



OACI

Organización de Aviación Civil Internacional
Oficina para Norteamérica, Centroamérica y Caribe

NOTA DE ESTUDIO

NACC/WG/5 — NE/19
17/05/17

Quinta Reunión del Grupo de Trabajo de Norteamérica, Centroamérica y Caribe (NACC/WG/5)
Puerto España, Trinidad y Tobago, 22-26 de mayo de 2017

Cuestión 3

del Orden del Día

Implementación de Asuntos de Navegación Aérea

3.3 Avance del ANI/WG en AIM, ATM y CNS

SEGUIMIENTO A LA INICIATIVA DE ARMONIZACIÓN PBN, MODERNIZACIÓN E IMPLEMENTACIÓN EN LA REGIÓN Y OTRAS IMPLANTACIONES RELACIONADAS CON LA OPTIMIZACIÓN DEL ESPACIO AÉREO

(Presentada por IATA)

| RESUMEN EJECUTIVO | |
|--|---|
| Esta nota de estudio presenta propuestas de seguimiento a las implementaciones relacionadas a la PBN, espacio aéreo y otros puntos importantes relacionados en la Región | |
| Acción: | La acción propuesta esta descrita en el punto 6 a esta Nota de Estudio |
| Objetivos Estratégicos: | <ul style="list-style-type: none">• Seguridad operacional• Capacidad y eficiencia de la navegación aérea• Protección del medio ambiente |
| Referencias: | <ul style="list-style-type: none">• ANI/WG/2 - NE27 & reporte final• ANI/WG/3 – reporte final |

1. Introducción

1.1 Los distintos análisis de crecimiento de tránsito aéreo en la región, indican que el aumento de la demanda prevista para la Región NAM/CAR/SAM puede tener un efecto dominó que afectará a muchos Estados y podría causar atrasos y consecuentes pérdidas en los usuarios, además de una sobrecarga de trabajo en las unidades ATC, al no existir las suficientes unidades de gestión para el balance entre la capacidad y la demanda.

1.2 Por este motivo se acordaron, en diferentes foros, la implementación de metas operacionales (optimización de separación longitudinal y de rutas ATS) de manera coordinada y armonizada en la Región, con impacto directo en el incremento de eficiencia, capacidad y seguridad operacional.

1.3 Al respecto y para mantener la armonización y objetivos deseados, es necesario mantener un monitoreo constante y periódico de los avances, logros y retos que todos los grupos de interés esperan.

1.4 Las *métricas de progreso* propuestas para este fin no sólo capturan información del progreso de iniciativas mencionadas, sino también buscan obtener un panorama claro de otras implementaciones de relevancia a las operaciones en los espacios aéreos de la región y que deberían formar parte de la implementación coordinada/armonizada.

2. Optimización de Rutas ATS

2.1 En cuanto a los beneficios estimados a la PfA1 (Proposal for Amendment 1), existen valores que pueden ser estimados:

- Cuantitativamente:
 - ✓ MFT (reducción directa de NM en ruta / entre pares de ciudades),
 - ✓ MCT (reducción en costos de operación – cobros por navegación)
 - ✓ MTT (reducción en tiempo de vuelo)
- Cualitativamente:
 - ✓ Flexibilidad en la planificación de vuelos (más opciones en caso de problemas de tiempo, CNS, ATC, aeronaves, etc.)

2.2 En cuanto a los estimados cuantitativos, es necesario contar como mínimo con la versión final de la PfA aprobada.

3. Cambios en la denominación de los procedimientos de aproximación (Circular 336)

3.1 Los detalles expuestos en la Circular 336 de la OACI (Cambios en la representación cartográfica correspondientes a la transición de la navegación de área (RNAV) a la performance de navegación requerida (RNP) en las aproximaciones por instrumentos), proporcionan orientación a las autoridades de aviación civil sobre la transición de la identificación del procedimiento de aproximación de navegación de área (RNAV) a la del procedimiento de aproximación de performance de navegación requerida (RNP), de conformidad con la Enmienda 6 a los Volúmenes I y II del Doc 8168, Procedimientos para los servicios de navegación aérea — Operación de aeronaves (PANS-OPS).

3.2 Aunque el plan de implementación es para el año 2022, consideramos de gran importancia que tanto los Estados como usuarios de espacio aéreo, tengan el panorama completo con suficiente antelación y la visión regional en cuanto a la implementación de dichos cambios, así como las acciones de mitigación propuestas para lograr una implementación coordinada.

