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**SUMMARY OF DISCUSSIONS OF THE SOUTH ATLANTIC  
IMPLEMENTATION MANAGEMENT GROUP**

**FIRST MEETING**

*(Abidjan, Côte d'Ivoire, 21 to 24 November 2022)*

**0. Introduction**

0.1 The First Meeting of the South Atlantic Implementation Management Group (SAT IMG/01) was held, thanks to the kind invitation of ASECNA, from **21 to 24 November 2022**, in Abidjan, Côte d'Ivoire.

0.2 The meeting was opened by Mr. Sinaly Silue (Director General ANAC Côte d'Ivoire), Mr. Sidi Kone (ASECNA Côte d'Ivoire), Mr. Luis Tojais (SAT IMG Chairperson), Mr. Sidi Gueye (Director General ANACIM Senegal and SAT SG Chairperson) and Mr. Prosper Zo'o Minto'o (Regional Director ICAO WACAF Office) who all welcomed the SAT IMG participants to Abidjan and also pointed out the importance to harmonize operations, infrastructure and programmes over the entire Atlantic Ocean, including the South Atlantic.

0.3 The lists of participants and meeting documentation are provided in [Appendices A](#) and [B](#) respectively.

0.4 Mr. Luis Tojais (Portugal) chaired the meeting with support from Mr. Sven Halle, SAT IMG Secretary, from the ICAO EUR/NAT Office. Administrative assistance was provided by Ms. Leyla Suleymanova from the ICAO EUR/NAT Office. The SAT IMG was also attended by Mr. Fanfe Bamba (Regional Officer AIM WACAF Office) and Ms. Keziah Ogutu (Regional Officer ATM/SAR ESAF Office).

0.5 At its opening session the Group adopted the following agenda and agreed on the proposed work schedule:

**Agenda Item 1: Opening and review of latest developments**

- 1.a) Adoption of the Agenda
- 1.b) Status of follow-up actions from ACM-S meeting
- 1.c) Latest significant international aviation developments
- 1.d) Review outcome of last meetings which are of relevance to the SAT IMG

**Agenda Item 2: Planning and implementation programmes**

- 2.a) States/ANSP updates including traffic figures
- 2.b) Airspace user update
- 2.c) AIDC implementation activity plan and associated implementation status/updates
- 2.d) RCP/RSP implementation and PBCS monitoring for all SAT FIRs
- 2.e) Data Link issues

- 2.f) ADS-B implementation aspects
- 2.g) Other issues

**Agenda Item 3: Airspace and ATS Route improvements**

- 3.a) Improvements to the EUR/SAM corridor to increase safety and efficiency
- 3.b) AORRA (Atlantic Ocean Random Routing Area) implementation and new potential areas of improvement)
- 3.c) Other Airspace improvement activities

**Agenda Item 4: SAT documentation**

- 4.a) Development and update of SAT documents

**Agenda Item 5: Safety management**

- 5.a) Improvements States/ANSP updates including reporting of LHDs to RMAs
- 5.b) Airspace user update including improved assignment of flight levels

**Agenda Item 6: Any other business**

- 6.a) Future work programme and follow-up actions
- 6.b) Next meetings
- 6.c) Report to the next SAT SG/01 meeting

**1. Opening and review of latest developments**

1.1 The Group noted that 19 working papers and 9 information papers had been prepared and submitted for discussion at the SAT IMG.

*1b-d) significant international aviation developments and outcome of meetings with relevance to the SAT IMG*

*ICAO UPDATE*

1.2 The Group was provided with an information paper about the recent significant international aviation developments, including the latest amendments and proposals for amendment to ICAO Annexes and Procedures for Air Navigation Services (PANS), the distributed State letters and Electronic Bulletins, as well as other publications (e.g. ICAO Documents, Manuals and iPacks). The Group also took note of the upcoming ICAO meetings at global and regional levels (hybrid meetings), as well as the planned regional and Global Aviation Training (GAT) courses.

*41<sup>ST</sup> ICAO ASSEMBLY*

1.3 The Group noted the presentation on the ICAO priorities for the 41<sup>st</sup> ICAO Assembly (A-41) and the next triennium, which highlighted the focus on innovation (the next triennium will be the opportunity to accompany the transformational agenda of the aviation sector through the active engagement of ICAO with the aviation and non-aviation stakeholders in a coherent, coordinated and efficient manner) and resilience (more robust, sustainable and resilient civil aviation system, recovering, and learning lessons from the COVID-19 pandemic; and effectively addressing challenges related to environment).

*Outcome of the Special Atlantic Coordination Meeting (ACM-S)*

1.4 The SAT IMG was informed about the outcome of the Special Atlantic Coordination Meeting (ACM-S) was held after the World ATM Congress in Madrid, Spain from 23 to 24 June 2022. The meeting was organised jointly between the ICAO European and North Atlantic Office, Paris (EUR/NAT), the ICAO North American, Central American and Caribbean Office, Mexico (NACC), the Eastern and Southern African Office, Nairobi (ESAF), the South American Office, Lima (SAM) and the Western and Central African Office,

Dakar (WACAF). The main objective of the ASM-S was to re-start the South Atlantic (SAT) discussions, after the introduction of a new work structure for the SAT and the election of new chairpersons for the SAT Groups in October 2021, on the harmonization and cross-regional coordination for the enhancement of remote oceanic operations in the Atlantic that were interrupted during the COVID-19 crisis. The Group noted the IMG Terms of reference as well as the associated IMG work programme and welcomed that the IMG-related Action Items from the ACM-S meeting had been either completed or included for discussion into this meeting. It was recalled that the involvement of 3 RMAs (with identified problem areas in data format, integrity of safety reports, report numbers, etc.) in the SAT area highlighted some issues which need to be addressed by not only the SAT SOG but also the ICAO RMA Coordination Group (RMACG) at their next meetings.



## 2. Planning and Implementation Programmes

### 2a-b) State/ANSP reports and airspace user updates

2.1 The Group noted the report from **Portugal** which indicated that the traffic figures for Santa Maria FIR are almost at 2019 pre-pandemic levels, having exceeded 2019 numbers in the months of July, August and September 2022. The report included data on the most utilized aircraft types and the top five requested flight levels in Santa Maria FIR. VHF and surveillance coverage diagrams, traffic flow maps, a table of coordination protocols (e.g. OLDI or AIDC) and the recently implemented ATM and CNS infrastructure changes were discussed. The IMG took note of the planned future changes which will include Space Based ADS-B, adaptation to the new WAFS dataset and implementation of new 15 NM track to track separation minima (2024 onwards). In the discussions it was clarified that the separation minima would be 23 NM when only ADS-B information would be available, but the minima would go down to 5 NM when ADS-B and VHF would be both available. It was also explained that the ATM system in Santa Maria is different from the recently upgraded system in Lisboa and that controller tools had recently been implemented to deal namely with aircraft identification issues and weather deviations.

