



INTERNATIONAL CIVIL AVIATION ORGANIZATION
Fourth Meeting of AFI Region Directors General of Civil Aviation (DGCA/4)
(Matsapha, Manzini, Swaziland, 8 to 9 November 2010)

Agenda Item 2: Aviation Safety

Air Traffic Services (ATS) Incident Analysis Group

(Presented by the International Air Transport Association)

Summary

This paper invites States and air navigation service providers to carry out thorough investigations on all reported ATS Incidents and take adequate measures to prevent repetition of similar occurrences. It also calls upon States to make their investigations, conclusions and recommendations readily available to all concerned parties.

References:

- SP AFI RAN (2008) Report
- ATS/AIS/SAR/SG/11 Report

1. INTRODUCTION

2.1 In accordance with ICAO provisions in Annex 11 – Air Traffic Services, Annex 13 – Aircraft Accident and Incident Investigation, the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444) and the Air Traffic Services Planning Manual (Doc 9426), procedures for reporting and investigating ATS occurrences are required in order to ensure the highest standards of safety. Assuming that ATS incidents are investigated thoroughly and that adequate measures have been taken to prevent similar occurrences in the future, however, corrective actions and safety recommendations are not always made known to all concerned aircraft operators. Unfortunately, users receive little or no feedback on air safety reports (ASRs) from some States and air navigation service providers (ANSPs).

2.2 ICAO SP AFI RAN 2008 endorsed activities of the AFI Incident Analysis Group (AIAG) which is multidisciplinary group¹ that reviews reported incidents in the Region on a yearly basis and formulate recommendations to prevent similar incidents in the AFI region. IATA is secretariat of this group.

Report of last AIAG meeting has been attached as Appendix A to this working paper.

¹ AIAG comprise of IATA; ICAO; various ANSPs (such ASECNA, NAMA and ATNS), CAAs (such as Kenya CAA) various operators; IFATCA, IFALPA, ARMA, etc

2.3 ICAO SP AFI RAN 2008 endorsed establishment of the Tactical Action Group (TAG), and that the group², through its by-weekly teleconferences, tactically address any deficiencies or

2.4 The collected data (Air Safety Reports reported by airline operators and Air Navigation Service Providers) are compiled into AIAG database, which is then presented to TAG on bi-weekly basis improved by TAG to meet specific requirements.

2. DISCUSSION

Investigation report

2.1 We must assume that reported incidents are investigated thoroughly and that adequate measures have been taken to prevent a similar occurrence in the future. In accordance with ICAO Doc9426 part II chapter II-1-3-4 paragraph 3.4.2, conclusions and recommendations shall be made available to all concerned.

We request Air Service Navigation Providers and States to provide comprehensive written feedback immediately after completion of the investigation in line with Recommendation 4/6 of the ICAO SP AFI RAN 2008 — Investigation of air traffic services incidents and provision of comprehensive feedback to parties involved:

That, in coordination with their air navigation service providers, States:

- a) diligently conduct investigations on all reported air traffic services incidents having taken place in airspace under their responsibility; and
- b) provide timely, documented feedback to all involved parties through participation in the established AIAG mechanism via the relevant ICAO regional office.

2.2 The rate of incident investigation feedback varies significantly from one State to another. In addition, AIAG and TAG have raised concern on the quality of reported incidents by cockpit crew as well on the quality of investigation reports provided by State.

2.3 Analysis of ASRs per Flight Information Region

Data in table is represented for ASRs reported between 01 January and 30 September 2010.

Following to be noted:

- ASRs are mostly reported to AIAG by operators, in very few instances reports have been raised by ANSP/State;
- Some ASRs have been reported recently hence investigation feedback not yet received;
- Some ASRs are pending feedback since January this year.

² Core AFI TAG members: ARMA, ASECNA, IATA, ICAO, IFALPA, IFATCA, Kenya CAA, NAMA and ATNS

Flight Information Region (FIR)	Reported ASRs	ASRs pending investigation	Date of oldest ASR pending feedback	Nature of ASRs pending investigation
Luanda	90	30	03-Jan	18 ASRs - ATIS; 7 ASRs - COMMS; 2 ASRs - NAVAIDS; 2 ASRs - MET; 1 ASR - AIRPROX
Tripoli	32	29	14-Jan	20 ASRs - COMMS; 5 ASRs - ATIS; 4 ASRs - AIRPROX
Nairobi*	29	21	24-Feb	11 ASRs - ATIS; 6 ASRs - AIRPROX; 2 ASRs - NAVAIDS; 1 ASR - COMMS
Kinshasa	20	13	10-Jan	7 ASRs - COMMS; 4 ASRs - AIRPROX; 1 ASR - ATIS; 1 ASR - RWY Incursion
Kano	35	12	15-Mar	3 ASRs - AIRPROX; 3 ASRs - ATIS; 2 ASRs - NAVAIDS; 2 ASRs - COMMS; 1 ASR - MET; 1 ASR - Airport
Khartoum	15	8	10-Jul	5 ASRs - COMMS; 2 ASRs - ATIS; 1 ASR - AIRPROX
Johannesburg*	17	6	14-Mar	2 ASRs - AIRPROX; 2 ASRs - ATIS; 1 ASR - NAVAIDS
Dar es Salaam	13	5	01-Aug	3 ASRs - ATIS; 1 ASR - AIRPROX
Accra	20	5	17-May	2 ASRs - AIRPROX 1 ASR - ATIS; 1 ASR - COMMS; 1 ASR - Airport
Harare*	16	4**	04-Aug	2 ASRs - COMMS; 1 ASR - ATIS; 1 ASR - NAVAIDS
Addis	3	3	04-Mar	1 ASR - ATIS; 1 ASR - COMMS
Beira	8	3	23-Mar	3 ASRs - COMMS
Dakar Oceanic	14	3	18-Sep	2 ASRs - ATIS; 1 ASR - AIRPROX
Lilongwe	3	2	23-Feb	2 ASRs- Aerodrome
SAL (Cape Verde)	6	2	31-Jan	2 ASRs - COMMS
Entebbe	9	2	31-Jul	1 ASR - AIRPROX; 1 ASR - MET
Brazzaville	17	4	20-Jul	2 ASRs - COMMS; 1 ASR - ATIS; 1 ASR - AIRPROX
Algiers	1	1	22-Mar	1 ASR - COMMS
Burundi	1	1	14-Aug	1 ASR - COMMS
Dakar	7	1	07-Aug	1 ASR - ATIS
Lusaka	9	0		
N'Djamena	7	0		
Gaborone	6	0		

Flight Information Region (FIR)	Reported ASRs	ASRs pending investigation	Date of oldest ASR pending feedback	Nature of ASRs pending investigation
Johannesburg Oceanic	5	0		
Mogadishu	3	0		
Seychelles	3	0		
Windhoek	2	0		
Antananarivo	1	0		
Kigali	1	0		
Niamey	1	0		
Cape Town	1	0		

* States provided Incident report voluntary (not reported by operator to AIAG).

** States raised incident, however investigation hasn't been completed yet.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Request States to proceed with agreed remedial actions as per recommendations of the 7th AIAG meeting attached as Appendix A of this working paper.
- b) Request States to investigate incidents thoroughly and that conclusions and recommendations shall be made available to all concerned without delays.
- c) Request States to participate in the next AIAG meeting scheduled for 16-17 March 2011 in Johannesburg, South Africa.

- END -



**Report of the Seventh AIAG Meeting
Johannesburg, 8 and 9 March 2010**



Introduction

1. The seventh ATS Incident Analysis Group (AIAG) meeting was held on 8 and 9 March 2010, at Southern Sun Hotel in Johannesburg under the chairmanship of Mr. Gerrit Plaisier of KLM.
2. This meeting was attended by fifty one (51) participants from Air France, ADM (Mozambique ANSP), ARMA (AFI Regional Monitoring Agency), ASECNA (ANSP for Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire, Gabon, Guinea Bissau, Equatorial Guinea, Madagascar, Mali, Mauritania, Niger, Senegal, and Togo); ATNS (South Africa ANSP), British Airways, Cape Verde CAA (ANSP); Delta Airlines; ENANA (Angola ANSP), Emirates Airlines; Ghana CAA (ANSP), IATA RO AFI (International Air Transport Association), ICAO RO WA (International Civil Aviation Organisation, IFATCA (International Federation of Air Traffic Controllers), (IFALPA (International Federation of airline Pilots Association), Kenya CAA (ANSP), KLM Royal Dutch Airlines, Kenya Airways, LAM Mozambique Airlines, NAMA (Nigeria ANSP), Namibia DCA, Nigeria CAA, RVA (DR Congo ANSP), South African Airways, Swiss Airlines, TAAG Angola Airlines, Tanzania CAA, Uganda CAA, WFP (World Food Programme), Zambia DCA, Zambia NAACL (Zambia ANSP).
3. In his opening remarks, Mr. Gerrit Plaisier, the AIAG Chairman and Mr. Gaoussou Konate, the Regional Director IATA SO&I, welcomed the participants and wished them success in their deliberations.