3.3 En ese sentido, se solicita considerar la recopilación de la información relacionada en la tabla que se adjunta como **Apéndice A** de esta nota de estudio, con miras a conocer el estatus de implementación en la Región.

4. Enmienda a la fraseología bilingüe ATC del Documento 4444

4.1 El 1 de marzo de 2016, la Comisión de Aeronavegación de la OACI aprobó la Enmienda 7 del Doc 4444, que incluye las Enmiendas 7-A y 7-B de la 15ª edición del PANS-ATM, aplicable desde del 10 de noviembre de 2016.

4.2 Al respecto y debido a la importancia del uso de la fraseología estandarizada ATC y por los cambios de la Enmienda del Doc 4444, se espera que las Autoridades de Aeronáutica Civil de la Región implementen las medidas adecuadas para informar a los usuarios del espacio aéreo bajo su responsabilidad de los cambios.

4.3 En ese sentido, se solicita considerar la recopilación de la información relacionada, en la tabla que se adjunta como **Apéndice B** a esta nota de estudio, con miras a conocer el estatus de implementación en la Región.

5. Optimización de separación longitudinal

5.1 Durante la última reunión de armonización, modernización e implementación PBN celebrada en Costa Rica, del 7 al 9 de Diciembre del 2016, la Región mostró avances en cuanto a la optimización de la separación longitudinal (80NM a 20NM), sin embargo consideramos de gran importancia actualizar el estado de los logros, planes y problemas encontrados hasta la fecha.

5.2 La iniciativa busca reducir la separación longitudinal especificada en cartas de acuerdo, a la mínima requerida para control por procedimientos, proporcionando mayor flexibilidad al ATC e incrementando la eficiencia de las operaciones en ruta.

5.3 De igual manera esta nota de estudio propone capturar la información relativa a la planificación de separación por procedimientos y por vigilancia ATS, así como las limitantes que existan.

5.4 En ese sentido, se solicita considerar la recopilación de la información relacionada en la tabla que se adjunta como **Apéndice C** de esta nota de estudio, con miras a conocer el estatus de implementación en la Región.

6. Acción sugerida:

6.1 Se invita a la Reunión a:

- a) Tomar nota de la información proporcionada en esta nota de estudio;
- b) adoptar la metodología de seguimiento propuesta;
- c) evaluar los formatos propuestos como modelo base en caso sea necesario editar campos; y
- d) llenar la información del Apéndice A, B y C a esta nota de estudio.

CIR336

| Conclusión/Tarea | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 | Estado 6 | Estado 7 | Estado 8 | Estado 9 | Estado 10 | Estado 11 | Estado 12 | Estado 13 | OBSERVACIONES |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|---------------|
| <p><u>Cambios en la denominación de los procedimientos de aproximación (Circular 336)</u></p> <p>Que los Estados al implementar los cambios previstos en la Circular 336, consideren los procesos para el desarrollo del plan de transición y de evaluación de impacto, así como publiquen una AIC sobre el tema, en coordinación con todos los <i>stakeholders</i> involucrados.</p> | | | | | | | | | | | | | | |

ADOPCIÓN Y DIFUSIÓN DE LA ENMIENDA 7 DEL DOC. 4444

| Conclusión/Tarea | Estado 1 | Estado 2 | Estado 3 | Estado 4 | Estado 5 | Estado 6 | Estado 7 | Estado 8 | Estado 9 | Estado 10 | Estado 11 | Estado 12 | OBSERVACIONES |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|---------------|
| <p><u>Se ha adoptado y difundido la enmienda 7 del Doc. 4444</u></p> <p>Notas:</p> <p>a) Insertar SI o NO en el campo correspondiente al Estado.</p> <p>b) Insertar la normativa del Estado en que se adoptado la mencionada enmienda y el medio de difusión de la información (AIC, NOTAM, Instrucción/difusión de información a tripulaciones/ATC, etc) en OBSERVACIONES.</p> | | | | | | | | | | | | | |

