



# NBAA INTERNATIONAL OPERATORS CONFERENCE

by James Wynbrandt

The 44th annual NBAA International Operators Conference (IOC) drew 500 corporate pilots, international flight ops specialists, and agency and government officials to Atlanta recently for an intensive review of procedural, safety and regulatory standards affecting global business aviation flight activity. The 28 presentations over the four full days covered topics from coming equipage mandates to security threats and brought at least one important recent regulatory change to the community's attention, all in the name of the IOC's mission: "To ensure that international operators fly safely, securely, efficiently and legally."

The premise is that everyone can contribute to the group's tribal knowledge, and IOC chair Craig Hanlon of DuPont Aviation urged attendees to "share your knowledge, share your passion" in his welcoming remarks. An updated NBAA event app facilitated that interchange, easing use of smart devices to pose questions and respond to audience surveys, while Scott Harrold of Signature Flight Support reprised his annual role as master of ceremonies.

## REGULATIONS

### The Global Regulatory Environment

Many of the regulatory changes international operators confront result from efforts to unify rules governing navigation procedures, onboard equipment and safety, as shaped by ICAO best practices and standards. In the keynote address, Stephen Creamer, director of ICAO's Air Navigation Bureau in Montreal, who described his job as "all about regulation and the management of risk," said the organization wants to "help manage with the right touch, and not be overly expensive or burdensome."

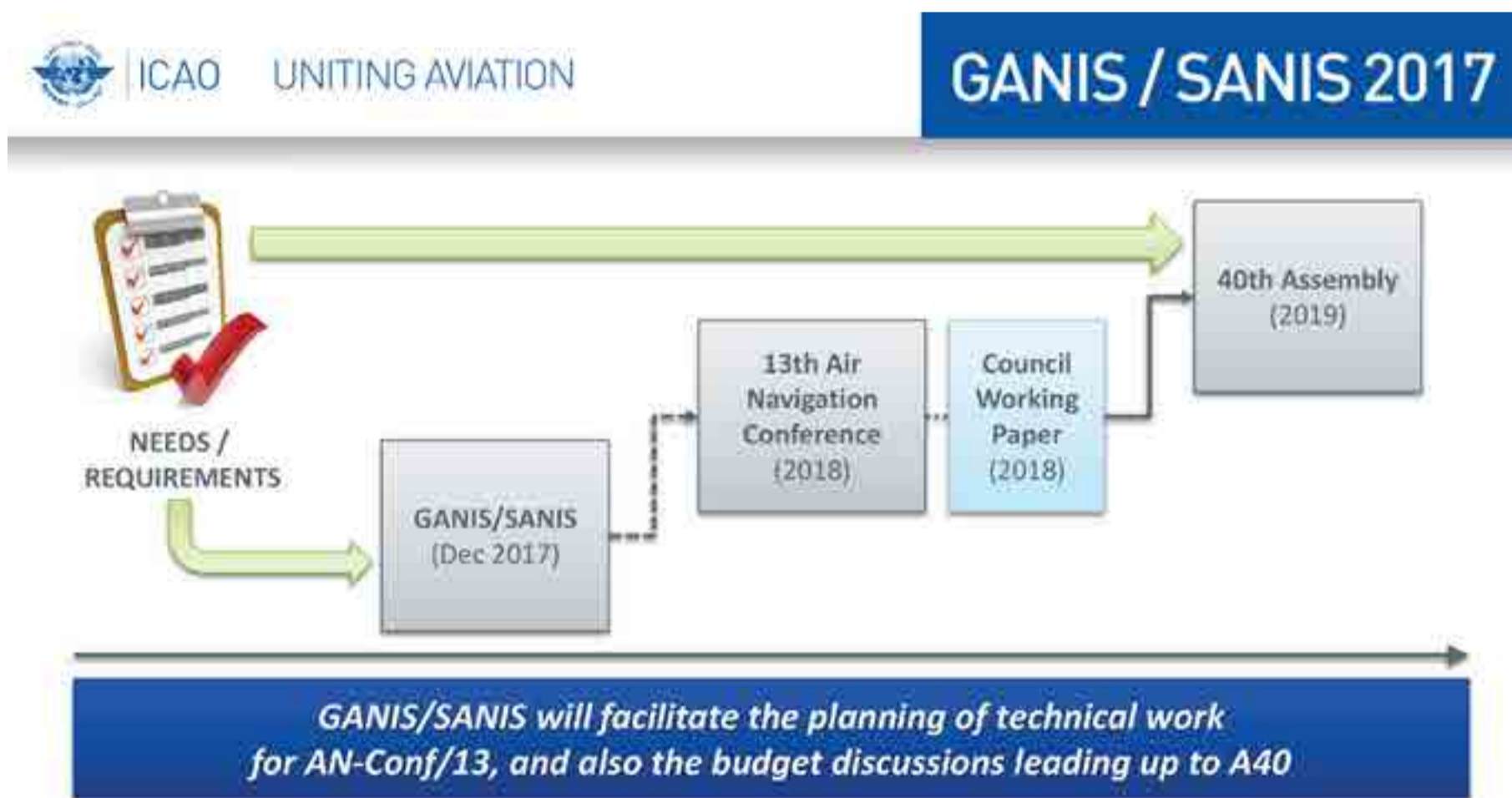
ICAO's Global Aviation Navigation Plan (GANP) and Global Aviation Safety Plan (Gasp) continue evolving through the recurring Global Air Navigation Industry Symposium (Ganis) and Safety and Air Navigation Implementation Symposium (Sanis), which "interact purposely," said Creamer,