Reference Papers

4. The Chairman reminded the meeting of the Terms of Reference of the Group. Thereafter, reviewed the methodology used in the meeting to ensure that new participants adhere to how AIAG determines an AIRPROX and how the Group draws lessons to be learned from the reports during the analysis.

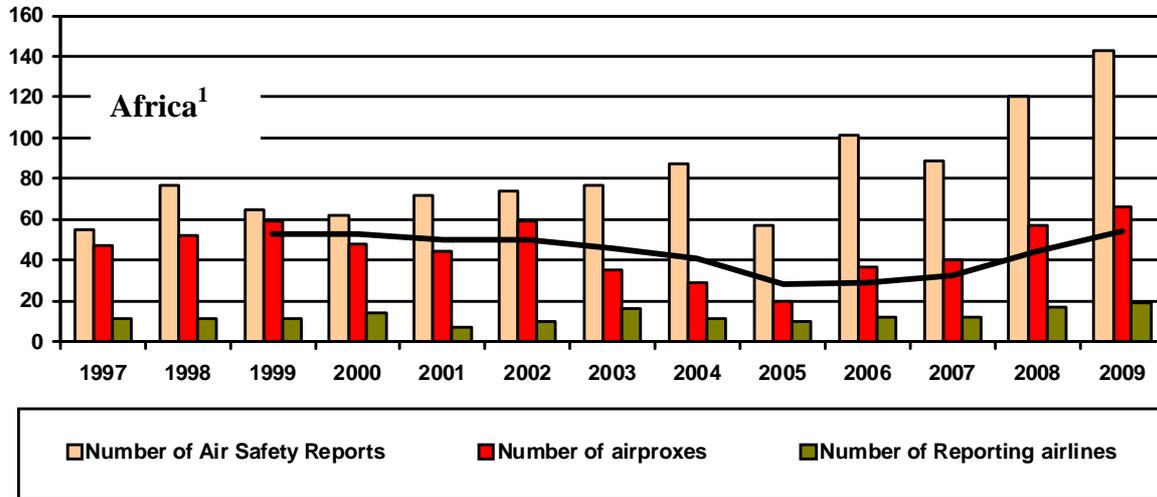
The following documents are included as attachments;

- List of participants *Attachment A*
- Terms of Reference *Attachment B*
- Methodology *Attachment C*
- Classification table *Attachment D*
- Summary of reported ASRs *Attachment E*

5. In total, AIAG analysed 142 reports in a plenary session, all submitted by Secretariat.

Airline reporting ATS Incidents

6. Nineteen (19) airlines operating in AFI contributed in reporting the 130 reports: South African Airways (23), Kenya airways (22), Air France (18), Emirates Airlines (12), British Airways (8), KLM Royal Dutch Airlines (8), Qatar airways (6), British airways Comair (5), South African Airlink (5), TAP Air Portugal (5), Virgin Atlantic airways (4), World Food Program (4), Brussels Airlines (3), Cargolux (3), Ethiopian Airlines (2), Air Austral (2), TAAG Angola Airlines (1), Air Madagascar (1) and Air Mauritius (1).



7. Eight (8) Air Navigation Service Providers (ANSPs) contributed in reporting 12 reports: RVA DR Congo (3), ENANA Angola² (2), NAMA Nigeria (2), ASECNA Cameroon (1), Ghana CAA (1), Mozambique ADM (1), ATNS South Africa (1) and Uganda CAA (1).

AIAG Outcome of 2009-Incident Analysis

8. On 8 and 9 March 2010, the ATS Incident Analysis Group has processed 142 ATS incidents reported to the Regional Offices.
9. Of these 142 incidents occurred in 2009:
 - 24 reports were determined to not constitute incidents (Events, Non-events and System limitations),
 - 16 reports were inconclusive, thereby resulting in a total of
 - 36 ATS incidents and,
 - 66 AIRPROX.
10. Following the AIAG analysis 66 incidents were classified as AIRPROX:
 - 28 incidents are classified as AIRPROX with high risk,
 - 3 incidents are classified as AIRPROX with medium to high risk,
 - 29 incidents are classified as AIRPROX with medium risk and
 - 6 incidents are classified as AIRPROX with low risk.

¹ Up to 2007 data is for IATA AFI region only, from 2008 data includes IATA AFI and remaining African states within IATA MENA region

² Investigation outcomes (1 for DT and 1 for TP) received from ENANA via SAA



11. Where ATC separation was compromised it was found that the required separation was restored as follows:

11.1 Separation was restored timely:

- TCAS TA in 24 instances, of which:
 - 19 were restored by TA only;
 - 3 were restored by TA and ATC intervention;
 - 1 was restored by TA, Pilot monitoring ATS frequency and pilot visual awareness;
 - 1 was restored by TA & Pilot visual awareness.
- ATC intervention in 8 instances, of which;
 - 1 was restored by ATC intervention and IFBP.
- ATC frequency monitored by pilot in 7 instances.
- IFBP in 3 instances.
- Pilot visual awareness in 2 instances

11.2 Separation was not restored timely:

- TACS RA in 18 instances;
- Last minute visual separation in 2 instances;
- No previous warning or no time for action in 2 instances.

Air Navigation Service Provider Contribution in Investigating ATS Incident Reports

12. The 142 reported ATS incidents occurred in the airspaces of FIRs, namely:

- Accra (3);
- Addis Ababa;
 - Djibouti (1)
 - Ethiopia (2)
- Antananarivo
 - Comoros (1);
 - Madagascar (1);
 - Reunion (1)
- Beira (4);



- Brazzaville
 - Cameroon (8);
 - Central African Republic (1);
 - Congo (2)
 - Equatorial Guinea (2);
 - Gabon (1)
- Cape Verde (1);
- Dar es Salaam (3);
- Dakar terrestrial and oceanic
 - Cote D'Ivoire (1)
 - Dakar Oceanic (1)
 - Senegal (2)
- Entebbe (4);
- Gaborone (1);
- Harare (2);
- Johannesburg (9), Cape Town (1) and Johannesburg Oceanic (1);
- Kinshasa (14),
- Khartoum (3);
- Kano (24);
- Kigali (1);
- Lilongwe (1)
- Luanda terrestrial and oceanic (8);
- Lusaka (3);
- Mauritius (1)
- Nairobi (13);
- Mogadishu (1);
- N'Djamena
 - Chad (8);
- Niamey
 - Burkina Faso (2);
 - Niger (3);
- Seychelles (3) and
- Tripoli (4).



13. Out of the 142 incidents, the concerned air navigation service providers have provided 122 feedbacks on average, for 4 incidents feedback was not received as operator did not file incident with relevant ANSP. Therefore for calculating average feedback rate, 138 incidents were taken into calculation deriving 88% of average feedback rate.

For 2008 the average was 86%; for 2007 the average was 63% for 2006 the average was 38.5% and 2005 the average was 23% only.