POSITION OF SAM FIRS AND WITH CAR ADJACENT FIRS REGARDING USE OF 40/20 NM GNSS/DME
(available only in English)

| STATE/ORGANIZATION | Adjacent State/Organization | 40 NM GNSS/DME Longitudinal | Proposed implementation dates | 20 NM GNSS/DME Longitudinal | Proposed implementation dates | Remarks |
|--|-----------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---|
| Trinidad & Tobago (Includes Antigua & Barbuda, Barbados) | United States (San Juan) | TBD | TBD | TBD | TBD | <p>Currently 10Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Trinidad and Tobago will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p> |

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|--|-----------|-------------|---------------|-----|-----|--|
| | Guyana | implemented | June 30, 2016 | TBD | TBD | <p>Currently 10 Mins MNT</p> <p>Analysis will be conducted over the first six months of use and a decision will be made by June 2017 as to the timeframe to reduce to 20 NM</p> |
| | Suriname | TBD | TBD | TBD | TBD | <p>Currently 10 Mins MNT</p> <p>Currently there is a VHF communication challenge for T&T at position TRAPP. Solutions to this challenge are being investigated.</p> |
| | Venezuela | TBD | TBD | TBD | TBD | <p>Currently 10 Mins MNT</p> <p>Meeting set between T&T and Venezuela to discuss. T&T is ready to implement 40NM GNSS with Venezuela SAFETY ANALYSIS NEEDED</p> |

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|----------------|-----------|--|-----|-----|-----|--|
| Curacao | San Juan | TBD | TBD | TBD | TBD | <p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p> |
| | DR | <p>Agreed but LOA/MOA needed</p> <p>A319, remain at 80nm by end of 2017 possible 40 NM</p> | TBD | TBD | | Currently 10 Mins MNT |
| | Venezuela | Agreed via telcon to be confirmed | TBD | TBD | TBD | Currently 10 Mins MNT |
| | Jamaica | Agreed but LOA needed | TBD | TBD | TBD | Currently 10 Mins MNT |

| | | | | | | |
|---|----------|---|-----------|-------------|-------------|---|
| | Haiti | UG444 remain at 80nm based on Curacao's VHF situation | TBD | TBD | TBD | Currently 10 Mins MNT Discussions ongoing |
| | Colombia | Agreed but LOA needed A319, UG444 remain at 80nm | DEC 2016 | TBD | | Currently 10 Mins MNT |
| COCESNA (Costa Rica, Honduras, Belize, El Salvador, Nicaragua) | Mexico | Implemented | In effect | TBD | TBD | Challenge to Reduction to 20 is due to required separation between Mexico and Houston |
| | Cuba | N/A | N/A | Implemented | implemented | Data sharing agreements in effect. 2017 proposed RADAR handoffs |
| | Jamaica | Implemented | In effect | Discussions | | Limitation is VHF at BDY with Jamaica. Request has been made by Jamaica for solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica |

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|---------------------------|----------|---|-------------------------|--|-----|--|
| | Panama | Implemented | In effect | <p>Reduce to 20NM in a certain area that include the FIX points.</p> <ul style="list-style-type: none"> • UM659 LESIR • UM328 PAPIN • UR773/UA502 POXON • UL655 EGODI • UG440 ISEBA • UA317 BUFEO • UM796 PADUR • UM419 ANSON • UA322 AMUBI • UR505 DURAM <p>Maintain 40NM the next points:</p> <ul style="list-style-type: none"> • UA552 FALLA • UA321 PELRA | | • |
| | Colombia | Agreed | TBD 2017 | TBD | TBD | LOA being revised. |
| Dominican Republic | Haiti | LOA signed in Ft. Lauderdale Florida march 2016 | Implementation Date TBD | TBD | TBD | Discussions Ongoing |
| | Curacao | TBD A319, remain at 80nm | TBD | TBD | TBD | |
| | Miami | Discussion with Miami re procedural contingency | | | | Currently 10 NM Surveillance in use Discussion if required |

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|--|----------|---|-----|--|--|--|
| | San Juan | Willing to reduce. Procedural. Discussion with San Juan (SJ RQS 15 and 20 MINS) | TBD | | | <p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>Discussions ongoing on LOA for 10NM Separation</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p> |
|--|----------|---|-----|--|--|--|

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|---------------|---------|--|--|--|--|---|
| Mexico | COCESNA | Already implemented (Surveillance) (MEX RQS 15 MINS in PACIFIC) Discussion about procedural use of 40NM with GNSS | | | | Northbound traffic from COCESNA Challenge to Reduction to 20 is due to required separation between Mexico and Houston Radar data sharing discussions ongoing |
| | Houston | N/A | | | | Continental – 10 NM miles Surveillance The proposed separation standard is currently being reviewed by FAA HQs to determine applicability in ZHU offshore airspace. |
| | | N/A | | | | Oceanic 10 minutes (MNT) The proposed separation standard is currently being reviewed by FAA HQs to determine applicability in ZHU offshore airspace. |