a former FAA air traffic controller. "The safety plan is the core of ICAO's purpose," while the navigation piece "is to help people understand how to develop air navigation programs that are effective and efficient."

The next Ganis and Sanis are scheduled for December in Montreal, as ICAO readies for its 40th Assembly in 2019, when the next major revision of these plans will be adopted. Creamer urged attendees to get involved in the process. "You know how things can be better, how a procedure doesn't work, and your input is something we want to facilitate in new ways. I need to understand how I can help you, and give you advice on how you can help me."

### Flying the North Atlantic

North Atlantic airspace, a hotspot of international operations, is one of the regions undergoing the most dramatic regulatory and procedural



**ICAO is hosting two symposia later this year to get operator feedback about changes coming to air navigation procedures, ahead of the triennial ICAO assembly in December 2019.**

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changes, as Mitch Launius of Air Training International explained. In February last year the North Atlantic Minimum Navigation Performance Specifications airspace (NAT MNPS) was redesignated the NAT High Level Airspace (HLA), part of an effort to accommodate more aircraft (up to 13 overflying the same point at one time) traveling between North America and Europe. Under this change, operations on the Organized Track System (OTS) within the NAT HLA require CPDLC and ADS-C (together composing Fans-1/A).

Bizav operators need to rise to the tighter standards, Launius said. GA aircraft account for 5 percent of North Atlantic traffic but 12 percent of the gross navigational errors in the airspace. “We keep making the same mistakes over and over,” Launius said. Among the top: “Flying the flight plan instead of the clearance.”

Late this year, Phase 2B trials of reduced lateral separation minimums (RLatSM; a half-degree versus one-degree of latitude) in NAT HLA are expected to begin, expanding RL at SM’s use beyond the OTS’s three core tracks, and requiring Fans-1/A in the entire NAT region from FL350 to FL390 inclusive.

When Phase 2B is completed (expected by next April), Performance-based Communication and Surveillance (PBCS) will be fully implemented, and only aircraft filed with Fans and PBCS designators (RSP 180, RCP 240) will be allowed in reduced separation areas. Phase 2C will take effect on Jan. 30, 2020, requiring Fans-1/A in all NAT region airspace at FL290 and above. These requirements won’t apply if surveillance by radar or ADS-B is available (the “Blue Spruce Routes”), or above 80 degrees North, or within NY Oceanic East FIR until FAA regulations are updated.

## Operations in Europe

As the primary international destination for North American aircrews and one of the most dynamic operating environments, Europe, and its procedures and regulations, received particular attention during the conference.



**SAFA ramp inspections turn up such details as foreign objects. Preparation is key.**

## SAFA

Pilots regard SAFA (Safety Assessment of Foreign Aircraft) ramp checks “like the plague,” said Executive Jet Management’s chief pilot Scott Mischo, acknowledging that his own company was unknowingly in arrears in responding to 40 Category 1 SAFA findings before deciding to tackle the check challenge proactively. Among his check tips: Have answers for each of the 53 specific items covered in the inspections, but “answer only the question asked.” Also, “Tidy up the cockpit” beforehand.” The inspection is supposed to take only 30 minutes, but in reality it’s “probably an hour,” Mischo added.