14. However, the responsiveness varied significantly from ANSP to ANSP.

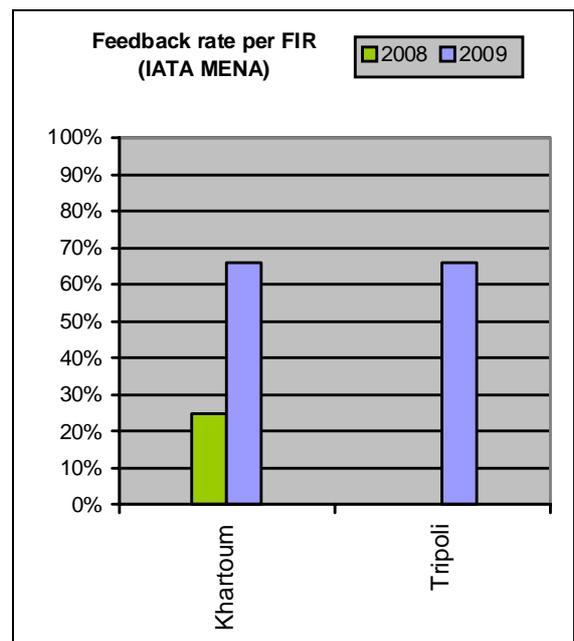
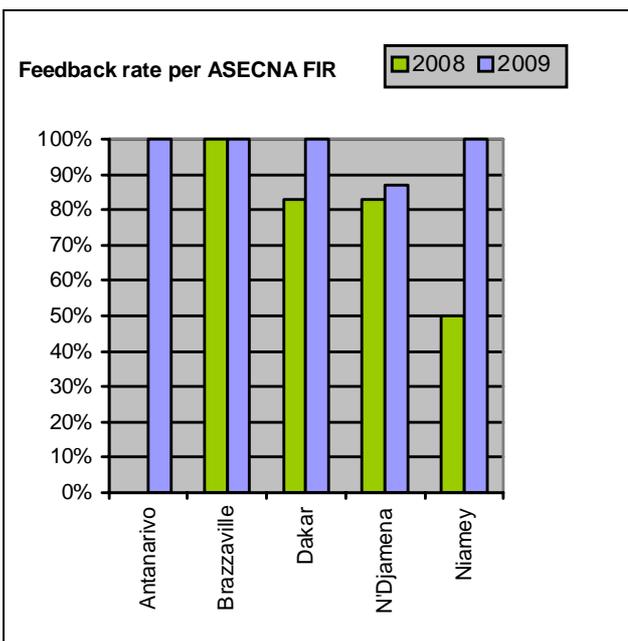
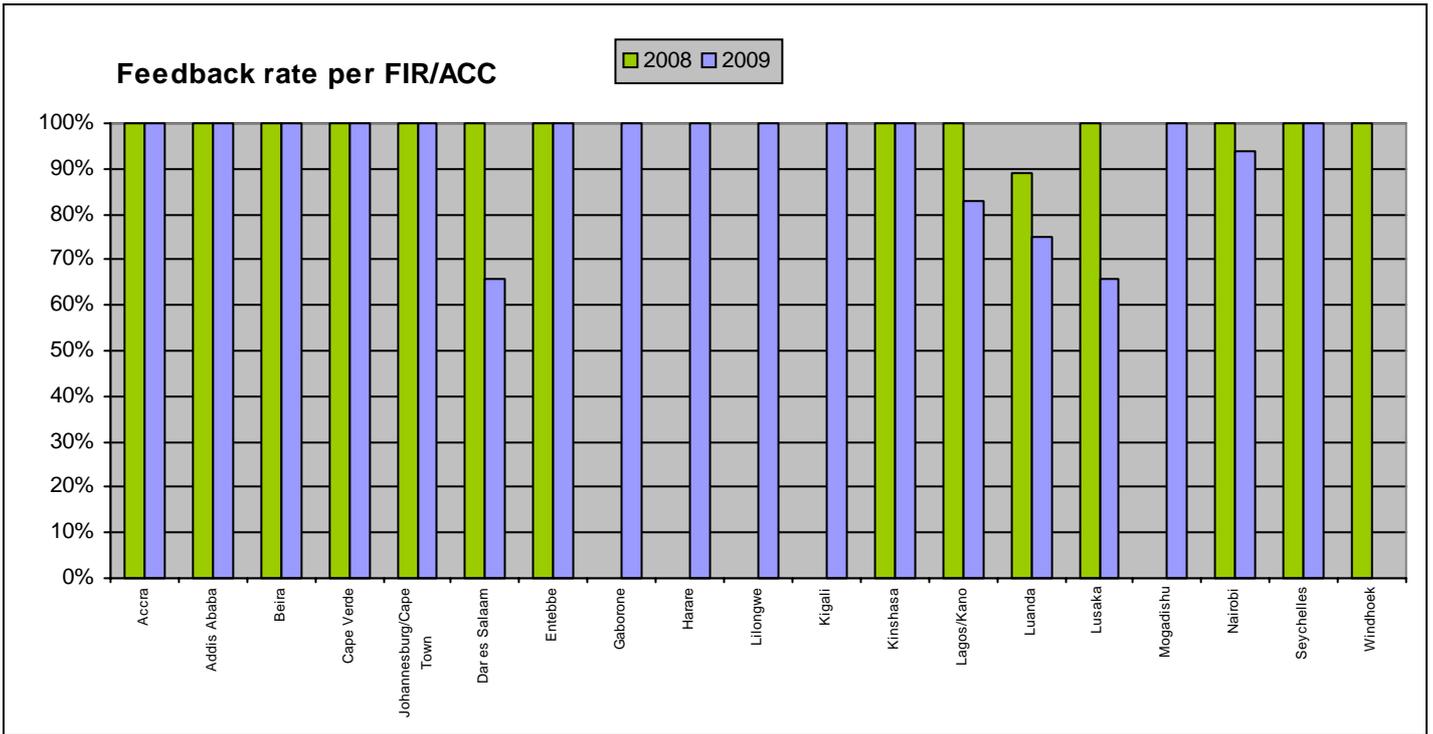
- ASECNA provided feedback to 96³% of reported incidents;
 - Brazzaville 100% ;
 - Dakar 100%;
 - Niamey 100%
 - N'Djamena 85% (one ASR received late from operator, therefore remaining investigation report);
 - Antanarivo 100%
- ATNS (South Africa) – 100%;
- ADM (Mozambique) – 100%;
- Botswana CAA – 100%;
- Cape Verde – 100%;
- Ghana CAA – 100%;
- ENANA (Angola) – 75% (two ASRs remaining investigation reports);
- Ethiopia CAA – 100%;
- Libya CAA – 25% (three ASRs remaining investigation reports)
- Kenya CAA – 94% (one ASRs remaining investigation report);
- Malawi CAA – 100%;
- Mauritius CAA – 100%
- NAMA (Nigeria) – 83% (four ASRs remaining investigation reports);
- RVA (DR Congo) – 100%⁴;
- Rwanda CAA – 100%
- Seychelles CAA – 100%;
- Somalia ICAO – 100%
- Sudan CAA – 66% (one ASRs remaining investigation report);
- Tanzania CAA – 66% (one ASRs remaining investigation report);

³Two ASRs that were not filed by operator with ANSP were excluded from calculation

⁴Two ASRs that were not filed by operator with ANSO were excluded from calculation



- Uganda CAA – 100%;
- Zambia CAA – 66% (one ASRs remaining investigation report);
- Zimbabwe CAA – 100%.





15. All participants provided additional feedback during the meeting. The meeting was of the opinion that States must provide timely feedback to incident reports. As well concern was raised on the quality of reported incidents and feedback provided.

16. IATA emphasizes to Operators AFI RAN and ICAO Recommendations:

Recommendation 4/6 — Investigation of air traffic services incidents and provision of comprehensive feedback to parties involved

That, in coordination with their air navigation service providers, States:

- a) diligently conduct investigations on all reported air traffic services incidents having taken place in airspace under their responsibility; and
- b) provide timely, documented feedback to all involved parties through participation in the established AIAG mechanism via the relevant ICAO regional office.

Recommendation 4/7 — Reporting of air traffic services incidents

That air operators be reminded, by IATA and their State Authority, of their obligation to ensure that air traffic services incident reports are filed on a timely basis, following the ICAO model as contained in the *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM, Doc 4444), Appendix 4, and provide sufficient relevant information to facilitate the ensuing investigation.

Analysis per FIRs/ACCs

17. ASECNA (ANSP for Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo, Cote d'Ivoire, Gabon, Guinea Bissau, Equatorial Guinea, Madagascar, Mali, Mauritania, Niger, Senegal, and Togo)

17a) Brazzaville FIR

Fourteen (14) Air Safety Reports were reported in Brazzaville FIR. Feedback had been received for thirteen (13) ASRs. As one (1) of incidents operator did not file with ANSP neither provided sufficient details enabling investigation, therefore feedback rate is calculated as – 100% feedback rate.

- Seven (7) AIRPROX occurred;
- Three (3) ATS incidents occurred;
- Two (2) ASR are inconclusive, one (1) ASR is Event and one (1) ASR is System Limitation.

AIRPROX:

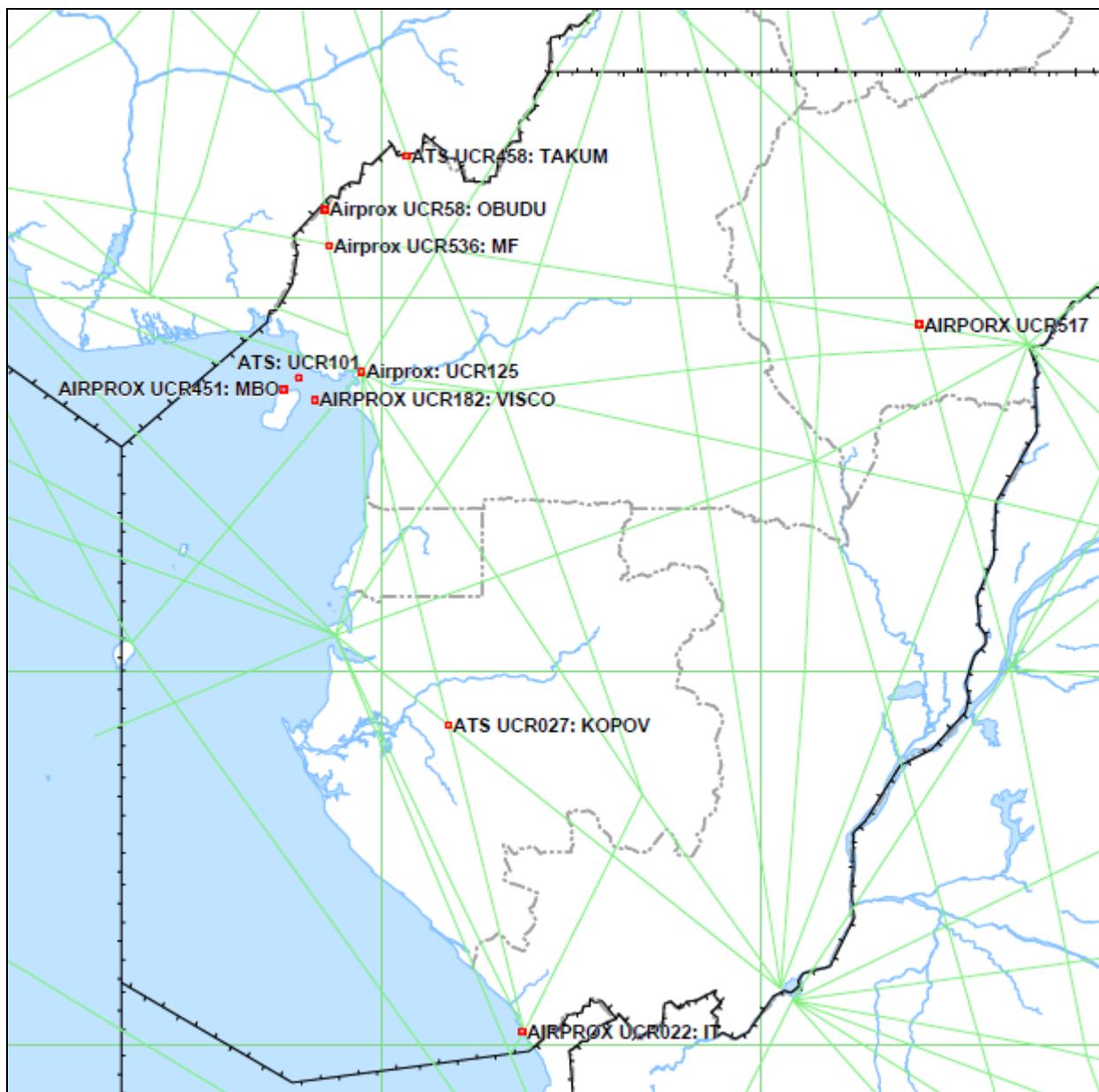
- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of four (4) AIRPROX.
 - Lack of Cockpit discipline was contributing factor in one (1) instance;
 - Lack of mobile communications was contributing factor in one (1) instance.
- II. Lack of cockpit disciplines was cause of one (1) AIRPROX.
- III. Lack of coordination between ATC was cause of two (2) AIRPROX. In addition, following factors contributed to lack of coordination between ATCs:



- Lack of Cockpit discipline (crew not contacting ACC) was contributing factor in one (1) instance;
- Lack of mobile communications and crew not using IFBP was contributing factor in one (1) instance;

ATS INCIDENT:

- i. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.
- ii. Cause for two (2) ATS incidents could not be determined.





17b) Dakar Terrestrial & Oceanic FIRs

Four (4) Air Safety Reports were reported in Dakar Terrestrial and Oceanic FIRs. Feedback had been received for four (4) incidents – 100% feedback rate.

- Two (2) AIRPROX occurred.
- One (1) ATS incident occurred;
- One (1) ASR is System Limitation.

AIRPROX:

- I. Lack of Coordination between units (Abidjan and Accra) and insufficient mobile COMMS as contributing factor was cause of one (1) AIRPROX.
- II. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX.

ATS INCIDENT:

- iii. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.

- Lack of mobile communications was contributing factor in this instance.



17c) Niamey FIR

Five (5) Air Safety Reports were reported in Niamey FIR. Feedback had been received for five (5) incidents – 100% feedback rate.

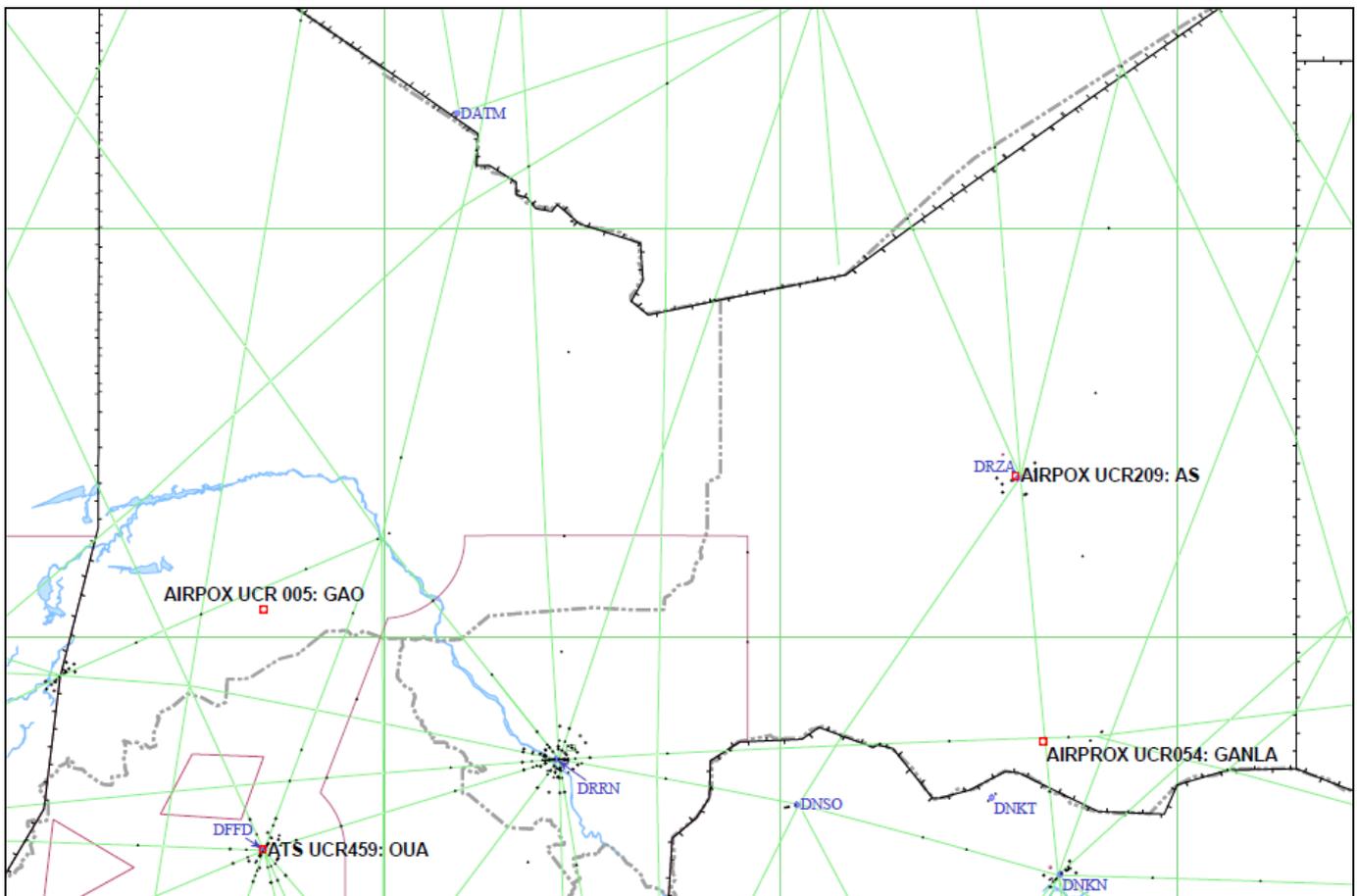
- Three (3) AIRPROX occurred;
- One (1) ATS incident occurred;
- One (1) ASR is non-event.

AIRPROX:

- I. Lack of Coordination between units was cause of one (1) AIRPROX.
- II. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX.
- III. Lack of communications was cause of one (1) AIRPROX.

ATS INCIDENT:

- i. Lack of cockpit disciplines was cause of one (1) ATS incident.



17d) N'Djamena FIR

Eight (8) Air Safety Reports were reported in Niamey FIR. Feedback had been received for six (6) ASRs. As one (1) of incidents operator did not file with ANSP neither provided sufficient details enabling investigation, therefore feedback rate is calculated as – 85% feedback rate, with one (1) investigation outcome pending.