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|---------------|--------------------|------------------------|-------------------|-----|-----|--|
| | Albuquerque | N/A | | | | Currently Continental – 10NM miles Surveillance Bilateral Discussions required |
| | Los Angeles | N/A | | | | Currently 10 nm Surveillance Bilateral Discussions required |
| | Cuba | TBD | TBD | TBD | TBD | Currently 40 nm (surveillance) Discussion regarding use of 40NM procedural under a letter of agreement |
| Haiti | Kingston | TBD | TBD | TBD | TBD | 10 Mins MNT Discussions Ongoing |
| | Cuba | TBD | TBD | TBD | TBD | 10 Mins MNT Discussions Ongoing |
| | Dominican Republic | TBD | TBD | TBD | TBD | 10 Mins MNT Discussions Ongoing |
| | Miami | TBD | TBD | TBD | TBD | 10 MINS MNT |
| | Curacao | LOA agreement in place | Operational from? | | | |
| Guyana | Trinidad & Tobago | Agreed | May 31 2016 | TBD | TBD | |
| | Suriname | Agreed | May 31, 2016 | TBD | TBD | |

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|----------|---------------------|---|--------------------|------------------------|--|--|
| | Brazil | Signed | Implemented | TBD | TBD | |
| | Venezuela | TBD | TBD | TBD | TBD | |
| Suriname | Guyana | | | | | 10 Mins MNT |
| | Brazil | Suriname in favour | TBD | TBD | TBD | Sent draft to Brazil. TELCON on April 7 for discussion |
| | French Guiana | TBD | TBD | TBD | TBD | 10 Mins MNT |
| | Trinidad and Tobago | Suriname willing, Trinidad and Tobago has challenges with VHF | TBD | TBD | TBD | Currently 10 MIN Currently there is a VHF communication challenge for T&T at position TRAPP. |
| Bahamas | | | | | Discussions needed with US Separation standards does not apply with US. | |
| | | | | | | |
| Colombia | PANAMA | Agreed Air traffic flying between the FIRs maintain 20 nm separation | I implemented 2016 | As agreed between FIRs | December 2016 | |

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|------|-----------|--------|---------------|-------------------|-------------|---|
| | JAMAICA | Agreed | When? | | | 20nm will depend on establishing communication in the north of the Barranquilla FIR |
| | CURACAO | Agreed | December 2016 | TBD | TBD | |
| | VENEZUELA | TBD | TBD | TBD | TBD | |
| | | | | | | |
| Cuba | COCESNA | N/A | N/A | 20 NM Implemented | Implemented | Data sharing agreements in effect. 2017 proposed RADAR handoffs |
| | MEXICO | TBD | TBD | TBD | TBD | Currently 40 nm (surveillance) Discussion regarding use of 40NM procedural under a letter of agreement |
| | HAITI | TBD | TBD | TBD | TBD | 10 Mins MNT Discussions Ongoing |

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|--------|----------|---|----------------|--|---------------|--|
| | JAMAICA | TBD | TBD | TBD | TBD | <p>Currently 40nm overflight based on surveillance, 20nm landing based on surveillance.</p> <p>Use of GNSS procedural minima to be discussed</p> |
| | | | | | | |
| Panama | COCESNA | LOA signed October 2016 effective November 2016 | Implemented | <p>Reduce to 20NM in a certain area that include the FIX points.</p> <ul style="list-style-type: none"> • UM659 LESIR • UM328 PAPIN • UR773/UA502 <p>POXON</p> <ul style="list-style-type: none"> • UL655 EGODI • UG440 ISEBA • UA317 BUFEO • UM796 PADUR • UM419 ANSON • UA322 AMUBI • UR505 DURAM <p>Maintain 40NM the next points:</p> <ul style="list-style-type: none"> • UA552 FALLA • UA321 PELRA | WHEN? | |
| | COLOMBIA | LOA Agreed Air traffic flying between the FIRs maintain 20 nm separation | September 2016 | As agreed between FIRs | December 2016 | |

| | | | | | | |
|---------------|---------------------|--------|--|------------------|-----|--|
| | JAMAICA | Agreed | November 2016 effective 10 December 2016 May 2016 | 40 NM Separation | TBD | LOA with Kingston signed November 2016, effective 10 December 2016. |
| United States | TRINIDAD AND TOBAGO | TBD | TBD | TBD | TBD | <p>Currently 10Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Trinidad and Tobago will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p> |