## Medical Certificates

Asked in the Q&A how SAFA inspectors would deal with an FAA first-class medical that is valid in the U.S. until month’s end but is beyond the six-month period ICAO recognized, Chapeau said, “You won’t like my answer: If the medical has expired, that means you can’t fly any more, so it could be a Category 3 [Major] finding.” Offered another panelist: “If you don’t want an argument, get a first-class medical every six months.”

## Brexit

Uncertainty about the impact of the UK’s departure from the EU is unlikely to dissipate soon, panelists agreed in the European Operations Overview session. Negotiations on leaving the EU, which were scheduled to begin in March, will be

conducted over two years and set the terms of the UK's departure. Among the questions: What will Brexit mean for the European Common Aviation Area, and the Single European Sky agreements? Will the UK forge a bilateral agreement with the EU as Switzerland has, or seek European Economic Area membership, as Norway has? And how will it affect an operator who imported an aircraft into the EU via the UK, as one attendee asked? "The final answer," said Adam Hartley, a manager at Universal Weather and Aviation: "Nobody knows."

## GETTING 'THERE'

### Round-the-World Flight

The eight Regional Reviews covered airspace regulations, airports, ground handling notes and much more, over the framework of a near globe-girdling route: São Paulo, Brazil (SBGR); La Paz, Bolivia (SLLP); Bogota, Colombia (SKBO); Cusco, Peru (SPZO); Toluca, Mexico (MMTO); Havana, Cuba (MUHA); Nassau, Bahamas (MYNN); Hamilton, Bermuda (TXKF); Reykjavik, Iceland (BIKF); Newburgh, N.Y. (KSWF); Beijing (ZBAA); Moscow (Vnukovo; UUWW); Tokyo Narita (RJAA); Hong Kong (VHHH); Singapore

**Nassau, Bahamas, was one of several stops on this year's round-the-world flight. FBOs and flight planners are a good resource for travelers, as they are familiar with local customs and expectations.**



CRAIG HANLON

### MEL/MMEL ISSUE CATCHES BIZAV OFF GUARD

Many attendees were caught by surprise when Laurent Chapeau, head of the Ramp Inspection Office of the French Safety Oversight Authority (DGAC), which administers SAFA checks in France, said that U.S. Part 91 operators now require a Minimum Equipment List (MEL) in Europe.

Under an EASA interpretation of ICAO guidelines, he said, a manufacturer's aircraft model Master MEL (MMEL) approved by the FAA under a Letter of Authorization (LOA DO95) no longer suffices. Instead, Part 91 twin turboprop and turbine operators must have a MEL approved under LOA D195 for that specific aircraft, as the EASA has concluded that LOA DO95 doesn't provide the oversight or approval process required for a valid MEL under ICAO's guidelines. "The regulation is now clearly written from November," Chapeau said, alluding to last year's change to Annex 6 Part 2.

Chapeau added that his agency has noted a lack of compliance "during ramp inspections in the last few months." In some cases inspectors "did raise Category 2 findings," which represent a significant impact on safety and require operators to take follow-up preventive action.

FAA Flight Standards was reportedly already developing compliance paths for affected U.S. operators, but in the days after the IOC several "conversations" involving FAA, EASA and ICAO officials took place regarding the issue, said Doug Carr, NBAA vice president for regulatory and international affairs. "At this point, we do not believe that the U.S. has filed a difference with ICAO on this standard," Carr said. "We are working directly with the EASA and the FAA to fully understand the implications of this recently shared interpretation. We believe that the technical differences between the issuance of a D095 and a D195 do not materially change the risk assessment."

Carr said that since the IOC event "many operators" have called NBAA for guidance regarding planned flights to Europe. "The only clear answer today is that D195 does meet ICAO standards and would be acceptable during a SAFA check," he said, adding that he is "resistant to telling several thousand operators to rush to their nearest FSDO to begin the application. I'm hopeful that we can work with the FAA, EASA and DGAC to resolve the interpretive differences on this ICAO standard and hopefully look to, perhaps, some changes to D095 as a preferred pathway."

The U.S. is the sole ICAO signatory country that allows operators to use an MMEL as an MEL.