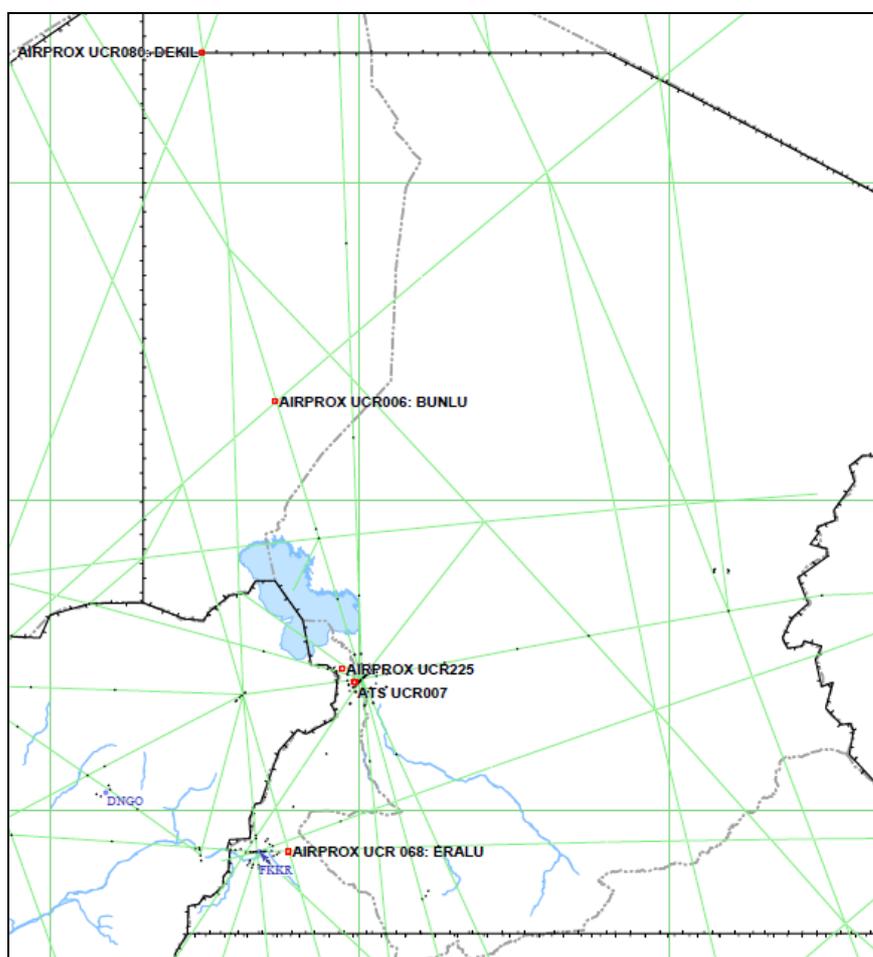
- Four (4) AIRPROX occurred;
- One (1) ATS incident occurred;
- Three (3) ASRs are inconclusive due to two (2) ASRs not providing sufficient information and one (1) investigation report without crew ASR.

AIRPROX:

- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of two (2) AIRPROX.
- II. Lack of Coordination between units was cause of two (2) AIRPROX.

ATS INCIDENT:

- i. Lack of mobile communications was cause of one (1) ATS incident.



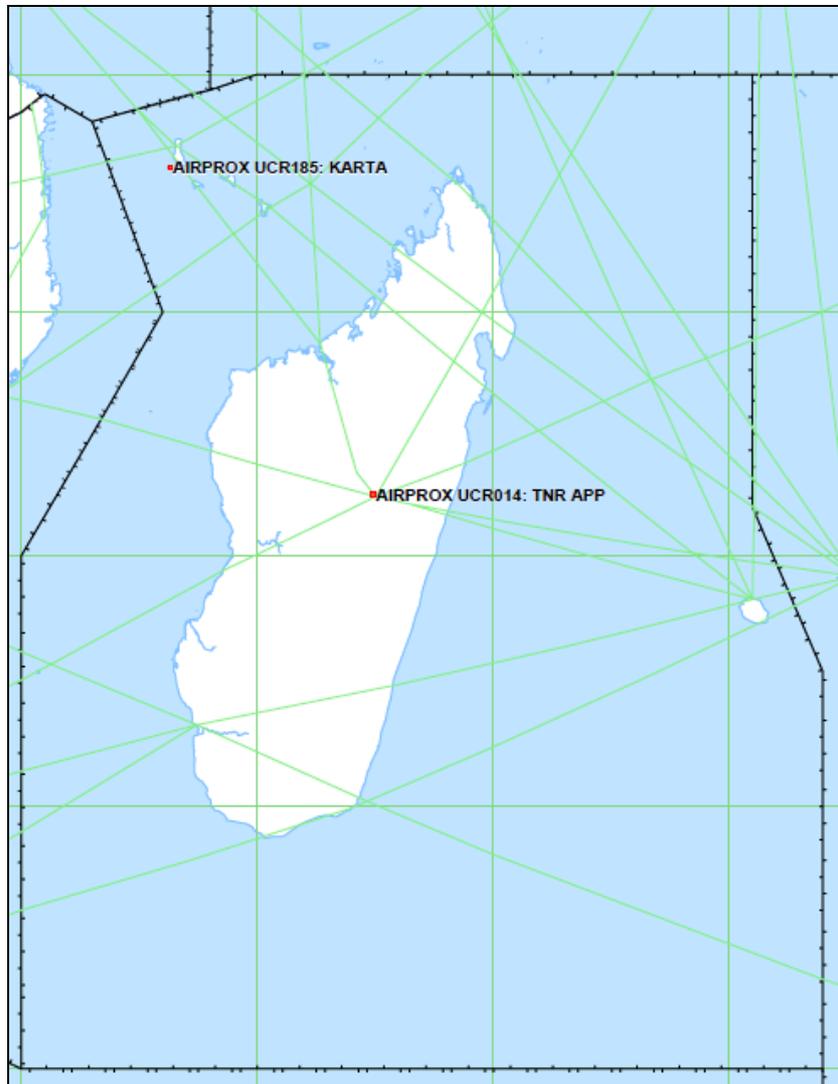
17e) Antananarivo UIR

Three (3) Air Safety Reports were reported in Antananarivo UIR. Feedback had been received for five (5) incidents – 100% feedback rate.

- Two (2) AIRPROX occurred;
- One (1) ASR was event.

AIRPROX:

- I. Lack of cockpit disciplines was cause of one (1) AIRPROX.
- II. Cause for one (1) AIRPROX could not be determined.



18. Johannesburg, Cape Town and Johannesburg Oceanic FIRs

Eleven (11) Air Safety Reports were reported in Johannesburg, Cape Town and Johannesburg Oceanic FIRs. Feedback had been received for eleven (11) incidents – 100% feedback rate.

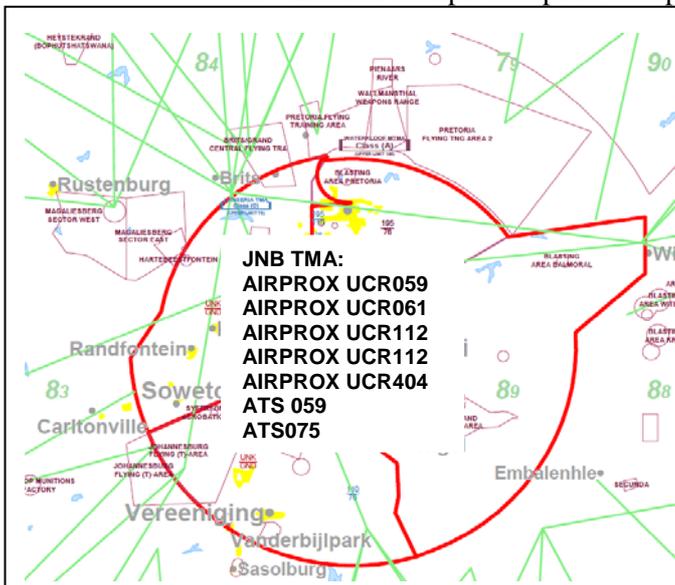
- Five (5) AIRPROX occurred;
- One (3) ATS incident occurred;
- Two (2) ASRs were Events while one (1) ASR was System Limitation.

AIRPROX:

- I. Lack of cockpit discipline/cockpit error was cause of three (3) AIRPROX.
 - Lost crew within JNB TMA was contributing factor in one (1) instance;
 - Call sign crew confusion was contribution factor in one (1) instance;
 - Unknown VFR traffic not complying with standard routing was contributing factor in one (1) instance.
- II. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of two (2) AIRPROX.

ATS INCIDENT:

- i. Lack of cockpit discipline/cockpit error was cause of three (3) ATS incident.



Johannesburg TMA



Cape Town FIR

19. Beira FIR

Four (4) Air Safety Reports were reported in Beira FIR. Feedback had been received for four (4) incidents – 100% feedback rate.