2.2 **South Africa** presented a summary of their air traffic figures which are very slowly increasing, but it is not near pre-COVID numbers. The aviation industry was one of the hardest hit sectors and the collapse of more than three major airlines was witnessed together with an adverse impact on various airport companies in South Africa and the whole Region. The Group noted that the traffic figures for the Johannesburg Oceanic airspace remain very low, well below the trends for the domestic airspace (still 65% below the 2019 figures for AORRA) and a projected recovery will not be realised in short to medium term. The IMG noted that ADS/C and CPDLC operating fleet within Johannesburg Oceanic equipage levels are at 100%, the good fleet equipage levels for ADS-B, the implementation status of AIDC and AMHS implementation (including a AIDC trial with Mauritius until April 2023), the CNS availability performance (between 95 and 100%) from the last 12 months and the planned ATM and CNS infrastructure changes. It was remarked that the reasons for the COM system failures had been power outages and power supply challenges and not really system problems. Space Based ADS-B trials have started within the en-route class A airspace of the South African FIRs (Johannesburg, Johannesburg Oceanic and Cape Town) and implementation has been targeted for April 2023 pending regulatory approval. Migration to RNP4 has been deferred in line with PBCS implementation roadmap and the implementation could commence from April 2024. The Group noted the information on the established robust and functional civil/military coordination platforms with emphasis on collaborative decision making, collaborative ATM/CNS implementation planning, national airspace planning and coordination ensuring equitable access as enabled by flexible use of airspace (FUA) concept which is managed by the ATNS' Central Airspace Management Unit (CAMU). The IMG also noted the activities for the review of the South African ATM Contingency Plans. The implementation of Free Route Airspace was briefly discussed and it was agreed that the AFI Region Free Route Airspace FRA implementation roadmap should be shared with all SAT IMG members so that the topic could be addressed at the next meeting. (Action 01-01).

2.3 The Group was informed by **Spain** on the South Atlantic Regional Monitoring Agency (SATMA) statistical data collection and treatment for air traffic movements along the EUR-SAM Corridor. The Group noted the difficulties/issues with the data collection and supported the proposal that Brazil, Cape Verde, Spain and Senegal should collect Air Traffic Movement data from their ATM Systems in a period of six months in accordance with the pre-established format agreed with each member, see summary of reported data to SATMA (2022) figure below:

2022	Canarias UIR		SAL <u>Oceanic</u> UIR		Dakar <u>Oceanic</u> UIR		Atlántico-Recife FIR/UIR	
Month	Rutas principales	Cruce	Rutas principales	Cruce	Rutas principales	Cruce	Rutas principales	Cruce
JANUARY								
FEBRUARY								
MARCH								
APRIL								
MAY								
JUNE								
JULY								
AUGUST								
SEPTEMBER								
OCTOBER								
NOVEMBER								
DECEMBER								
LEYENDA:		Disponible		No disponible				

The Group also appreciated the inclusion of the Demand Data Repository (DDR) provided by EUROCONTROL Network Manager (NM) as a new data source for the traffic figures in the 4 FIRs of the EUR/SAM corridor. The IMG took note of the global 2022 figures for the EUR/SAM corridor which included data for flights per month, the percentage of change to the previous year, the flight numbers per airline, the figures per aircraft type, the figure per routes/traffic flows, the figures on CNS equipment and capabilities and the figures where the flight did not receive their requested flight level. This was followed by individual presentation for the Canarias FIR, the SAL Oceanic FIR, the Dakar Oceanic FIR and the Atlantico FIR which added more details on flight level distribution, traffic load and traffic distribution per ATS route. As a result of the discussion the following SAT IMG Decisions were agreed:

<b>Why</b>	To identify required traffic statistics and aircraft data so that the SAT SG will be in a position to make more accurate and predictable planning decisions
<b>What</b>	Inclusion of RCP240 and RSP 180 values into the aircraft equipment monitoring tables.
<b>Who</b>	Spain (SATMA)
<b>When</b>	For the next report at SAT IMG/02

#### SAT IMG Decision 01/01 – Add RCP240 and RSP 180 into the monitoring tables

That, Spain amends the aircraft equipment monitoring tables for the EUR/SAM corridor so that they include the values for RCP240 and RSP180.

<b>Why</b>	To identify required traffic statistics and aircraft data so that the SAT SG will be in a position to make more accurate and predictable planning decisions
<b>What</b>	Expansion of the time horizon for traffic figures within the EUR/SAM corridor so that the range includes traffic figure from the past year (Y-1), the actual/current year (Y) and the next year (Y+1).
<b>Who</b>	Spain (SATMA)
<b>When</b>	For the next report at SAT IMG/02

**SAT IMG Decision 01/02 – Expansion of time horizon for traffic figure monitoring**

That, Spain expands the time horizon for traffic figures within the EUR/SAM corridor so that the range includes traffic figure from the past year (Y-1), the actual/current year (Y) and the next year (Y+1).

2.4 **ASECNA** gave a presentation to the Group which provided an overview of operations in Dakar Oceanic airspace and ongoing activities to facilitate improvements of Air Traffic Service provision within this SAT area. The Group noted not only the existing (e.g. CPDLC, RNP10, ADS-C) CNS systems in use, but also the recently implemented (e.g. AIDC between Dakar and Abidjan ACC in November 2021, or Space Based ADS-B in May 2022) improvements. Additional information on the futures implementation activities for PBCS (RCP240 and RSP180), RNP4, ASEPS and AIDC were presented and discussed. The results of an assessment (via information derived from flight plans of 5492 flights between July and September 2022) for the determination of the current Communications, Navigation and Surveillance equipage and capabilities within the EUR/SAM corridor indicated high percentage values which should be considered in the identification of priority projects for the EUR/SAM corridor.

2.5 The Group noted the information from **Ghana** for the Accra Oceanic Airspace which has become a preferred airspace for East African and Middle East aircraft operators. The quarterly traffic figures had been growing steadily and were approaching pre-COVID levels within the Accra FIR. The report also included details on data link (CPDLC and ADS-C providing 100% coverage over the Accra FIR), the three installed ADS-B ground stations (each with 250 NM range for 90% coverage of the airspace), the limited VHS coverage in the oceanic airspace and the data gathering for the migration from RNAV10 to RNP10/RNP4. The Group noted that the regulatory framework for the PBCS approval process has still to be established and that the ATM systems would be compliant for PBCS implementation. The IMG discussed the encountered challenges (e.g. lack of training for operational and technical personnel, missing flight plans, message format errors) on the AMHS / AIDC implementations and noted the work on a new Air Navigation Complex (including a new ATM system) which would become operational in the first quarter of 2023. The Group was informed about the status of FRA implementation, the AFI SSR Code Allotment and Assignment Review (ASCAAR) concept implementation and the civil/military cooperation activities. The discussions on concerns about the current contingency plan arrangements following the experience from the recent ASECNA industrial action were deferred to a later agenda item.

