<table>
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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>08:30 – 10:00</td>
<td>Registration</td>
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<tr>
<td>10:00 – 10:15</td>
<td>Welcome address</td>
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<td>10:15 – 10:30</td>
<td>Keynote address&lt;br&gt;Ambassador Luis Alfonso de Alba, United Nations Secretary General Special Envoy for the 2019 Climate Change Summit</td>
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<tr>
<td>10:30 – 11:00</td>
<td>Session 1: Setting-the-scene&lt;br&gt;This session will aim to provide participants with a snapshot of the themes that will be discussed during the Symposium.</td>
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<tr>
<td>Speaker: Ms. Jane Hupe, Deputy Director Environment, ICAO</td>
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<tr>
<td>11:00 – 11:30</td>
<td>Coffee Break&lt;br&gt;sponsored by Bombardier</td>
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<td>11:30 – 12:30</td>
<td>Session 2: Two decades of Balanced Approach on aircraft noise: impacts and lessons learned&lt;br&gt;Aircraft noise represents the first concern of communities and the most significant impediment to aviation growth. In 2001, the ICAO Assembly adopted the Balanced Approach to aircraft noise, thus laying down an internationally recognized framework for the management of aircraft noise at and around airports. This session will allow a number of case studies to be presented that will provide a better understanding of the impact of the Balanced Approach and will identify lessons learned on its implementation.</td>
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<td>Moderator: Mr. Samuel Campbell Lucas, Australia’s Representative on the ICAO Council</td>
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<tr>
<td>Speakers: Mr. Tim Johnson, International Coalition for Sustainable Aviation (ICSA)  &lt;br&gt;Mr. Michel Adam, Senior Manager, International Air Transport Association (IATA)  &lt;br&gt;Mr. Michael Rossell, Deputy Director General, Airports Council International (ACI)</td>
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<tr>
<td>12:30 – 14:00</td>
<td>Lunch Break</td>
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14:00 – 15:00  Session 3: 50 years of Annex 16, Volume I: The role of technology in reducing aircraft noise

The first edition of Annex 16, Volume I was developed in 1969. Since then, regular updates of Annex 16, Volume I fostered the development of noise reduction technologies that make today’s aeroplanes 75 per cent quieter than in the 1960’s. The session will examine whether aircraft and engine manufacturers have reached the limits of the technology envelope, or if more progress can be expected in the future.

Moderator: Mr. Alok Shekhar, India’s Representative on the ICAO Council

Speakers:
Mr. Arnaud Bonnet, on behalf of the International Coordinating Council of Aerospace Industries Associations (ICCAIA)
Dr. Dimitri Mavris, Georgia Institute of Technology, The Independent Expert Integrated Review
Mr. Eli Dourado, Head of Global Policy and Communications, Boom Supersonic
Mr. Brian Cook, Engineering Group Head, Gulfstream

15:00 – 15:30  Coffee Break

15:30 – 16:45  Session 4: Aircraft noise and annoyance - when non-acoustic factors drive out of the box thinking

Despite significant progress on the acoustic impact of aircraft, aircraft noise management at and around airports has remained the most significant impediment to aviation growth. This session will look at the dose-response relationship between aircraft noise exposure and annoyance and will elaborate on the role of non-acoustic factors underpinning annoyance to aircraft noise.

Speakers:
Prof. Paul Hooper, Manchester Metropolitan University
Mr. Jonathan Bagg, Senior Manager Public Affairs, NAVCANADA
Mr. Blake Cushnie, National Manager, Performance Based Operations Development NAVCANADA
Mr. Truls Gjestland, Senior Research Scientist SINTEF

16:45 – 17:00  Discussion and Wrap-Up

17:00 – 19:00  Reception

sponsored by Airbus
Day 2 - Wednesday, 15 May 2019

09:00 – 10:00  Session 5: Local Air Quality - the role of ICAO Standards
In 2004, ICAO adopted three environmental goals, including “limiting or reducing the impact of aviation emissions on local air quality”. ICAO has developed aircraft engine emission standards, which include Smoke Number, NOx, CO, HC and non-volatile Particulate Matter (nvPM). During this session, engine and aircraft manufacturers will also be invited to share the impact of ICAO Standards on the technical options developed for retrofitting aircraft and on the design of new aircraft.