(WSSS); Delhi (VIDP); Dubai International (OMDB); Amman (OJAM); Tel Aviv (LLBG); Cairo (HECA); Mwanza, Tanzania (HTMW); Windhoek, Namibia (FYWH); Abuja, Nigeria (DNAA); Athens (LGAV); Rome (LIRA); and London Stansted (EGSS).

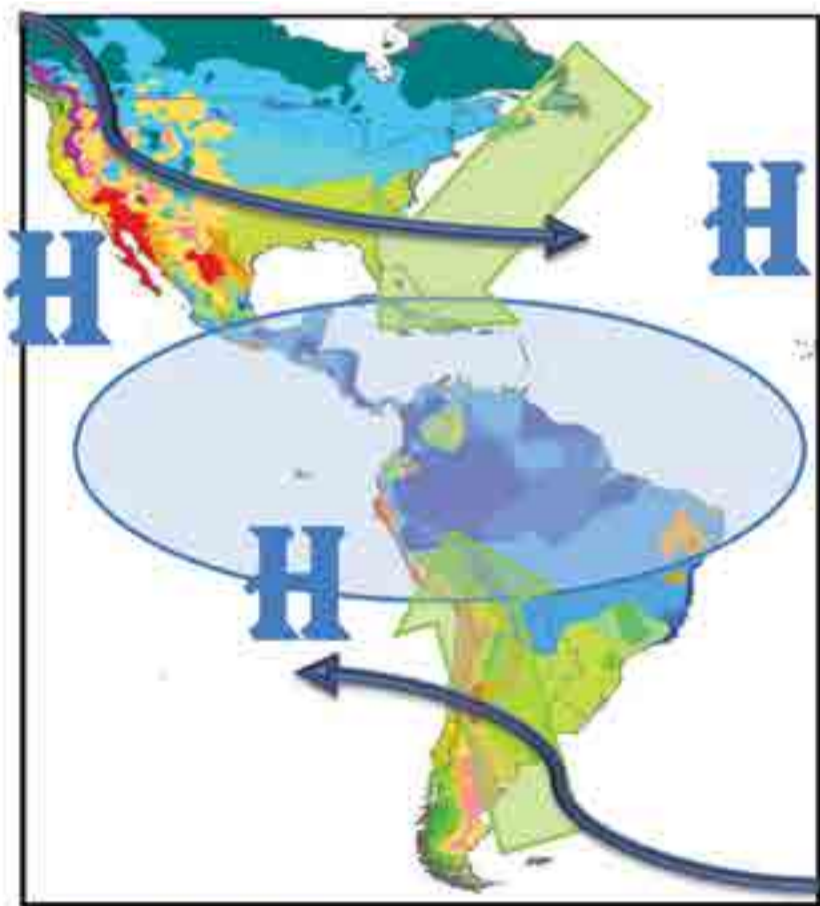
Among the myriad expert tips and guidelines proffered for the challenges of operating internationally, one recurring bit of advice appeared to have global application. “Patience is one of the key things I will tell you to have a little more of,” said Sender Melendez of World Fuel Services in the Latin America Regional Review. Echoed Patrick Dunn, aviation manager and chief pilot for a Fortune 100 company, via FaceTime from Singapore during the Asia briefing, “Be flexible, and be very patient.”

### En Route Weather

Morning weather briefings reviewed pertinent weather patterns for the portion of the route covered in the day’s regional presentations. The journey’s starting point in São Paulo and route through

tropical latitudes put Day One’s focus on the Inter Tropical Convergence Zone (ITCZ) and the danger of high-altitude ice-crystal icing (HAICI). Distinct from airframe icing seen at lower altitudes, HAICI forms and accumulates within jet engines, causing power loss or engine failure. A couple of hundred such events have been reported over the past two decades, said Evo Jet Services meteorologist Mike Wittman, and pilots need to be aware of the hazard “when operating in thick, moist, convective tropical air masses.”