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|--|---------|-----|-----|-----|-----|---|
| | CURACAO | TBD | TBD | TBD | TBD | <p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p> |
|--|---------|-----|-----|-----|-----|---|

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|--|--------------------------|--|-----|-----|-----|---|
| | DR | Willing to reduce Procedural Discussion with San Juan | | | | <p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p> |
| | MEXICO (Reference Above) | | | | | |
| | HAITI | TBD | TBD | TBD | TBD | 10 MNT |

| | | | | | | |
|---------|----------|---|-------------|-------------|-----|---|
| Jamaica | Curacao | Agreed | TBD | TBD | TBD | <p>Currently 10 Min MNT in use</p> <p>Discussions on ground to ground communications in progress and LOA revision to be signed soon.</p> <p>Automated coordination being investigated.</p> |
| | COCESNA | <p>Implemented</p> <p>EXCEPTION: UM782 10 MIN MNT</p> | In effect | Discussions | TBD | <p>Limitation is VHF at BDY with Jamaica. Request has been made by Jamaica for solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica</p> |
| | PANAMA | agreed | 10 Dec 2016 | TBD | TBD | |
| | COLOMBIA | Implemented | In use | TBD | TBD | |
| | HAITI | TBD | TBD | TBD | TBD | |

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|--|------|-----|-----|-----|-----|---|
| | CUBA | TBD | TBD | TBD | TBD | <p>Currently 40nm overflight based on surveillance, 20nm landing based on surveillance.</p> <p>Use of GNSS procedural minima to be discussed</p> |
| | | | | | | |
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| ARGENTINA | | | | | | |
|--------------------|--------------------|-------------------------|------------------------|-----------------------|------------------------|--------------------------------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/ DME | Date of Implementation | 20 NM GNSS/ DME | Date of Implementation | |
| CORDOBA | IQUIQUE | OG | | | | |
| | LA PAZ | YES | 01/01/17 | | | |
| | EZEIZA | | | YES | 13/10/2016 | |
| | MENDOZA | | | YES | 13/10/2016 | |
| | RESISTENCIA | | | YES | 13/10/2016 | VHF Com. Constrains |
| RESISTENCIA | ASUNCION | YES | 01/01/17 | | | |
| | LA PAZ | YES | 01/01/17 | | | |
| | CORDOBA | | | YES | 13/10/2016 | |
| | CURITIBA | YES | 01/01/17 | | | |
| | EZEIZA | | | YES | 13/10/2016 | |
| | MONTEVIDEO | YES | 01/01/17 | | | |
| EZEIZA | COMODORO RIVADAVIA | | | YES | 13/10/2016 | |
| | MENDOZA | | | YES | 13/10/2016 | |
| | PUERTO MONTT | OG | | | | |
| | CORDOBA | | | YES | 13/10/2016 | |
| | RESISTENCIA | | | YES | 13/10/2016 | |
| | MONTEVIDEO | YES | 01/01/17 | YES | 2010 | PAPIX, KUKEN and DORBO 20NM |
| MENDOZA | EZEIZA | | | YES | 13/10/2016 | |
| | SANTIAGO | OG | | | | |
| | CORDOBA | | | YES | 13/10/2016 | |
| COMODORO RIVADAVIA | EZEIZA | | | YES | 13/10/2016 | |
| | PUNTA ARENAS | OG | | | | |
| | PUERTO MONTT | OG | | | | |

| BOLIVIA | | | | | | |
|----------------|-------------|-------------------------|------------------------|----------------|------------------------|----------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| LA PAZ | AMAZÓNICO | YES | 01/01/17 | | | |
| | ASUNCION | YES | 01/01/17 | | | |
| | CURITIBA | YES | 01/01/17 | | | |
| | CORDOBA | YES | 01/01/17 | | | |
| | LIMA | OG | | | | |
| | IQUIQUE | OG | | | | |
| | RESISTENCIA | YES | 01/01/17 | | | |