2.6 The IMG was informed by **Cabo Verde** that due to delays in the ATM system modernisation, the AIDC-related implementation activities are planned to restart at the end of 2022. The new ATM system is expected to become operation in Q1 2023 and will also be able to analyse, monitor and report PBCS related data in the future. The Group noted the current and planned CNS developments which include the transition from AIS to AIM, the implementation of PBN Approach procedures at 4 international airports, the introduction of SATCOM as an alternative means of communication, the planned implementation of Space Based ADS-B, the AIDC/OLDI and AMHS implementation plans (Santa Maria –SAL and Dakar – SAL projects to start in Q1 2023), as well as the theoretical SSR coverage maps and the theoretical HF and VHF coverage maps. The Group appreciated the information on the first volcanic ash exercise (VOLCEX 01/2021 conducted in the AFI Region) which was led by Cabo Verde, as one of the AFI States responsible for an FIR in which there's an active volcano in proximity to routes used for international flights. An eruption of the volcano located at Fogo Island (which last erupted in 2014) was simulated and the AFI VACP contingency plan was tested. The exercise was a complete success as all involved stakeholders were able to test all the procedures and assess the coordination between several entities with responsibility in this event.

2.7 **Angola** gave a detailed presentation on the project for the modernisation of the Air Navigation System which would be implemented before the end of 2024. The CNS infrastructure project included ADS-B ground stations for continental airspace, MLAT system, VHF and HF stations, AIM system, 2 new VOR/DMEs and 1 new DME: A new 3D aerodrome simulator system, new ATC simulators for ACC, the migration to radar control (potential reorganisation of the airspace structure) and training of all operational and technical staff (including English language proficiency) have also been included into the project. A national Air Navigation Plan and a contingency plan that would ensure the continuity (short-, mid-, long- term) of services are expected to be developed in the framework of this project. The implementation of AIDC could be envisaged after the completion of the modernisation project.

2.8 SAT IMG members were invited to submit their State/ANSP reports, even if they could not attend the meeting, in order to allow the distribution of important information and coordination of ANS related developments within the SAT FIRs. (Recurrent Action R1-01)

2c) AIDC implementation activity plan and associated implementation status/updates

2.9 The Group was informed by South Africa about the status of AIDC implementation and the significant improvements in the coordination failures since 2015. South Africa implemented AIDC interconnection between the South African and Namibian FIRs (i.e. Johannesburg Oceanic, Johannesburg and Windhoek FIR) in 2020. As previously reported at SAT23 and SAT24 meetings, the ATM systems and communication infrastructure capability limitations including the non-availability of circuits to enable AIDC implementation has remained a challenge to date and hampered AIDC implementation plans within the Region. Collaboration efforts between Argentina and South Africa to establish a REDDIG II MPLS node in Johannesburg, had been delayed due to technical coordination limitations in telco link establishment which resulted in delays in planned implementation of AIDC between Johannesburg Oceanic, Atlantico, Monte Video and Ezeiza FIRs. The AIDC interconnection implementation plans have subsequently been reviewed and implementation planning and coordination will resume pending successful implementation of the REDDIG II MPLS node which is anticipated in Q1 2023. There has been a significant improvement in coordination failures as can be seen in the performance comparison from 2015, however these performances remain a concern especially between Johannesburg Oceanic and Luanda FIRs. The communication capability related limitation in Luanda FIR have been identified as the contributing factor to majority of the coordination failures. The Group supported the proposal to further interrogate the communication capabilities and related circuits availability to enable AIDC implementation between Johannesburg Oceanic and Luanda FIRs.

2.10 The IMG was presented with status updates on the AIDC implementation within ASECNA and especially the present status of AIDC implementation in Senegal with adjacent ATSUs in the SAT Region. AIDC was successfully implemented between Dakar ACC and Abidjan ACC in November 2021. In order to achieve harmonious and effective results regarding the AIDC implementation, a project based approach was adopted and a 4 step methodology with 22 deliverables (including safety assessment) was developed to support the implementation. For the AIDC trial between Dakar ACC and Atlántico ACC (Brazil) a similar but slightly adjusted project approach was agreed and the technical trials have started in January 2022, with an expected implementation by the end of 2022. The AIDC implementation activities with Cayenne and SAL ACCs are expected to start once the new ATM system have been installed. There are currently no plans for AIDC implementation between Dakar and PIARCO and the connection between Dakar ACC and Canarias ACC will still have to address the interoperability issues between OLDI and AIDC systems. The Group thanked ASECNA for sharing their coordination experiences with adjacent ATS units in order to effectively resolve AIDC implementation issues. Following the discussion, the IMG reviewed the methodology and deliverables and adopted new **Deliverables and Content Guidelines in support of AIDC implementation between 2 ATSUs in the SAT Region** which are attached in Appendix F and can be used to further harmonise and support the AIDC implementation within the SAT. The Secretariat was invited to share the new guidance material with all SAT IMG members (Action 01-03).

2.11 A report on the progress made in the implementation of CNS infrastructure and various services including AMHS (ATS Message Handling System) and AIDC was presented by ASECNA to the IMG. ASECNA started AMHS installation for the smooth implementation of ATS messaging in accordance with ICAO regional plan in 2014. Since 2017, AFS Circuits between ASECNA centers are operating in AMHS and several actions are ongoing to pursue AMHS connections with adjacent ACCs. In June 2020 and during COVID-19 period, the first connection in AMHS technology between South America (DECEA Brazil) and Africa (ASECNA) was operationally activated. With this new operational AMHS link, using satellite connection of the AFISNET network from Recife and Dakar, DECEA and ASECNA guarantee the fluidity necessary for the processing of Flight Plans, Meteorology and Aeronautical Information messages between South America and Africa. During the discussions, several IMG members reported their problems with COM system bandwidth capacity issues and the issues with the COM128 infrastructure which are delaying the AMHS implementation. The Group agreed that, in order to expedite the implementation of AMHS, IMG

members should be invited to report back on their individual technical solutions that were used for a successful AMHS installation (Action 01-04).

2.12 The Group agreed that any AMHS and/or AIDC implementation activities should be reported at every SAT IMG meeting either as part of the State/ANSP report or as an individual working paper. (Recurrent Action R1-02).