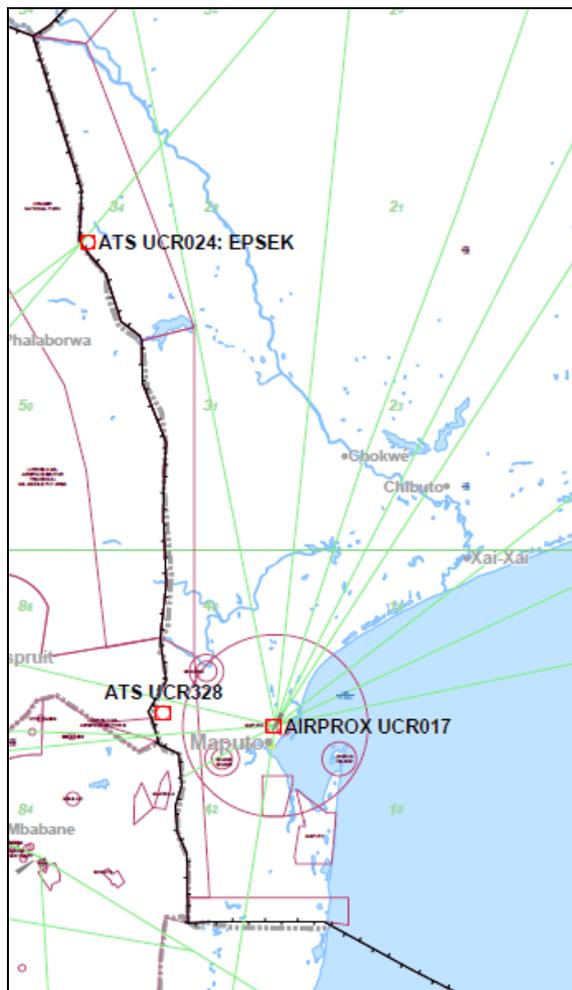
- One (1) AIRPROX occurred;
- Two (2) ATS incidents occurred;
- One (1) ASR was Event.

AIRPROX:

- I. Lack of cockpit discipline/cockpit error was cause of three (3) AIRPROX.
 - Lack of ATC procedures were contributing factor in one (1) instance.

ATS INCIDENT:

- i. Lack of Coordination between units was cause of one (1) ATS incident:
 - Lack of ATC attention was contributing factor.
- ii. Cause of one (1) ATS incident was inconclusive.



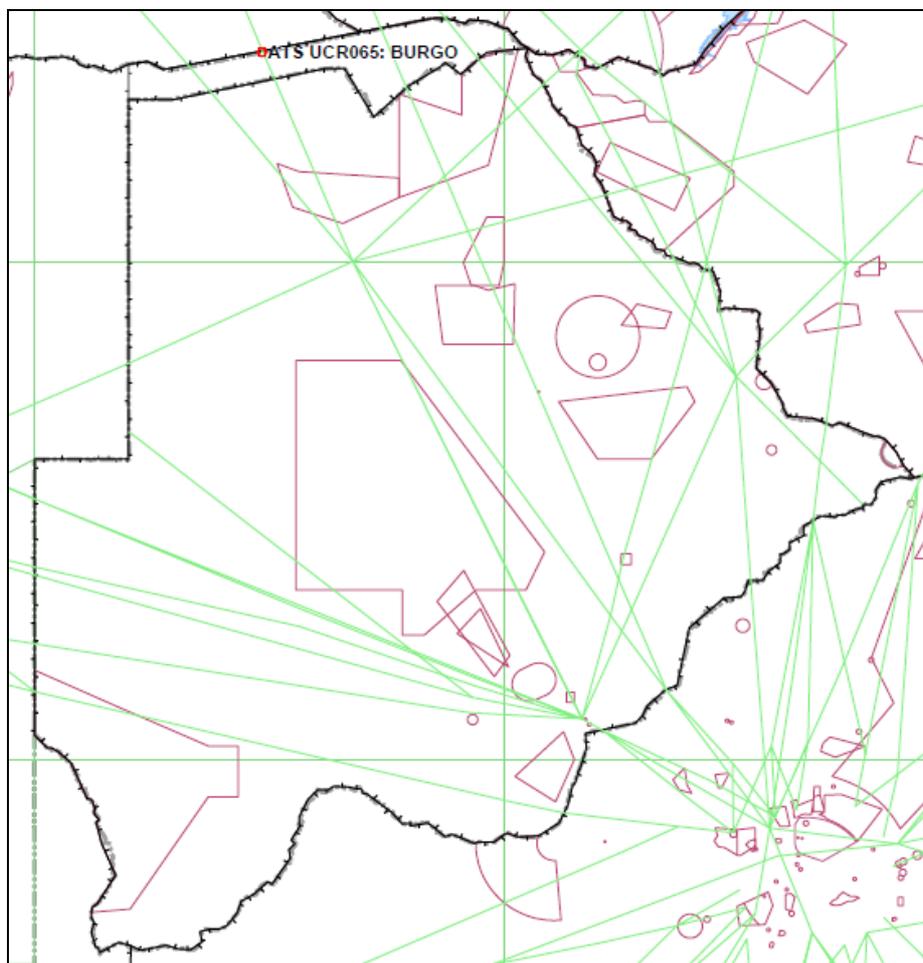
20. Gaborone FIR

One (1) incident was reported in Gaborone FIR. Feedback had been received for one (1) incident – 100% feedback rate.

- One (1) ATS incident occurred.

ATS INCIDENT:

- i. Lack coordination between ATS units with ATC proficiency as contribution factor was cause of one (1) ATS incident.



21. Sal Oceanic FIR (Cape Verde)

One (1) Air Safety Report was reported in Sal Oceanic FIR. Feedback had been received for one (1) incident – 100% feedback rate.

- One (1) ASR was Non-Event.

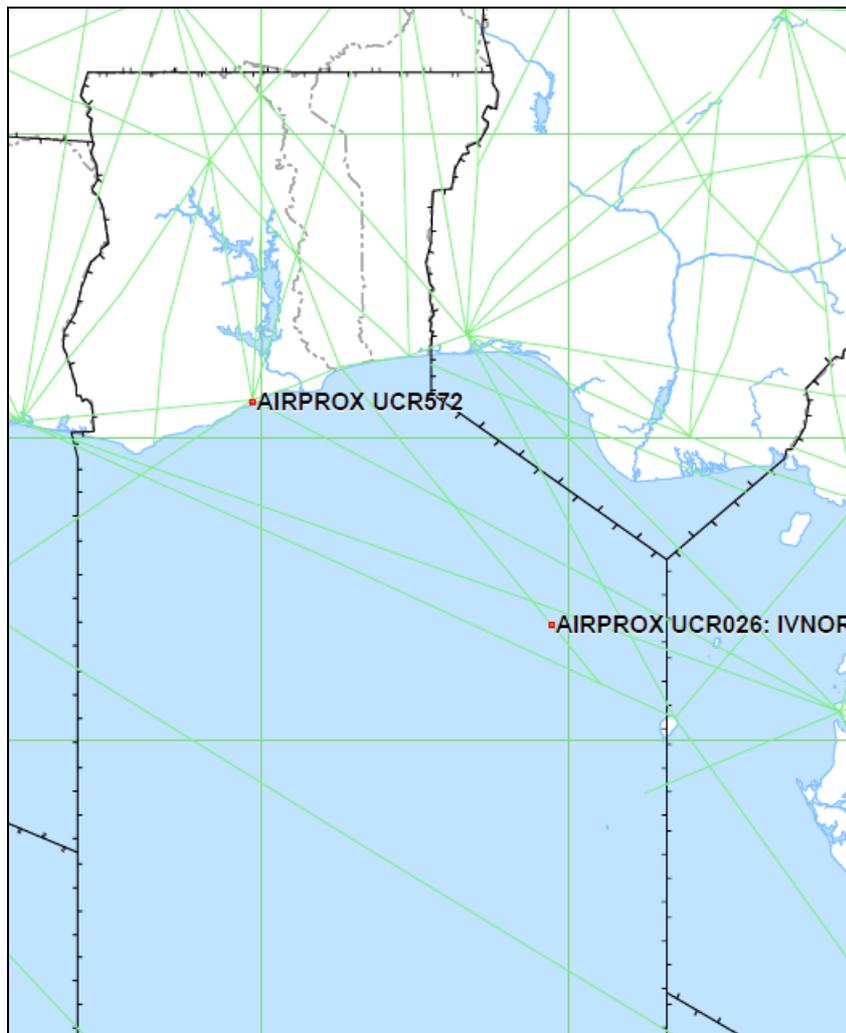
22. Accra FIR

Three (3) Air Safety Reports were reported in Accra FIR. Feedback had been received for three (3) incidents – 100% feedback rate.

- Two (2) AIRPROX occurred;
- One (1) ASR was Event.

AIRPROX:

- I. Lack of Coordination between units was cause of one (1) AIRPROX:
 - ATC error, workload and lack of communications were contributing factor.
- II. Equipment failure (radar) was cause of one (1) AIRPROX:
 - ATC error and cockpit crew discipline were contributing factor.



23. Luanda FIR

Eight (8) Air Safety Reports were reported in Luanda FIR. Feedback had been received for six (6) incidents –75% feedback rate.