Moderator: Ambassador Mitzi Gurgel Valente da Costa, Brazil’s Representative on the ICAO Council

Speakers:
Dr. Neil Dickson, Chief Environmental Standards, ICAO
Mr. Theodore Rindlisbacher, Federal Office of Civil Aviation, Switzerland
Mr. Daniel Carnelly, Director, Aircraft Environmental Marketing, Airbus SAS

10:00 – 10:30  Coffee Break
sponsered by Airlines for America

10:30 – 11:30  Session 6: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on Technology
The 37th Session of the ICAO Assembly adopted two aspirational goals of 2 per cent annual fuel efficiency improvement and carbon-neutral growth from 2020. It also defined a basket of mitigation measures that States and aviation stakeholders could implement to collectively progress towards the goals. This session will invite relevant stakeholders to present the latest progress on aircraft technology.

Moderator: Mr. Martial Pagé, Canada’s Representative on the ICAO Council

Speakers:
Mr. Rüdiger Thomas, Engine Performance Senior Expert, Airbus
Mr. Amory Levins, co-founder and Chief Scientist, the Rocky Mountain Institute
Mr. Sean Newsum, Director of Environmental Strategy, Boeing
Mr. Arnaud Bonnet, Senior Engineer, engine performance, Embraer
### Day 2 - Wednesday, 15 May 2019

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<tr>
<th>Time</th>
<th>Session 7: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on Operations</th>
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<tr>
<td>11:30 – 12:00</td>
<td>This session will invite relevant stakeholders to present the latest progress on operational improvements, as one of the elements of the ICAO Basket of Measures.</td>
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<tr>
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<td>Moderator: Dr. Neil Dickson, Chief Environmental Standards, ICAO</td>
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<td>Speakers:</td>
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<td>Mr. David Brain, Environment and Operations, EUROCONTROL</td>
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<td>Mr. Ian Jopson, Head of Environmental and Community Affairs, NATS</td>
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<tr>
<th>Time</th>
<th>Session 8: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on Sustainable Aviation Fuels</th>
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<td>13:30 – 15:00</td>
<td>This session will invite relevant stakeholders to present the latest progress on sustainable aviation fuels. It will also provide information on the outcome of the First ICAO Stocktaking Seminar Toward the 2050 Vision for Sustainable Aviation Fuels (30 April to 1 May 2019 in Montreal, Canada).</td>
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<td>Moderator: Mr. Dionisio Mendez, Mexico’s Representative on the ICAO Council</td>
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<td>Speakers:</td>
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<td>Sustainable Aviation Fuels: Outcome of the First ICAO Stocktaking Seminar Toward the 2050 Vision for Sustainable Aviation Fuels, Ms. Jane Hupe, Deputy Director Environment, ICAO</td>
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<td>Mr. Cesar Velarde, co-Rapporteur of the Aviation Fuel Task Force (ICAO CAEP)</td>
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<td>Mr. Glenn Johnston, Executive Director of Regulatory Affairs at Agrisoma Biosciences Inc. and Chair Regulatory Committee of the Advanced Biofuels Association (ABFA)</td>
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<td>Mr. Steven Le Moing, Sustainable Alternative Fuels Manager, Airbus Environmental Affairs</td>
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<td>Mr. Jean-Christophe Monfort, Senior Energy Life Cycle Emissions Analyst, Aramco Services</td>
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<th>Time</th>
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Session 9: The ICAO Basket of Measures on CO₂ Emissions mitigation – Focus on CORSIA

This session will invite relevant stakeholders to present the latest progress on CORSIA, including the outcome of the ICAO Regional Workshops on CORSIA and the latest developments on ACT CORSIA.