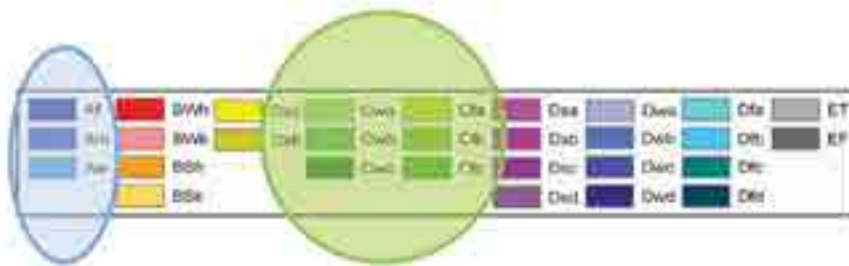
These conditions can produce temperatures significantly above standard at altitudes of 50,000 to 60,000 feet, and they are a particular hazard for transoceanic flights in these latitudes. As Bradley Crosier of FlightSafety International noted in a subsequent brief on oceanic convection, for reasons unknown lightning doesn’t occur often over oceans. (The electrification of storms is poorly understood.) Moreover, the attenuation from moisture renders radar incapable of accurately depicting the conditions, making avoiding these



Koppen World Climate

Moist Tropical Air  
Minor Seasonal Changes

Mild Temperate Climate  
Mid-Latitude Dynamics



Icing often takes center stage, but presenters also provided information about the Inter Tropical Convergence Zone, where the trade winds of North and South America meet, an area characterized by violent thunderstorms.

storms at night impossible, Wittman said. “No indicators will help us determine if we’re loading up with crystalized icing, until power fluctuation or total engine failure occurs.”

Monitor temperature probes and airspeed indicators for indications of icing, such as erroneous numbers, Wittman advised. Slightly vary throttle settings every few minutes at cruise to help avoid accumulation of ice on the core of the motor. NOAA’s new GOES-16 weather satellite becomes operational this November, and will provide water vapor, ice, and other data previously unavailable to aviation weather forecasters, making it “easier for meteorologists to help plan routes and avoid” HAICI conditions, Wittman said.

## Regional Reviews

Over the four days, presenters in the regional reviews provided a catalog of regulatory and procedural changes, pitfalls and gotchas illustrating the wide spectrum of challenges and rules international operators must keep in mind. Among them:

Brazil requires some documents to be submitted in Portuguese. Within the last year, two aircraft entering the country through Manaus were detained for noncompliance with this rule, one for two days, another for a week, facing “the threat of a fine close to the value of the airplane,” said BJ Ferro, a senior demonstration captain for Bombardier Business Aircraft. “Expect lengthy delays if paperwork is not what it’s expected to be.”

Mexico began imposing “extraordinary” fees for immigration services delivered off site or outside normal working hours in January last year, and as of last November a fee of 15 pesos per kilo for disposing of catering leftovers. Moreover, every pet on an aircraft flying from the U.S. to Mexico must now have a deworming certificate, not older than six months, according to Manuel Romero Vargas of Mexico’s Manny Aviation. “It’s not a joke; it’s an additional requirement,” he said.

If planning to fly to Central America, file your flight plan well in advance. Since February Cenamer, Central America’s ATC authority, has been

telling operators that flight plans filed within 48 hours of intended departures haven’t been received, reported Keith Dixon of World Fuel Services.

Also in February, airports in Russia began changing altimeter settings to QNH from QFE “little by little,” said Susan Potter, an international captain with Deere. During this transition she recommends repeating “QFE” along with the altimeter setting to ensure using the proper setting.

In Hong Kong private jet movements fell 24 percent in the last year as a new system (allowing just five slots per day for general aviation) was being instituted, requiring approvals for both arrivals and departures. Recently a crew, upon calling for a clearance, was informed it had no departure slot, and the next one available was seven days hence. “They got out three or four days later,” Dunn said in his FaceTime brief.

Under recently adopted rules in Indonesia, as of last October foreign-registered aircraft are prohibited from flying domestic routes, and can make only one stop in the country, Dunn continued. The rule isn’t being enforced, “but it hasn’t been rescinded,” he said. “Political issues drive this rule and it may be enforced tomorrow.”

## Cuba

Reflecting intense operator interest, Cuba received a session of its own this IOC. The 12 categories of traveler that the U.S. Treasury’s Office of Foreign Assets Control (OFAC) approves remains unchanged, but operators are no longer restricted to using one of 22 CBP-approved U.S. AOE’s for departures and arrivals, Sneider Melendez of World Fuel Services reported. As of March last year, any U.S. airport in compliance with standard entry and exit protocols is useable, but flights must go directly to Cuba, and from Cuba back to the U.S. Melendez noted that while OFAC’s rules are clear, Cuba’s interpretation of them “changes daily,” complicating operators’ planning and operations.