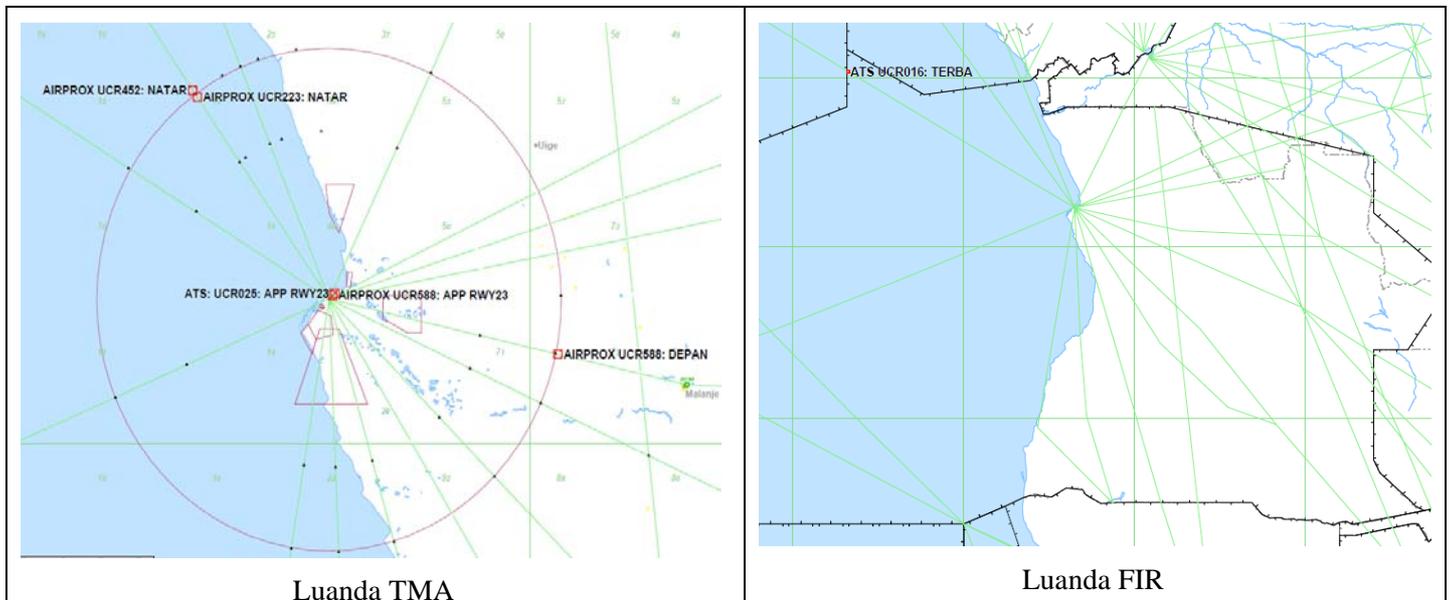
- Four (4) AIRPROX occurred;
- Two (2) ATS incidents occurred;
- Two (2) ASRs are inconclusive due to one (1) ASRs lacking investigation report and one (1) investigation report without crew ASR.

AIRPROX:

- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of four (4) AIRPROX:
 - Airspace organisation was contributing factor in one (1) instance.

ATS INCIDENT:

- i. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.
- ii. Cause for one (1) ATS incident could not be determined.



24. Addis Ababa FIR

Three (3) Air Safety Reports were reported in Addis Ababa FIR. Feedback had been received for three (3) incidents – 100% feedback rate.

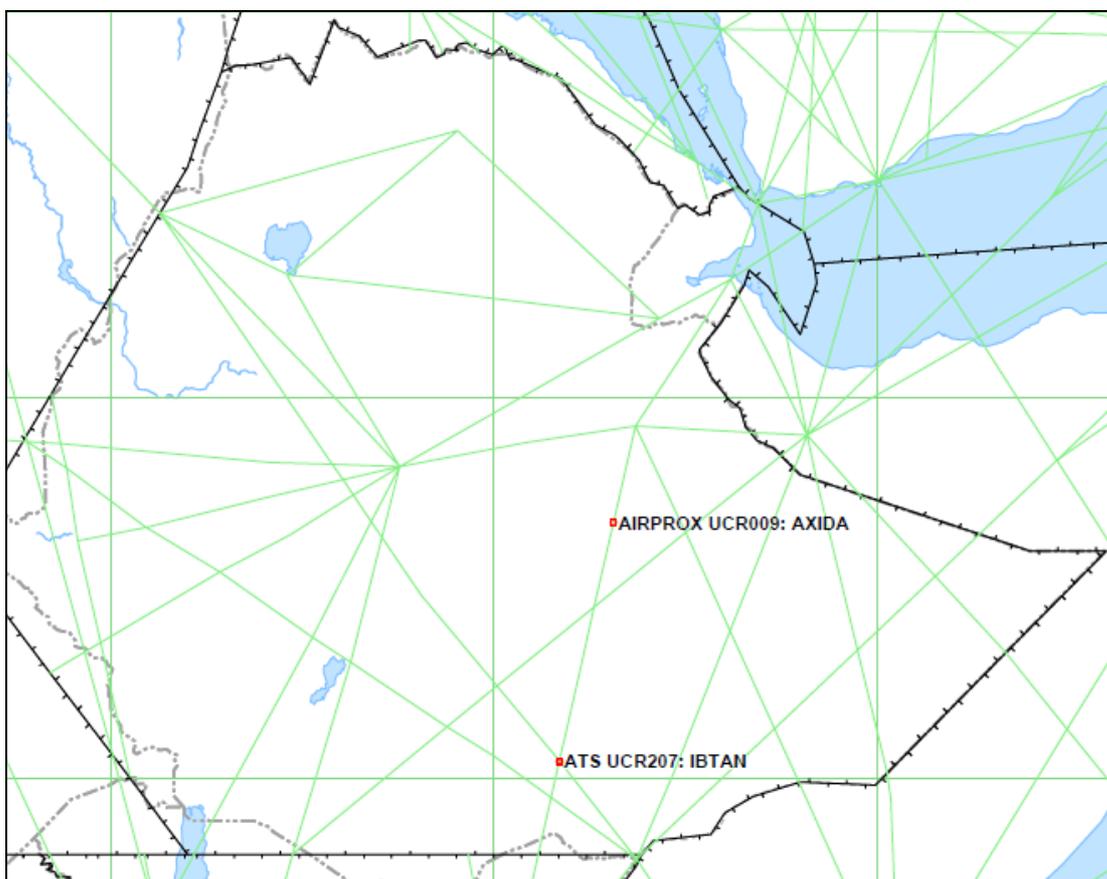
- One (1) AIRPROX occurred;
- One (1) ATS incident occurred;
- One (1) ASR is inconclusive.

AIRPROX:

- I. Lack of ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX:
 - Shift hand over was contributing factor.

ATS INCIDENT:

- i. Lack of cockpit discipline/ was cause of one (1) ATS incident.



25. Nairobi FIR

Thirteen (13) Air Safety Reports were reported in Nairobi FIR. Feedback had been received for eleven (11) ASRs. For one (1) ASR it was not clear FL where event occurred therefore Kenya CAA could not conduct investigation, feedback rate is calculated as – 94% feedback rate.

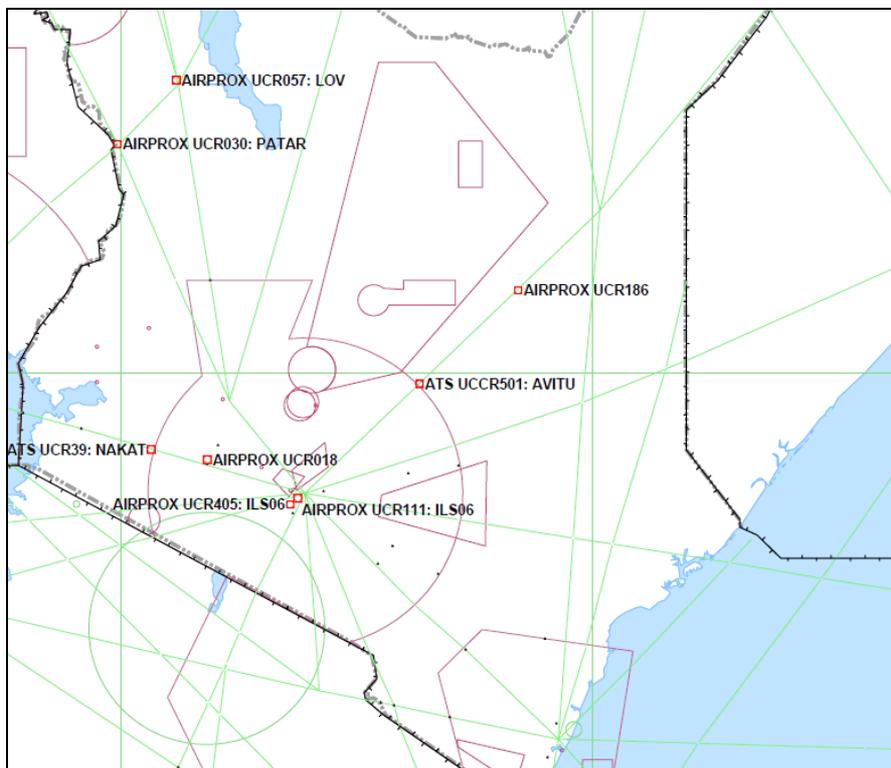
- Six (6) AIRPROX occurred;
- Two (2) ATS incidents occurred;
- Two (2) ASRs are inconclusive and three (3) ASRs were System Limitations.