Moderator: Ambassador Philippe Bertoux, France’s Representative on the ICAO Council

Speakers:
Ms. Jane Hupe, Deputy Director Environment, ICAO
Mr. Michael Gill, Executive Director, ATAG
Mr. Gawie Bestbier, Executive Aviation Infrastructure, South Africa Civil Aviation Authority
Eng. Majed Obaid Al Mujaini, Chief Officer – Environment, General Civil Aviation Authority, United Arab Emirates
09:00 – 10:45  **Session 10: Green and Resilient Airports**
In May 2019, ICAO organized a Seminar on Green Airports in Lima, Peru. The objective of this Seminar was to identify the various components of a “Green Airport” and to take stock of the latest practices on each of these aspects. This session is aimed at sharing the key conclusions from the Seminar on Green Airports, including on climate change adaptation.

**Moderator:** Ambassador Ali Riza Colak, Turkey’s Representative on the ICAO Council

**Speakers:**
- **Ms. Rachel Burbidge,** Environment Policy Officer, EUROCONTROL
- **Ms. Ülkü Özeren,** IGA’s Director of Environment & Sustainability
- **Ms. Juliana Scavuzzi,** Senior Manager Environment, Airports Council International (ACI)
- **Mr. Matthew Gorman,** Director Sustainability and Environment, London-Heathrow Airport

10:45 – 11:15  **Coffee Break**

**sponsored by**
Onyx Solar

11:15 – 12:00  **Session 11: International Aviation in a Circular Economy**
The principles of a “Circular Economy” emerged in the 1970’s, and have since been integrated into a number of environmental sustainability policies, such as the waste management policy of “reduce, re-use and recycle”; the use of sustainable aviation fuels processed from waste products; the consideration of energy efficiency and water usage during manufacturing processes. In the past few years, several aviation stakeholders have adhered to the principles of a circular economy and designed comprehensive implementation strategies. The objective of this session will be to raise awareness on the roots of the “Circular Economy”, to look at its main principles and applications and to understand how they translate to the international aviation sector.

**Moderator:** Ambassador Martin Vidal, Uruguay’s Representative on the ICAO Council

**Speakers:**
- **Ms. Michelle Samson,** Corporate Responsibility Advisor, Amsterdam-Schiphol Airport
- **Mr. Philippe Fonta,** Founder and CEO SCRUM-consult
### Day 3 - Thursday, 16 May 2019

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<td>12:00 – 14:00</td>
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| 14:00 – 15:00 | **Session 12: ICAO Capacity-building and assistance activities on environmental protection – a success story**  
The ICAO State Action Plans are an ICAO initiative under the context of No Country Left Behind. This session will highlight the benefits of developing an action plan for a State and its stakeholders, showcase successful cooperation between ICAO Member States as part of the Buddy Programme and raise awareness on the updates to ICAO Doc 9988. It will also present the deliverables of the capacity-building activities deployed as part of the regular programme, and the implementation of two capacity-building and assistance projects, with funding from the European Union and from the Global Environmental Facility (in cooperation with the United Nations Development Programme), respectively.  
Moderator: **Mr. Shinji Matsui**, Japan’s Representative on the ICAO Council  
Speakers:  
**Dr. Neil Dickson**, Chief Environmental Standards, ICAO  
**Mr. Eduardo Caldera Petit**, Programme coordinator, ICAO-European Union project  
**Mr. Mazarin Mintsa**, Director Safety, Quality and Environment, Aeroports du Cameroun  
**Ms. Dorsa Sabet-Rasekh**, Civil Aviation Authority, Panama |
| 15:00 – 15:15 | Coffee Break                                                        |
15:30 – 16:30  Session 13: Three years to prepare for the next 30
This session will summarize the work accomplished by ICAO in the area of environmental protection and set out by the successive Assembly Resolutions and will invite stakeholders to present their views on the challenges that the international aviation sectors will have to face in the next decades in the area of environmental protection.