Bring \$400 to \$500 per person per day for expenses. Keep a copy of hotel reservations and confirmation numbers (it’s common for hotels to lose vouchers), and a photocopy of your passport’s

## Havana Airport (MUHA)



Some restrictions on travel to Cuba from the U.S. have loosened, but complications remain. According to one operator, travelers should be prepared for ever-changing interpretations of the regulations.

photo page with you at all times. Communication with the outside world from the island has improved. Last year AT&T began offering cellular service in Cuba (joining Verizon). Wi-Fi is available in most hotels but requires buying an access card. Download or use offline maps for terrestrial navigation and “go with a driver who knows where he’s going,” said Melendez.

### U.S. Customs Procedures

Returning to the U.S. and complying with U.S. Customs and Border Protection (CBP) procedures is among the challenges of operating internationally. “We seem to be the finish line,” said Eric Rodriguez, CBP’s GA program manager. “You jump through a lot of hoops, endure challenges, and then you get to us.” Rodriguez has been directing efforts to create a standardized border clearance process for general aviation that’s “fast, reliable, reasonable and responsible,” as he told attendees in his latest IOC appearance. A recent “radical” internal system modernization is accelerating those

efforts, Rodriguez reported. “The way we operated in the 1980s and ’90s, we were still doing until six months ago.”

CBP’s GA initiatives include an upgraded, systemized inspection worksheet that “walks the officer through specific points we want to touch on, nothing more, nothing less,” and a channel for “systematic processing of enforcement actions” aimed at removing “port discretion” in assessing penalties, Rodriguez said. “Policy is based on regulations,” and inspections and enforcement actions should be spelled out and applied uniformly, he said.

The office is also completing a new General Aviation Operators Guide aligned with the agency’s internal manuals, “so your guide, or electronic copy in your tablet will be consistent with the internal guidance the officer has.” Rodriguez stressed these initiatives rely on operators’ compliance with all reporting requirements, and urged IOC attendees to ensure that what shows up on the ramp when they arrive at customs for inspection “is exactly what you told us to expect.”

## SAFETY AND SECURITY

### International Ops Security

Security is a major concern when traveling internationally, and the issues are not only physical safety on the ground and cyber security in the air but now overflight considerations when trip planning as well. The threats can be difficult to identify. In the wake of the 2014 downing of Flight MH17 over Ukraine, ICAO created a Conflict Zone Information Repository to identify airspace where operations are at potential risk from the spillover of conflicts on the ground, Stephen Creamer, director of ICAO's Air Navigation Bureau in Montreal, noted in his address. Since then "different political perspectives" among member states have rendered the organization "unable to provide a common global assessment of risk" for aviation operations, he said.