2d) RCP/RSP implementation and PBCS monitoring for all SAT FIRs

2.13 The Group noted a report on the PBCS implementation in South Africa which highlighted the challenges for the Air Navigation Service Provider (ATNS), the CAA and the aircraft operators. These challenges remain relevant to date and formed part of the implementation planning considerations and the recommendations to review the implementation roadmap. With ADS-C and CPDLC monitoring ongoing, the acquisition of the Performance Based Communication and Surveillance (PBCS) analysis tool was deferred to the financial year 2024/25 due to budgetary constraints as result of the Covid-19 impact and the reviewed ATNS strategy. Therefore ATNS will have the capability to analyse PBCS data in support of the performance monitoring and reporting provisionally from April 2024 onwards. The South African CAA will start the application of the PBCS rules and the associated regulatory PBCS framework from June 2023 onwards, so that aircraft operators can apply for PBCS authorisation from Q3 2023 onwards. Whilst it is undeniable that the volume of air traffic in the Johannesburg Oceanic FIR airspace is far below previously recorded level operating within the FIR and transiting through the SAT area, previous statistics have shown that a majority of the fleet operating within the SAT area are appropriately equipped and therefore the PBCS implementation plans had to be reviewed and updated.

2.14 The discussion revealed that there is still a considerable variety in PBCS implementation activities and the AFI Regional Monitoring Agency (ARMA) supported these with details from the last APIRG/25 Meeting (November 2022) and the ARMA presentation on the implementation of procedures to support Performance Based Communication and Surveillance (PBCS) and non-compliance reporting in AFI Region. Consequently, the SAT IMG decided that all States in the South Atlantic would be invited to complete a survey (based on the ARMA questionnaire) on the status of the planned implementation of PBCS in their respective FIRs:

<b>Why</b>	To review the coordinated PBCS monitoring process for all SAT FIRs and to support the planning and implementation of PBCS
<b>What</b>	Submit survey on PBCS implementation, analyze the results obtained, and present them to the next meeting
<b>Who</b>	SAT IMG Members, Secretariat, RMA's (ARMA, CARSAMMA, SATMA)
<b>When</b>	Survey launch before end of 2022, report to SAT IMG/02

**SAT IMG Decision 01/03 – Survey on PBCS implementation in all SAT FIRs**

That the SAT IMG:

- a) invites SAT IMG members to complete a survey (similar to the one from ARMA) in order to determine the readiness for PBCS Implementation as provided at **Appendix G**; and
- b) tasks the ICAO Secretariat to analyse the results of the survey and shares them with the involved RMA's; and
- c) request the ICAO Secretariat to report the results back to the SAT IMG/02 meeting.

2e-f) Data Link Issues and ADS-B implementation aspects

2.15 Spain informed the Group about the ASECNA/ENAIRe plan for the installation of ADS-B/VHF stations in Mauritania in order to improve Surveillance and Communication Coverage in Canarias FIR Oceanic airspace. Though the ADS-B coverage in oceanic areas must rely on satellite ADS-B, the strategic



location of ADS-B terrestrial antennas may provide an extra coverage that could be useful for ATS provision. A project was defined in which ENAIRE would install a new air-ground communications site in Nouadhibou (Mauritania) consisting on 3 frequencies, would install an ADS-B ground station in Nouadhibou site, and would share A/G communication equipment in Peñas del Chache Radio Station for the use of ASECNA. An installation plan was developed following an on-site visit in September 2022 and the project is expected to start in 2023. The terrestrial ADS-B coverage would be significantly enhanced not only for the South Eastern part of Canarias FIR but also for the EUR/SAM corridor. Cabo Verde informed the Group that they will start an analysis for the implementation of Space Based ADS-B in SAL FIR during 2023.

2.16 A working paper was presented by ASECNA with information on the implementation of space-based Automatic Dependent Surveillance-Broadcast (ADS-B) and the transition to Advanced Surveillance Enhanced Procedural Separations (ASEPS). Since 2020, ASECNA implemented ADS-B in all the airspace under its jurisdiction (6 FIRs) and carried out benchmarking in different regions of the world which showed that ADS/B mandates have been in force in almost all Regions. The SAM Region has planned for a mandate for 2023. For the AFI Region, ADS/B-based operations are allowed for areas of operation where the equipped aircraft rate is above 90%. 3 surveys on the aircraft equipage were conducted and the results showed that equipped aircraft vary between 90% and 99% depending on the area of operations; see below:

- a) Oceanic airspace (Dakar Oceanic FIR): 98%
- b) West Africa continental airspace (Niamey and Dakar continental FIRs): 92 %
- c) Central Africa continental airspace (Ndjamena and Brazzaville FIR): 91 %
- d) Indian Ocean airspace (Antananarivo FIR): 92%

Therefore ASECNA decided to use space-based ADS-B data for flights with direct routings and for flights entering from any FIR border point. In addition, Space-Based ADS-B has been introduced in ASECNA's terminal control area (TMA) and upper control area (UTA) with a separation minima of 10 NM and 5 NM. The Group took note of the planned ASEPS expansion into oceanic airspace and remote continental where currently a 80 NM (10min) longitudinal separation was being applied and where, by using Space-Based ADS-B, a new target horizontal separation minimum between ADS positions could be 20 NM. A question was raised on the ASEPS requirements of RCP240 and it was confirmed that the ASEPS CONOPS indicates also how to deal with degraded situations, including the "residual" unequipped aircraft. SAT ANSPs were invited to collaborate in the ASEPS implementation, so that the benefits of the new separation minima can be optimized.

2.17 Côte d'Ivoire presented the process for authorisation of Space-Based ADS-B operations in Abidjan ATSU which became operational in July 2022. Côte d'Ivoire was identified to host one of the two hubs (System Delivery Point SDP) for the processing and dissemination of space ADS-B data throughout the airspace managed by ASECNA. The Côte d'Ivoire CAA, took special provisions, in particular: setting up a solid multidisciplinary project team, building the capacity and technical abilities of its Air Navigation safety inspectors, developing the relevant regulatory texts and rigorously conducting the five (5) stages (preliminary analysis, technical analysis, on-site audit/inspection, authorisation, publication in AIP) of the authorization process. The Group noted that the SB ADS-B has been added as another surveillance source and that no change in the application of separation minima had been considered so far.

2.18 Spain reminded the IMG that the implementation of ADS-B and Space Based ADS-B had also been part of the EUR/SAM Air space Concept Implementation Team (ESCIT) discussions and therefore it was agreed by the SAT IMG to request an update on implementation timelines and coverage of ground and space based ADS-B within the EUR SAM corridor for the next ESCIT/03 meeting (Action 01-05).

