ABOUT THE AUTHOR

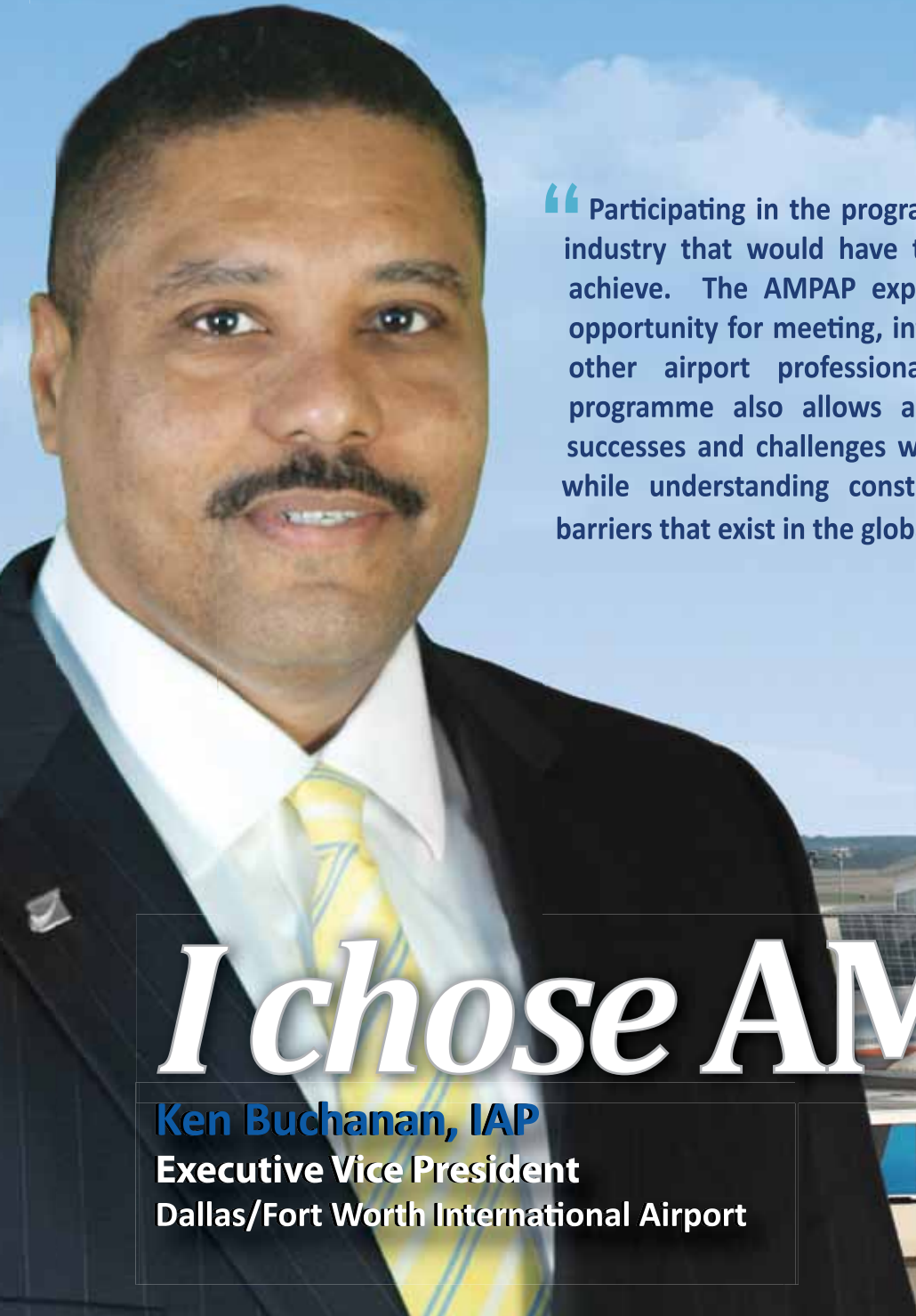
In 2011, Nadine Itani became the first Assad Kotaite Graduate and Postdoctoral Fellowship Fund (Assad Kotaite Fund) recipient in recognition of her PhD research in civil aviation strategic planning. Itani, a PhD research student in the School of Engineering / Department of Air Transport at Cranfield University, UK, is currently conducting research in developing a framework for the formulation of civil aviation strategies. In her home country, Lebanon, Itani also delivers lectures at local universities to students in air transport management. Her specialties are air transport strategic planning and air transport economics.



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