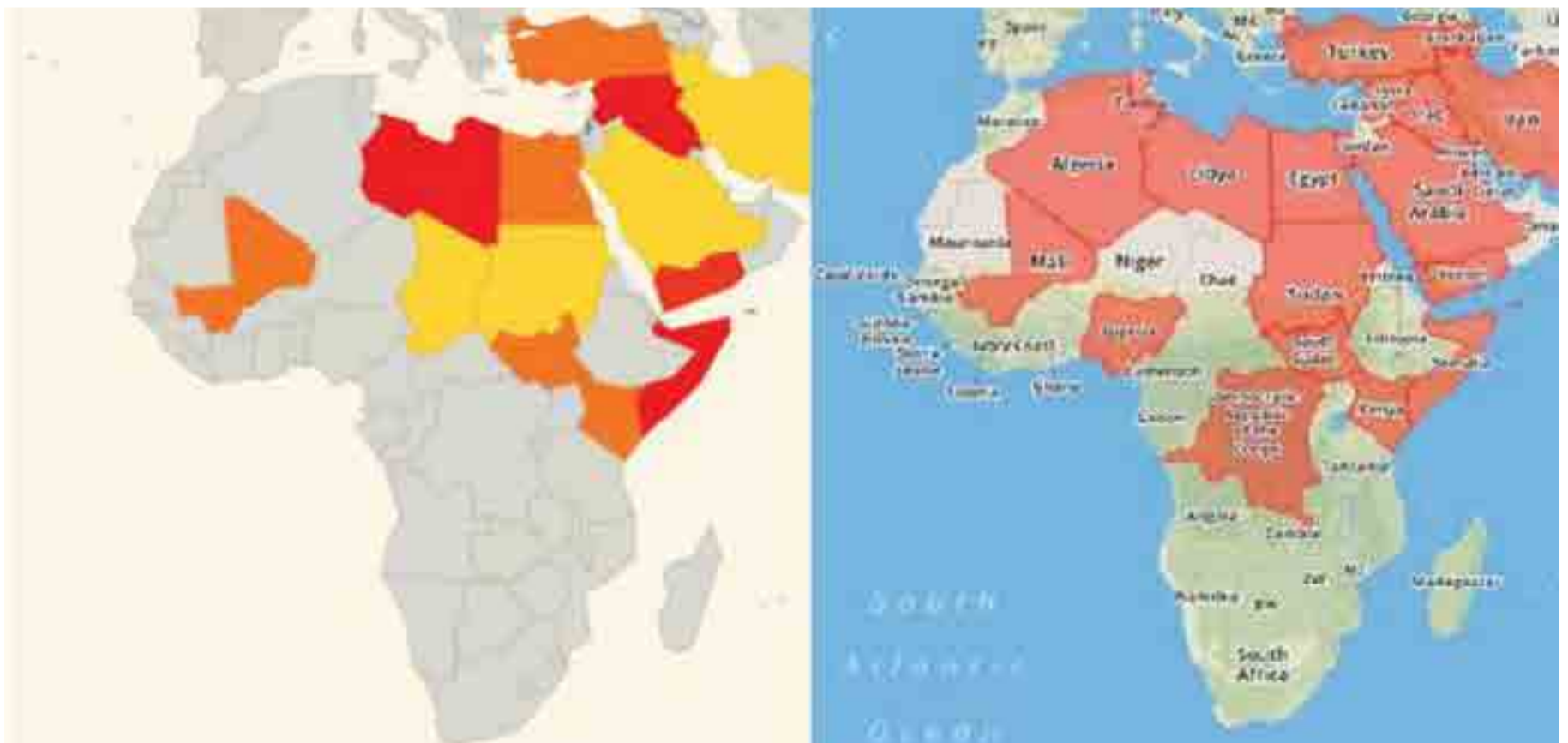
However, he reported that a survey conducted in January by ICAO, IATA, IBAC and ACI concluded that appropriate information on risks to civil aviation is available through "multiple corporate" channels that "do not depend on the political

apparatus in one state." Creamer added, "Even in the U.S., warnings might not be as timely as we'd like to see," because of the "diplomatic ramifications" of publishing them.

Countering that last notion, Elliot Fertik of the U.S. Department of State said in prepared remarks on threat status, "If we know something, you know something. If we have information of a potential threat, distributed in the official government community, it's given to private citizens. Bilateral relations don't affect these warnings."

For updates on the security status of individual countries, Mark McIntyre, a pilot for Mente who frequently operates in Africa, recommends contacting the regional security officer at the U.S. embassy when flight planning. Also get the phone number of Marine Post One (the security center of every embassy) and after-hours contact information in the event you end up on the ground in a trouble spot and need help.

If you must operate in a conflict zone, here's how one African air ambulance does it. "We have someone on the ground and call 15 minutes out. If we don't hear gunshots, we land. If we hear



At left, a conflict zone map created by OPS Group. Red: do not overfly. Orange: overflight not recommended. Yellow: warnings exist. At right, a MedAire-developed map highlighting areas of health concerns.



gunshots while we're on the ground, we leave.”

But though aircraft and airport security are a focus of international operations, almost two-thirds (64 percent) of attacks that occur while traveling happen in or around travelers' automobiles, said Nathan Foy, CEO of limousine service Fortis Riders, in a session on ground transportation security. Answers to two questions define one's vulnerability, Foy said: “Who is driving; and can they be trusted?”

No government agency licenses chauffeurs, and many limousine companies conduct no background checks, making careful vetting of ground transportation providers both essential and challenging. Get the driver's photo and mobile phone number in advance, Foy advised. “You can't assume it's the right person because your name is on a board.” Ensure all elements of the ground ops meet your approval. “Are the tires properly inflated? Does the driver know the route and potential traffic snarls? They should have thought through the ride for the day and be able to answer confidently.”