| BRAZIL | | | | | | |
|---------------|------------|-------------------------|------------------------|----------------|------------------------|--|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| AMAZÓNICO | BRASILIA | --- | --- | --- | --- | 10NM |
| | BOGOTÁ | YES | 13/10/16 | | | |
| | CAYENNE | --- | --- | --- | --- | 10 Minutes |
| | CURITIBA | --- | --- | --- | --- | 10NM |
| | GEORGETOWN | YES | 07/01/16 | | | |
| | LA PAZ | YES | 01/01/17 | | | |
| | LIMA | YES | 31/03/16 | | | COM/SUR required, does not apply, overflights from/to La Paz FIR |
| | MAIQUETIA | YES | 23/10/16 | | | |
| | PARAMARIBO | YES | 13/10/16 | | | |
| | RECIFE | --- | --- | --- | --- | 10NM |
| BRASILIA | ATLANTICO | --- | --- | --- | --- | 10 Minutes |
| | AMAZÓNICO | --- | --- | --- | --- | 10NM |
| | CURITIBA | --- | --- | --- | --- | 5NM |
| CURITIBA | RECIFE | --- | --- | --- | --- | 5NM |
| | ASUNCION | YES | Mar/2016 | | | |
| | AMAZONICO | --- | --- | --- | --- | 10NM |

| | | | | | | |
|-----------|-------------|-----|----------|-----|-----|---------------------|
| | BRASILIA | --- | --- | --- | --- | 5NM |
| | LA PAZ | YES | 01/01/17 | | | |
| | MONTEVIDEO | YES | 01/01/17 | | | |
| | RECIFE | --- | --- | --- | --- | 5NM |
| | RESISTÊNCIA | YES | 01/01/17 | | | |
| | ATLÂNTICO | --- | --- | --- | --- | 10 Minutes |
| RECIFE | AMAZÔNICO | --- | --- | --- | --- | 10NM |
| | BRASÍLIA | --- | --- | --- | --- | 5NM |
| | CURITIBA | --- | --- | --- | --- | 5NM |
| | ATLÂNTICO | --- | --- | --- | --- | 10 Minutes |
| ATLÂNTICO | AMAZÔNICO | --- | --- | --- | --- | 10 Minutes |
| | CURITIBA | --- | --- | --- | --- | VHFCom. problems |
| | RECIFE | --- | --- | --- | --- | |
| | CAYENNE | --- | --- | --- | --- | |

| CHILE | | | | | | |
|-----------------|-----------------------|-------------------------|---------------------------|-----------------------|---------------------------|----------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/ DME | Date of Implementation | 20 NM GNSS/ DME | Date of Implementation | |
| SANTIAGO | IQUIQUE | | | | | 5NM |
| | LIMA | OG | | | | |
| | MENDOZA | OG | | | | |
| | PUERTO MONTT | | | | | 5NM |
| IQUIQUE | CORDOBA | OG | | | | |
| | LA PAZ | OG | | | | |
| | LIMA | OG | | | | |
| PUERTO MONTT | SANTIAGO | | | | | 5NM |
| | PUNTA ARENAS | | | | | 5NM |
| | EZEIZA | OG | | | | |
| | COMODORO RIVADAVIA | OG | | | | |
| PUNTA ARENAS | PUERTO MONTT | | | | | 5NM |
| | COMODORO RIVADAVIA | OG | | | | |

| COLOMBIA | | | | | | |
|--------------|--------------|-------------------------|------------------------|----------------|------------------------|---|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| BOGOTÁ | AMAZÓNICO | YES | 13/10/16 | | | |
| | CENAMER | NO | | | | 80 NM due to VHF/HF Communications Constrains |
| | GUAYAQUIL | YES | 13/10/16 | | | Reduced separation of 40 NM is applied. Memorandum of Understanding among ATC service providers signed. |
| | LIMA | YES | 31/03/16 | | | COM SUR required, does not apply overflights |
| | MAIQUETIA | OG | | | | |
| | PANAMÁ | YES | Oct/16 | | | |
| | BARRANQUILLA | YES | | | | |
| BARRANQUILLA | MAIQUETIA | OG | | | | |
| | PANAMÁ | YES | Oct/16 | | | |
| | BOGOTÁ | YES | | | | |
| | KINGSTON | YES | 30/Ago/2013 | | | |
| | CURAÇAO | | | | | No available information |