Moderator: **Mr. Musa Shuaibu Nuhu**, Nigeria’s Representative on the Council

Speakers:
- **Mr. Michael Gill**, Executive Director, ATAG
- **Mr. Michael Rossell**, Deputy Director General, ACI
- **Mr. Tim Johnson**, International Coalition on Sustainable Aviation (ICSA)
- **Mr. Nico Voorbach**, Director, ICAO and Industry Affairs, CANSO
- **Ms. Leslie Riegle**, Assistant Vice President, Civil Aviation, Aerospace Industries Association, on behalf of ICCAIA

16:30 – 17:00  Closing Remarks

**END**
### 2019 Events on the horizon

**ICAO TRIP Regional Seminar**
- **Location:** Cotonou, Benin
- **Dates:** 12 – 14 February 2019

**EUR/NAT-DGCA/2019**
- **Location:** Paris, France
- **Dates:** 19 – 20 March 2019

**ICAO/ACI Symposium on Implementation of the New Global Reporting Format for Runway Surface Condition (GRF2019)**
- **Location:** Montréal, ICAO HQ
- **Dates:** 26 – 28 March 2019

**UNWTO/ICAO Ministerial Conference on Tourism and Air Transport in Africa**
- **Location:** Santa Maria, Sal Island, Cabo Verde
- **Dates:** 27 – 29 March 2019

**Seminar on Aerodrome Certification and Surveillance**
- **Location:** Brasília, Brazil
- **Dates:** 22 - 26 April 2019

**ICAO Stocktaking Seminar toward the 2050 Vision for Sustainable Aviation Fuels**
- **Location:** Montréal, Canada
- **Dates:** 30 April – 1 May 2019

**ICAO Seminar on Green Airports**
- **Location:** Lima, Peru
- **Dates:** 8 – 9 May 2019

**Fourth ICAO Air Transport Symposium (IATS/4)**
- **Location:** Paradise City, Incheon, Korea
- **Dates:** 8 – 10 May 2019

**Environmental Symposium**
- **Location:** Montréal, ICAO HQ
- **Dates:** 14 – 16 May 2019

**ICAO EURNAT Aviation Security Group (ENAVSEC)**
- **Location:** Paris, France (TBC)
- **Dates:** 4 – 6 June 2019

**6th Meeting of the air navigation and FLS Directors**
- **Location:** Lima, Peru
- **Dates:** 24 – 26 June 2019

**Fifteenth Symposium and Exhibition on the ICAO Traveller Identification Programme (TRIP)**
- **Location:** Montréal, ICAO HQ
- **Dates:** 25 – 28 June 2019

**ICAO Global Aviation Cooperation Symposium**
- **Location:** Thailand
- **Dates:** 22 – 24 July 2019

**56th APAC DGCA Conference**
- **Location:** Kathmandu, Nepal
- **Dates:** 19 – 23 August 2019

**ICAO Global Aviation Security Symposium (AVSEC2019)**
- **Location:** Montréal, ICAO HQ
- **Dates:** 18 – 20 September 2019

**Innovation Fair**
- **Location:** Montréal, ICAO HQ
- **Dates:** 22 – 23 September 2019

**Fifth ICAO World Aviation Forum (IWAF 2019)**
- **Location:** Montréal, ICAO HQ
- **Dates:** 23 September 2019

**40th Session of the Assembly**
- **Location:** Montréal, ICAO HQ
- **Dates:** 24 September - 4 October 2019

**Cyber Security & Resilience Seminar**
- **Location:** Cairo, Egypt
- **Dates:** 8 – 10 October 2019

**APANPIRG30 – 30th Asia/Pacific Air Navigation Planning and Implementation Group**
- **Location:** Bangkok, Thailand
- **Dates:** 4 – 6 November 2019

**RASG-APAC/9 – 9th Regional Aviation Safety Group Meeting – Asia/Pacific Region**
- **Location:** Bangkok, Thailand
- **Dates:** 7 – 8 November 2019

**Third UAS DRONE ENABLE Symposium (UAS2019)**
- **Location:** Montréal, ICAO HQ
- **Dates:** 12 – 14 November 2019

**Tenth ICAO ATFM Global Symposium [ATFMS/10]**
- **Location:** Region [TBD]
- **Dates:** Q4 2019

**Global Aviation Training and TRAINAIR PLUS Symposium**
- **Location:** Region [TBD]
- **Dates:** 2019

*All event dates are subject to change*