### 2g) Other Issues

2.19 IATA presents a working paper to the IMG which highlighted three focus areas that must be addressed to facilitate implementation of ATM efficiencies in the South Atlantic (SAT). These areas include the IATA South Atlantic Operational Strategy, CNS and ATM change management, and progression of the EUR/SAM corridor airspace and AORRA airspace concepts. The framework of the IATA strategy is focused



on implementation of safety and efficiency priorities in the SAT region and to ensure interoperability and improved oversight in accordance with the regional targets. The strategy summarizes requirements for the short-term (end 2023), mid-term (end 2025) and incorporates the goals of the of the EUR/SAM corridor concept. IATA explained that the recommended focus areas support SAT IMG actions that promote safety, airspace efficiency, capacity enhancements, interoperability and sustainability. Focus Area 1, directly supports the SAT IMG ToRs as well as addresses recovery efforts of airline while recovering from the global pandemic; additionally, utilization of current aircraft equipage and infrastructure assists with stabilization of costs and bolsters operational and economic benefits. Focus Area 2, assures that the SAT IMG assumes full management responsibility, necessary to fulfill its mandate to coordinate implementation of regional CNS and ATM priorities. Focus Area 3, adoption by the SAT IMG facilitates a common baseline of completed activities, clearly defines and formalizes documentation of concept priorities, and establishes an implementation timetable for the EUR/SAM corridor concept and AORRA Airspace. The IMG discussed the IATA proposal and agreed that after a complete assessment of the short term ANSP plans for ATM and CNS enhancements together with the results from the next ESCIT/03 meeting, a SAT Service Development Roadmap for the coordinated and harmonised implementation of operational improvements from 2024 onwards would be developed. (Action 01-07).

2.20 Additionally, IATA requested the SAT IMG to address the issue that between 20-30% of flights did not receive the ATC clearance to fly at their requested flight levels (with a variance of 2000-4000ft) due to capacity constraints. Even while traffic levels have not returned to pre-pandemic levels, it is necessary that sustainable solutions are implemented to assure flight level limitations are mitigated to the greatest extent possible. IATA requested that SAT ANSPs should provide the solutions implemented to mitigate flight level limitations and improve flight level occupancy for existing and future flights transiting the EUR/SAM corridor. Due accounting must be conducted of ANSPs solutions so that operators can be properly conduct fuel load planning and benefit from a higher light level efficiency. The IMG discussed this issue and agreed to the following decision:

<b>Why</b>	To implement solutions for the improvement of flight efficiency and flight level occupancy in the EUR-SAM corridor
<b>What</b>	A State Letter be send to SAT States highlighting the need to implement solutions for the improvement of flight efficiency and flight level occupancy in the EUR-SAM corridor.
<b>Who</b>	ICAO Secretariat
<b>When</b>	December 2022

### **SAT IMG Decision 01/04 – Improvement of flight efficiency and flight level occupancy in the EUR-SAM corridor**

That, SAT ANSPs are invited to provide the solutions to mitigate flight level limitations and improve flight level occupancy for existing and future flights within the EUR/SAM corridor.

## **3. Airspace and ATS Route improvements**

### **3a) Improvements to the EUR/SAM corridor to increase safety and efficiency**

3.1 The IMG was presented with a working paper from Spain on the summary of activities from the ESCIT (EUR/SAM Air space Concept Implementation Team) which was a subgroup created by ICAO SAT targeting implementations of CNS/ATM improvements in EUR/SAM Corridor. The first meeting of the ESCIT was in 2019 in Canary Islands, Spain where the conclusions from the SAT/23 Meeting on the Implementation of reduced separation minima via PBCS and the framework for the implementation and operation of RCP and RSP had been addressed. In addition, the SAT CONOPS schedule for the EUR/SAM corridor was developed which separates the States/stakeholders in charge of the EUR/SAM corridor from the States/stakeholders in charge for the rest of the SAT area. The second ESCIT meeting/WebEx was organised in 2021 for the discussion of the organisational and structural changes of the SAT. Due to COVID, changes in SAT

Structure, and lack of dates in 2022, the third ESCIT meeting has been delayed to the first semester of 2023. In that meeting, ESCIT will review its role into the new SAT formal structure, to report properly to the new SAT/IMG in the future. The first and main item to be faced, once ESCIT group restart the work, should be to analyze any available options to increase the number of optimal levels to be offered in a short/medium term, as traffic is increasing rapidly the EUR/SAM corridor. The revision/update of the SAT CONOPS (Group I) will be also covered in that meeting. Considering the discussions from the IATA working paper and the presented developments, the SAT IMG urged the ESCIT to have their meeting as soon as possible, ideally in Q1 2023. The chairman and the ICAO Secretariat offered their support to the ESCIT, which could potentially be organised in Madrid Spain in early 2023, and the following decision was agreed:

<b>Why</b>	To restart the work on the CNS/ATM improvements in the EUR-SAM corridor
<b>What</b>	Organization of ESCIT/03 meeting in Q1/2023.
<b>Who</b>	ICAO Secretariat
<b>When</b>	December 2022

#### **SAT IMG Decision 01/05 – Organisation of ESCIT/03 meeting in Q1/2023**

That, in accordance with the SAT IMG ToRs, the ESCIT/03 meeting will be organized as early as possible in 2023 with the main priority to assess and improve the air navigation system capacity and efficiency within the EUR/SAM corridor

#### 3b) AORRA (Atlantic Ocean Random Routing Area) implementation and new potential areas of improvement

3.2 The Group was presented with information from the Secretariat on the different phases of the AORRA (Atlantic Ocean Random Routing Area) implementation which had been derived from previous SAT meeting and AIP data. The AORRA phases 1 and 2 had been implemented in April 2009 and the AORRA phases 3 and 4 were implemented by all involved States in August 2010. A review of published information in ENR 1.8.5 of several AIPs resulted unfortunately in no clear picture on the exact dimensions of the AORRA airspace, the published waypoints or any information for additional implementation steps. The IMG chairperson therefore invited all SAT IMG Members to submit their AIP data or any other additional AORRA information (including charts or maps) to the ICAO Secretariat, so that the Group can decide about the future of the AORRA SubGroup at the next meeting (Action 01-08)

## **4. SAT Documentation**

### 4a) Development and update of SAT documents

4.1 ASECNA presented a working paper to the group which provided details on the activation of the Dakar Oceanic FIR contingency plan from 23 September (0800 UTC) to 24 September 2022 (1550 UTC) due to industrial actions. In order to respond to the contingency scenario, coordination was immediately carried out with the adjacent ACCs, through the ESCIT group, in order to ensure the continuity of service along the EUR-SAM corridor. As a result, all ACC in the EUR-SAM corridor published a common NOTAM with same restrictions (FL restrictions, 20 minutes longitudinal separation and ATFM measures with 3 aircraft per hour) applied to their FIR, to harmonize procedures for contingency.