| ECUADOR | | | | | | |
|-----------|---------|-------------------------|------------------------|----------------|------------------------|--|
| ACC | ACC ADJ | Longitudina separationl | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| GUAYAQUIL | BOGOTÁ | YES | 13/10/16 | | | Reduced separation of 40 NM is applied. Memorandum of Understanding among ATC service providers signed. |
| | LIMA | YES | 31/03/16 | | | COM/SUR required, does not apply overflights. Updated with signing of LoA during SAM/IG/18, limitations on overflights is eliminated since 10/11/16. |
| | CENAMER | NO | --- | N/A | --- | Oceanic Separation |

| FRENCH GUIANA | | | | | | |
|---------------|------------|-------------------------|------------------------|----------------|------------------------|------------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| CAYENNE | AMAZÔNICO | --- | --- | --- | --- | 10 Minutes |
| | PARAMARIBO | --- | --- | --- | --- | 10 Minutes |
| | PIARCO | --- | --- | --- | --- | 10 Minutes |

| GUYANA | | | | | | |
|------------|------------|-------------------------|------------------------|----------------|------------------------|----------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| GEORGETOWN | AMAZONICO | YES | 7/Jan/2016 | | | |
| | PIARCO | YES | 30/Jun/2016 | | | |
| | MAIQUETIA | YES | 30/01/2017 | | | |
| | PARAMARIBO | YES | 31/May/2016 | | | |

| PANAMÁ | | | | | | |
|--------|--------------|-------------------------|------------------------|----------------|------------------------|------------------------------------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| PANAMÁ | BOGOTÁ | YES | Oct/16 | | | |
| | BARRANQUILLA | YES | Oct/16 | | | |
| | CENAMER | YES | 18/Oct/2012 | OG | TBD | 20NM under consideration in Panama |
| | KINGSTON | YES | 10/Dec /2016 | | | |

| PARAGUAY | | | | | | |
|----------|-------------|-------------------------|------------------------|----------------|------------------------|----------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| ASUNCION | CURITIBA | YES | Mar/16 | | | |
| | LA PAZ | YES | 01/01/17 | | | |
| | RESISTÊNCIA | YES | 01/01/17 | | | |

| PERU | | | | | | |
|------|-----------|-------------------------|------------------------|----------------|------------------------|---|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| LIMA | AMAZONICO | YES | 31/03/16 | | | COM/SUR required, does not apply overflights to/from La Paz FIR |
| | BOGOTÁ | YES | 31/03/16 | | | COM/SUR required, does not apply overflights |
| | SANTIAGO | OG | | | | |
| | IQUIQUE | OG | | | | |
| | GUAYAQUIL | YES | 31/03/16 | | | COM/SUR required, does not apply overflights. LoA signed during SAM/IG/18, overflights limitation is eliminated since 10/11/16. |
| | LA PAZ | OG | | | | |

| SURINAME | | | | | | |
|------------|------------|-------------------------|------------------------|----------------|------------------------|--------------------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| PARAMARIBO | AMAZÓNICO | YES | 13/10/16 | | | Signed |
| | GEORGETOWN | YES | 31/05/16 | | | Signed |
| | PIARCO | N/A | | | | Oceanic Separation |
| | CAYENNE | N/A | --- | --- | --- | Oceanic Separation |

| URUGUAY | | | | | | |
|------------|-------------|-------------------------|------------------------|----------------|------------------------|---------------------------------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| MONTEVIDEO | CURITIBA | YES | 01/01/17 | | | |
| | EZEIZA | YES | 01/01/17 | YES | 2010 | PAPIX KUKEN DORBO 20NM |
| | RESISTENCIA | YES | 01/01/17 | | | |

| VENEZUELA | | | | | | |
|-----------|--------------|-------------------------|------------------------|----------------|------------------------|--------------------------|
| ACC | ACC ADJ | Longitudinal separation | | | | Comments |
| | | 40 NM GNSS/DME | Date of Implementation | 20 NM GNSS/DME | Date of Implementation | |
| MAIQUETIA | AMAZONICO | YES | 23/10/15 | | | |
| | BOGOTA | OG | | | | |
| | BARRANQUILLA | OG | | | | |
| | PIARCO | | | | | Negotiating |
| | CURAZAO | NO | | | | Curazao does not accept. |
| | SAN JUAN | NO | | | | |
| | GEORGETOWN | YES | 30/01/2017 | | | |

— END —