## Medical Issues

“We have a way to check our health status every six months,” said Dr. Paulo M. Alves, Medaire's vice president for aviation and marine health, referencing first-class medical exams while addressing medical fitness for duty. “But most problems happen unplanned.” That fact was driven home this IOC with the announcement that a scheduled speaker was absent because of a kidney stone attack after arriving in Atlanta.

This year the perennial topic of fitness for duty focused on corporate policies and liability. Only five of 50 companies in a recent survey had fitness-for-duty policies, according to research cited by Medaire director Debbi Laux. Among those that do, the policies contain “too many gray areas,” said Gary Dietz of AT&T. His own company is now “redefining what are the clear expectations for our flight attendants,” in part to create fitness-for-duty standards. “It's not how well you prepare food; it's your understanding of the job. As far as fit for duty,” Dietz continued, “they need to lift a 50-pound life raft. I can't say you're too old for the

job [or] HR and legal are calling me. So how do we help them stay on as long as possible as long as they can do their job?” His advice: “Become friends with HR and legal. I'm in the process of doing that, and we'll work it into the flight manuals, and make sure our policies align with HR and legal department policies, so every crewmember clearly understands the expectations, when to self-report health issues, and knows we're here to help them maintain a long career.”

Pilots and operators, meanwhile, must also be aware of their reporting requirements for unfit passengers. “From a civil liability standpoint, if you're carrying a sick passenger and something happens to them, you could be negligent as a pilot or the company could be found liable in a civil suit,” said Jason Maddux, an aviation attorney with Garofalo Goerlich Hainbach. “To protect yourself, have procedures in place.”

Panelists presented several real-life examples to demonstrate the point, with Maddux weighing in on liability implications. In one, a cabin attendant on a Part 91 aircraft injured her wrist while prepping for the flight back to the U.S., leaving her unable to perform evacuation duties. After the company consulted its medical assistance provider about treating the injury, a company maintenance tech familiar with the onboard equipment was tapped to join the flight and handle the duties as necessary, under the cabin attendant's instructions.

“I would say they did it right in the legal sense,” Maddux said, noting the cabin attendant wasn't a required crewmember, the company had followed an established procedure, and had a backup plan for performing duties on the flight. Whether briefing a passenger to take over in the absence of an augmented crewmember would suffice from a legal perspective, he said, “As a guard against civil liabilities? Probably not.”

## Polar Routes

Cosmic radiation is getting more attention as ultra-long-range jets open routes across polar regions (above 78 degrees of latitude), where radiation levels are higher than in mid-latitude and equatorial regions. Since his company acquired a G650, John

Gale, international captain for a Northeast-based *Fortune* 500, has made three flights to China, mimicking the Newburgh, N.Y.-Beijing leg of the IOC's flight itinerary. Going polar saves time (12.6 hours versus 14.4 hours total) and money, "a focus of all our operations," Gale said, but presents "significant disadvantages." He cited unpredictable major weather events, and few equal time points (ETPs) and alternates for emergencies, in addition to radiation concerns.

Cosmic radiation is measured in Sieverts (Sv), millisieverts (mSv) and microsieverts (uSv). The average annual human exposure to radiation is 2.4 mSv (a chest or dental X-ray delivers about 0.04 mSv), while cosmic radiation exposure for aircrews ranges from an estimated 0.2 to 5 mSv, and averages 3.07 mSv, per year. Given aircrews' elevated exposure, the U.S. government classifies them as radiological workers, but there are no regulations on limits. The International Commission

on Radiological Protection (ICRP) and the FAA recommend crewmembers limit their dosages to an annual average of 20 mSv over a five-year period, and no more than 50 mSv in any single year. Pregnant crewmembers should limit exposure to 1.0 mSv, and no more than 0.5 mSv in any single month.

Galactic cosmic radiation exposures for people on flights between any two airports in the world can be calculated using the FAA's CARI-6 downloadable program. A flight from KSWF to ZBAA last September at a maximum altitude of FL430 was calculated to deliver a 0.11 mSv dose.

Gale's flight department engaged handlers in evaluating ETPs and available medical facilities at potential alternates, gathered radiation information, and involved passengers in the route decision. Their time of increased exposure would be about 22 minutes. All passengers voiced preference for the polar crossing. □



**A map of the North Polar Region depicts a flight from Newburgh, N.Y., to Beijing, noting equal time points (ETPs) in Barrow, Alaska, and Greenland, where people speak English.**