4.2 The Group noted that it was the first time that a contingency plan had been activated for the EUR-SAM corridor. The restrictions affected a total of 78 flights which crossed Dakar FIR contingency routes via SAL and Atlantico FIRs boundaries and only 43% of flights could get their Requested Flight Level. However, it was noted that FL400 not initially provided for in the contingency plan was used by aircraft operators. The Group discussed the challenges (issues with ATM system interfaces, ATSU coordination challenges, protocols/procedures which are not 100% aligned) in the contingency situation. The Group decided that instead of changing the current SAT contingency plan with the ASECNA proposals (review of the 20 min

LONG separation minima and use of FL 400) from this experience in September, a dedicated project team should be established for a thorough review and update of the current document.

<b>Project Title</b>	SOUTH ATLANTIC CONTINGENCY PLAN REVIEW PROJECT TEAM SAT CPR PT
<b>Parent Group</b>	SAT IMG
<b>Project Supervisory body</b>	SAT SG
<b>Project Period</b>	December 2022 – up to IMG/03 meeting
<b>Project Objective</b>	To review and propose amendments to the ATM Operational Contingency Plan for the South Atlantic, taking into account, whenever possible, the need to harmonize and simplify contingency procedures within in the SAT States. To verify the accuracy of the information particular to each SAT FIR, and the correspondence with AIP procedures, and make the necessary corrections to the existing SAT Contingency Plan Publish the SAT Contingency Plan as a new SAT Doc 002
<b>Project High Level Tasks</b>	1. To collect all the published contingency procedures/arrangements for each SAT FIR 2. To review and propose amendments to the SAT Contingency Plan 3. To make proposals for the alignment of SAT Contingency Plan content with the published AIP provisions 4. To discuss the amendment proposals for further harmonization at the AFI Contingency plan workshop in Q2 2023 5. To consolidate the changes/amendments into a new SAT Doc 002 6. To present the new SAT Doc 002 for discussions and endorsement at the SAT IMG meeting
<b>Membership</b>	SAT IMG members and observers. Note: Other subject matter experts may also participate, as deemed appropriate by the Project Team.
<b>Coordination Requirements</b>	Series of virtual meetings Physical meeting during the AFI Contingency plan workshop in Q2 2023
<b>Project Outcomes</b>	New SAT Doc 002
<b>Project Lead</b>	ASECNA
<b>Project Secretariat Support</b>	SAT IMG Secretariat

<b>Why</b>	Review and propose amendments to the ATM Operational Contingency Plan for the South Atlantic
<b>What</b>	Establishment of a SAT Contingency Plan Review Project Team.
<b>Who</b>	ICAO Secretariat
<b>When</b>	December 2022

## **SAT IMG Decision 01/06 – SAT Contingency Plan Review Project Team**

That, a Project Team be established in order to review and propose amendments to the ATM Operational Contingency Plan for the South Atlantic, to verify the accuracy of the information particular to each SAT FIR, and to publish the SAT Contingency Plan as a new SAT DOC 002.

4.3 The SAT IMG chairman presented examples (e.g. NAT Doc 006 and NAT OPS Bulletins) from the NAT Region, which are based on official AIM publications from States and are used as additional and valuable guidance material for aircrews and dispatchers. The Group took note of this option and it was agreed to look into the possibility for the development of these specific SAT documents during the next meetings.

## **5. Safety management**

5.1 The Group took note of the proposed SAT Safety policy, which was presented by the SAT SOG vice chair and which will be discussed at the SAT SOG/1 meeting, that aims to provide a policy framework in order to introduce the necessary safety enhancement and enable the Region to align its work with the Global Aviation Safety Plan (GASP) goals.

5.2 The Group also noted the update on the ongoing work of the SAT SOG, which was presented by the SAT SOG vice chair and which will be discussed at the SAT SOG/1 meeting, related to a base proposal for a shared database between the 3 RMAs in their jurisdiction and related actions, the results from the RMA survey, the gathering of information regarding traffic statistics and reduction in collision risk assessment and LHD and the development of an SAT-SOG annual working programme for 2023.

5.3 IATA presented their support to the SAT Safety Policy and further suggested that just culture should be foundational to the SAT region safety culture. The Group noted that detailed comments to para 1.2 and para 2.4 of the SAT Safety policy would be discussed at the SAT SOG/1 meeting.

5.4 The IMG noted the information from SATMA regarding the 2021 EUR-SAM Corridor CRM (Risk has been calculated in 6 different locations along the Corridor) and statistics of traffic, which will be presented in SAT SOG/1 meeting.

5.5 The Group remarked that a significant amount of Safety related elements had been discussed at the SAT IMG/01 meeting and that an appropriate representation should be ensured for the SAT SOG/01, which would hopefully take place in due time.

## **6. Any other business**

### 6.a) Future work programme and follow-up actions

6.1 The Group had no items to add and the work programme was confirmed as assigned.

6.2 The list of SAT IMG 01 Decisions, as attached in Appendix E and the Action Item list as attached in Appendix D were endorsed by the SAT IMG.

6.3 All SAT IMG meeting documentation will be made available on the ICAO Secure Portal <https://portallogin.icao.int/>, Group name **SATIMG** (all caps, no space). Trinidad and Tobago recommended that the same approach would also be used by SAT SOG for their meetings, so the Secretariat was invited to coordinate this with ICAO HQ and the ICAO SAM office (which will support the SAT SOG).

*6.b) Next meetings*

6.4 The Group agreed that the next meeting (SAT IMG/02) would be organised from 30 May to 2 June 2023 either in Dakar, Senegal or alternatively in Santa Maria, Portugal. The location will be confirmed shortly.

6.5 It was also proposed to have the SAT IMG meeting details for the next 2 meetings, so that planning stability can be improved and timely reservation of travel can be arranged

*6.c) Report to the SAT SG/01*

6.6 The report to SAT SG/01, with proposed actions, is at Appendix H.

6.7 The Chairman together with the SAT IMG members expressed their appreciation for the decision to convene the SAT IMG meeting as a face-to-face meeting. The level of interaction, discussions and engagement was completely different than in a virtual environment.

6.8 In the closing remarks, the Chairman and the Regional Director from the WACAF Office thanked ASECNA and Côte d'Ivoire for their excellent support, their very nice hospitality and generosity which were instrumental factors for the successful outcome of the SAT IMG/01.

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**APPENDIX A — LIST OF PARTICIPANTS***(paragraph 0.3 refers)***ANGOLA**

José AGOSTINHO GONÇALVES  
 António BORGES PEREIRA  
 Francisco José DOMBALA

**CAPE VERDE**

Micael DELGADO LIMA MORENO

**CÔTE D'IVOIRE**

Lamine DIARRA  
 Sandrine GNASSOU  
 Kouadio KONAN  
 Adama SANOGO  
 Sinaly SILUE  
 Ariel TRAORE

**FRANCE**

~~Serge CUPOLI~~  
~~Alain KERHASCQUET~~

**GHANA**

Daniel DOE  
 Daniel LARBI  
 Daniel NARTEY  
 Theophilus Joe QUAYE

**NAMIBIA**

~~Jeremia I. KAMATI~~  
~~Abiatar T. NTINDA~~

**PORTUGAL**

Luis Miguel Castanhas TOJAIS (SAT IMG  
 Chairperson)

**SENEGAL**

Gallo BA  
 Sidy GUEYE  
 Papa Dibocor SENE

**SOUTH AFRICA**

Martin COOPER  
~~James DAVIS~~  
 Sandile MAPHANGA  
 Sibusiso NKABINDE

**SPAIN**

Antonio ARIAS FEBLES  
~~Maria Del Mar TABERNERO SERRANO~~  
 Alexander DORTA FUMERO  
 Eduardo ORTUNO VILLAPALOS  
 Mauricio RUIZ ROLLE

**TRINIDAD AND TOBAGO**

Alexis BRATHWAITE

**UNITED STATES**

Travis FIEBELKORN

**AFI RMA**

Kevin EWELS  
 Nonjabulo GUMEDE

**ASECNA**

Mi Fernande Jocelyne ABY épse DJIA  
 Kpatcha Essozimna AWISSOBA  
 Eric Armand DAMIBA  
 Mamour DIOUF  
 Eric Guiraud INANAN  
 Apollin KOMGUEM MAGNI  
 Sidi KONE  
 Yao Paulin KOUASSI  
 Cosse WADE

**IATA**

Jeffrey MILLER\*

**ICAO RO ESAF**

Keziah OGUTU

**ICAO RO EUR/NAT**

Sven HALLE  
 Leyla SULEYMANOVA (secretarial support)

**ICAO RO WACAF**

Fanfe BAMBABA  
~~Nika Meheza MANZI~~  
 Prosper ZO'O MINTO'O

\*remote participation to IMG/01 for presentation of  
 WPs only

**APPENDIX B — MEETING DOCUMENTATION***(paragraph 0.3 refers)*

| <b>WP</b> | <b>A.I.</b> | <b>Title</b>                                                                                                                                 | <b>By</b>           |
|-----------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| WP01      | 1           | Draft Agenda                                                                                                                                 | Secretariat         |
| WP02      | 2           | Installation of an ENAIRE ADS-B/VHF Stations in Mauritania                                                                                   | ENAIRE,<br>Spain    |
| WP03      | 3           | ESCIT Report                                                                                                                                 | ENAIRE,<br>Spain    |
| WP04R     | 2           | IATA South Atlantic Operational Strategy                                                                                                     | IATA                |
| WP05      | 2           | PBCS implementation in South Africa                                                                                                          | South Africa        |
| WP06      | 2           | AIDC implementation in South Africa                                                                                                          | South Africa        |
| WP07      | 1           | ACM-S meeting SOD                                                                                                                            | Secretariat         |
| WP08      | 1           | State report                                                                                                                                 | Portugal            |
| WP09      | 1           | State report                                                                                                                                 | ENAIRE,<br>Spain    |
| WP10      | 2           | AIDC Implementation Status Updates                                                                                                           | ASECNA              |
| WP11R     | 2           | Status of ATM operations in Dakar Oceanic FIR                                                                                                | ASECNA              |
| WP12      | 2           | Increase ASECNA airspace capacity: implementation of ASEPS (advanced surveillance-enhanced procedural separations) in Dakar Oceanic Airspace | ASECNA              |
| WP13      | 3           | Activation of Dakar Oceanic Contingency Plan Report                                                                                          | ASECNA              |
| WP14      | 2           | State report                                                                                                                                 | South Africa        |
| WP15      | 2           | Process for Authorization of Space Based ADS-B Operations                                                                                    | Côte d'Ivoire       |
| WP16      | 2           | AMHS Implementation Status                                                                                                                   | ASECNA              |
| WP17      | 2           | State Report                                                                                                                                 | Ghana               |
| WP18R     | 2           | State Report                                                                                                                                 | Cabo Verde          |
| WP19      | 2           | State report                                                                                                                                 | Angola              |
| <b>IP</b> | <b>AI</b>   | <b>Title</b>                                                                                                                                 | <b>Presented by</b> |
| IP01      | 1           | Meeting schedule                                                                                                                             | Secretariat         |
| IP02      | 1           | List of meeting documents                                                                                                                    | Secretariat         |
| IP03      | 5           | SATMA report                                                                                                                                 | Spain               |
| IP04      | 1           | High-Level Review of the ICAO 41st Assembly                                                                                                  | Secretariat         |
| IP05      | 1           | ICAO update                                                                                                                                  | Secretariat         |
| IP06      | 5           | Proposal for the SAT Safety Policy – IATA Support                                                                                            | IATA                |
| IP07      | 5           | SAT Safety Policy                                                                                                                            | SAT SOG             |
| IP08      | 5           | SAT SOG work plan update                                                                                                                     | SAT SOG             |
| IP09      | 2           | Update from ATNS South Africa                                                                                                                | South Africa        |



**APPENDIX C — LIST OF APPENDICES**

| <b><i>Attached:</i></b>                    |                                                                                                          |           |  |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------|--|
| Appendix A                                 | SAT IMG/01 List of Participants                                                                          | Para 0.3  |  |
| Appendix B                                 | List of Documents                                                                                        | Para 0.3  |  |
| Appendix C                                 | List of Appendices                                                                                       | Para 6.3  |  |
| Appendix D                                 | Action Items List                                                                                        | Para 6.2  |  |
| Appendix E                                 | SAT IMG 01 Decisions                                                                                     | Para 6.2  |  |
| Appendix H                                 | Report to SAT SG                                                                                         | Para 6.6  |  |
| <b><i>Published in separate files:</i></b> |                                                                                                          |           |  |
| Appendix F                                 | Deliverables and Content Guidelines in support of AIDC implementation between 2 ATSU's in the SAT Region | Para 2.10 |  |
| Appendix G                                 | PBCS Readiness Questionnaire for the SAT States                                                          | Para 2.14 |  |
|                                            |                                                                                                          |           |  |

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**APPENDIX D — ACTION ITEM LIST***(paragraph 6.2 refers)*

| <b>ID #</b> | <b>ACTION</b>                                                                                                                                                                                                | <b>REMARKS</b>            | <b>WHO</b>                     | <b>WHEN</b>   |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------|---------------|
| R-01        | Provide State/ANSP Reports including traffic figures and information on implementation activities.                                                                                                           | SAT IMG/1 SoD, para 2.8   | All SAT IMG members            | Every meeting |
| R-02        | In accordance with the detailed AIDC implementation activity plan for the SAT Region (Appendix X) present updates on AIDC implementation to the SAT IMG                                                      | SAT IMG/1 SoD, para. 2.12 | Secretariat<br>SAT IMG members | Every meeting |
| 01-01       | Share the AFI Region Free Route Airspace FRA implementation roadmap with SAT IMG members                                                                                                                     | SAT IMG/1 SoD, para. 2.2  | Secretariat                    | SAT IMG/02    |
| 01-02       | Review the SAT Contingency Plan (inclusion of 20 min LONG separation minima and use of FL 400) in the framework of the SAT CPR Project Team report back to the next meeting                                  | SAT IMG/1 SoD, Para. 4.1  | SAT CPR PT                     | SAT IMG/02    |
| 01-03       | Share the deliverables/guidelines in support of AIDC implementation between 2 ACCs/OACs in the SAT Region with SAT IMG members                                                                               | SAT IMG/1 SoD, Para. 2.10 | Secretariat                    | 31 DEC 2022   |
| 01-04       | Report back on the technical solutions which support the implementation of AMHS                                                                                                                              | SAT IMG/1 SoD, Para. 2.11 | Secretariat<br>SAT IMG members | SAT IMG/02    |
| 01-05       | Update on implementation timelines and coverage of ground and space based ADS-B within the EUR SAM corridor                                                                                                  | SAT IMG/1 SoD, Para. 2.18 | ESCIT members                  | ESCIT/03      |
| 01-06       | Submit the ESCIT/03 meeting report for discussion and review to the next SAT IMG meeting                                                                                                                     | SAT IMG/1 SoD, Para. 3.1  | ESCIT chairperson              | SAT IMG/02    |
| 01-07       | Following the assessment of the current implementation activities, prepare a SAT Service Development Roadmap for the coordinated harmonised implementation of operational improvements from 2024 onwards     | SAT IMG/1 SoD, Para. 2.19 | Secretariat<br>SAT IMG members | SAT IMG/03    |
| 01-08       | Submit all material from the individual AIPs on the airspace dimensions, waypoints and procedures of the AORRA phase 4 area to the Secretariat. If available, send also any information on the AORRA phase 5 | SAT IMG/1 SoD, Para. 3.2  | SAT IMG members                | 31 DEC 2022   |
|             |                                                                                                                                                                                                              |                           |                                |               |

## APPENDIX E — SAT IMG/01 DECISIONS

| Reference/Title                                                                                                                 | Description                                                                                                                                                                                                                                                                             | Comments                                                                                                                                              | Status   |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| SAT IMG/01-1<br>Inclusion of RCP240 and RSP 180 values into the aircraft equipment monitoring tables                            | That, Spain amends the aircraft equipment monitoring tables for the EUR/SAM corridor so that they include the values for RCP240 and RSP 180.                                                                                                                                            | To be included into the next report for the SAT IMG/02 meeting                                                                                        | On-going |
| SAT IMG/01-2<br>Expand the time horizon for traffic number monitoring in the EUR/SAM corridor                                   | That, Spain expands the time horizon for traffic figures within the EUR/SAM corridor so that the range includes traffic figure from the past year (Y-1), the actual/current year (Y) and the next year (Y+1)                                                                            | To be included into the next report for the SAT IMG/02 meeting                                                                                        | On-going |
| SAT IMG/01-3<br>Submit survey on PBCS implementation, analyze the results obtained, and present them to the next meeting        | That:<br>a) the SAT IMG members are invited to complete a survey (similar to the one from ARMA) in order to determine the readiness for PBCS Implementation;<br>b) the ICAO Secretariat analyse the results of the survey; and<br>c) report the results to the next SAT IMG/02 meeting. | Survey launch before end 2022<br>3 months comments period<br>Share the results with the 3 SAT RMAs<br>Preparation of WP for SAT IMG/02                | On-going |
| SAT IMG/01-4<br>Implement solutions for the improvement of flight efficiency and flight level occupancy in the EUR-SAM corridor | That, SAT ANSPs are invited to provide the solutions to mitigate flight level limitations and improve flight level occupancy for existing and future flights within the EUR/SAM corridor                                                                                                | State Letter to be sent<br>Follow up at SAT IMG/02                                                                                                    | On-going |
| SAT IMG/01-5<br>Organisation of ESCIT/03 meeting in Q1/2023                                                                     | That, in accordance with the SAT IMG ToRs, the ESCIT/03 meeting will be organized as early as possible in 2023 with the main priority to assess and improve the air navigation system capacity and efficiency within the EUR/SAM corridor.                                              | State Letter invitation to be sent<br>ESCIT report to be presented at SAT IMG/02                                                                      | On-going |
| SAT IMG/01-6<br>Establishment of a SAT Contingency Plan Review Project Team                                                     | That, a Project Team be established in order to review and propose amendments to the ATM Operational Contingency Plan for the South Atlantic, to verify the accuracy of the information particular to each SAT FIR, and to publish the SAT Contingency Plan as a new SAT DOC 002.       | State Letter for nominations to be sent<br>Series of virtual meetings<br>Participation in the AFI workshop<br>PT report to be presented at SAT IMG/02 | On-going |

**APPENDIX H — REPORT TO SAT SG***(paragraph 5.7 refers)*

|                                                                                                                                            |                             |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Note that the Action Items from the ACM-S had been addressed at the IMG/01                                                                 | Para 1.1 and 1.4            |
| Note the updates from the SAT States/ANSPs                                                                                                 | Para 2.1 to 2.8             |
| Note the status on the AIDC implementation in the SAT area                                                                                 | Para 2.9 to 2.12            |
| Note the discussions on the PBCS implementation and support the launch of a PBCS implementation readiness questionnaire for the SAT States | Para 2.13 to 2.14 and App G |
| Note the new deliverables/context guidelines for AIDC implementation in the SAT                                                            | App F                       |
| Note the discussions on the different Space-Based and Ground-Based ADS-B implementation activities within the SAT FIRs                     | Para 2.15 to 2.18           |
| Note the SAT operational strategy from airspace user (IATA) perspective                                                                    | Para 2.19 to 2.20           |
| Note the SAT IMG Decision on the organisation of the ESCIT/03 meeting in Q1 2023                                                           | Para 3.1                    |
| Note the SAT IMG actions for the analysis of the AORRA implementation phases and the future work arrangements                              | Para 3.2                    |
| Note the request to update the SAT contingency plan                                                                                        | Para 4.1                    |
| Note and support the establishment of the SAT Contingency Plan Review Project Team                                                         | Para 4.1                    |
| Note and support the SAT IMG Action Item list                                                                                              | Para 6.2 and App D          |
| Note and support the SAT IMG Decisions                                                                                                     | Para 6.2 and App E          |
| Note the schedule for the next meeting                                                                                                     | Para 6.4 to 6.5             |

**-END-**