AIRPROX:

- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of three (3) AIRPROX:
 - Aircraft equipment failure was contributing factor in one (1) instance;
 - Lack of coordination between ATS units and cockpit discipline was contributing factor in one (1) instance.
- II. Lack of coordination between ATS units was cause of three (3) AIRPROX:
 - Lack of mobile communication was contributing factor in one (1) instance.

ATS INCIDENT:

- i. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.



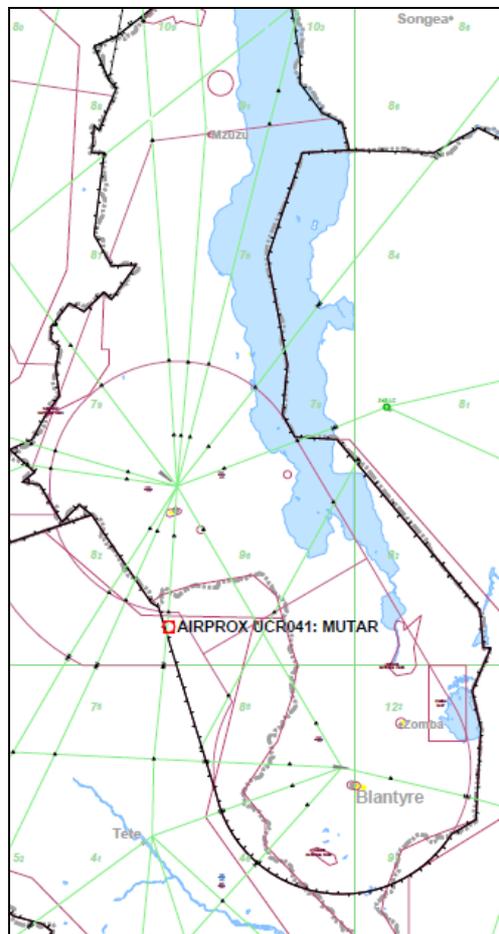
26. Lilongwe FIR

One (1) Air Safety Report was reported in Lilongwe FIR. Feedback had been received for one (1) incident – 100% feedback rate.

- One (1) AIRPROX occurred.

AIRPROX:

- I. ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX:
 - Faulty equipment (NAVAIDS) was contributing factor.



27. Mauritius FIR

One (1) Air Safety Report was reported in Mauritius FIR. Feedback had been received for one (1) incident – 100% feedback rate.

- One (1) ASR was Event.



28. Kano FIR

Twenty four (24) Air Safety Reports were reported in Kano FIR. Feedback had been received for eleven (20) incidents – 83% feedback rate.

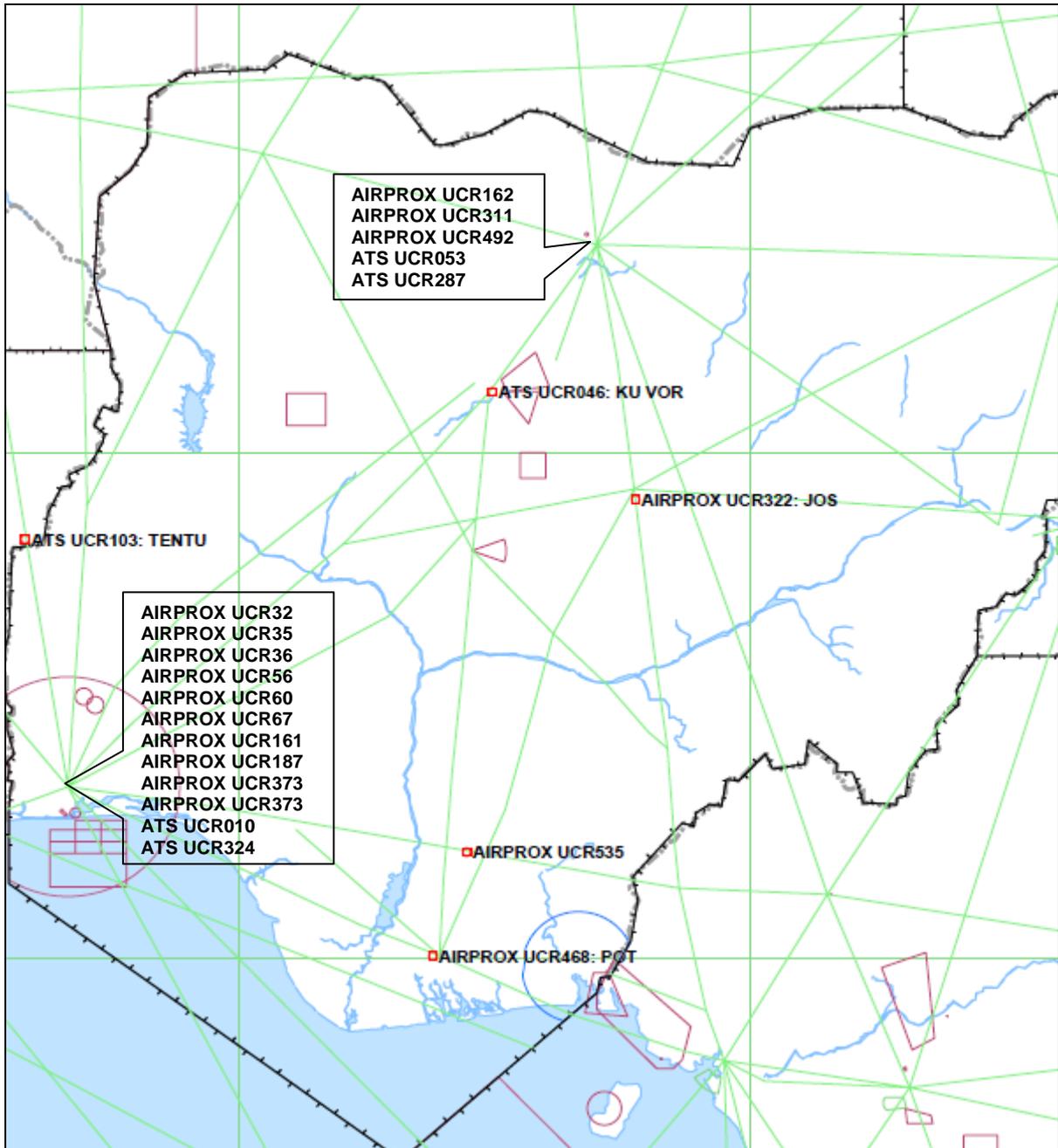
- Sixteen (16) AIRPROX occurred;
- Six (6) ATS incidents occurred;
- One (1) ASR was Event while one (1) ASR was Inconclusive.

AIRPROX:

- I. Inadequate airspace organisation was cause of eight (8) AIRPROX.
 - Lack of coordination between ATS units was contributing factor in three (3) instances;
 - Inadequate mobile communications / frequency congestion was contributing factor in four (4) instances;
 - Lack of ATC anticipation/ATC situational awareness/ATC proficiency was contribution factor in two (2) instances;
 - Inadequate ATS procedures was contributing factor in one (1) instance;
 - Cockpit crew discipline was contributing factor in one (1) instance.
- II. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of six (6) AIRPROX.
- III. Cause for two (2) AIRPROX could not be determined.

ATS INCIDENT:

- i. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of two (2) ATS incidents:
 - Inadequate mobile communications was contributing factor in one (1) instance.
- ii. Inadequate airspace organisation was cause of was cause of two (2) ATS incidents:
 - Lack of coordination between ATS units was contributing factor in one (1) instance;
 - Combination of inadequate mobile communications / frequency congestion and ATC using non standard phraseology was contributing factor in one (1) instance.
- iii. Cockpit crew discipline was cause of was cause of one (1) ATS incident.
- iv. Inadequate mobile communications was cause of one (1) ATS incident.



29. Kinshasa FIR

Fourteen (14) Air Safety Reports were reported in Kinshasa FIR. Feedback had been received for twelve (12) ASRs. As two (2) of incidents operator did not file with ANSP neither provided sufficient details enabling investigation, therefore feedback rate is calculated as – 100% feedback rate.

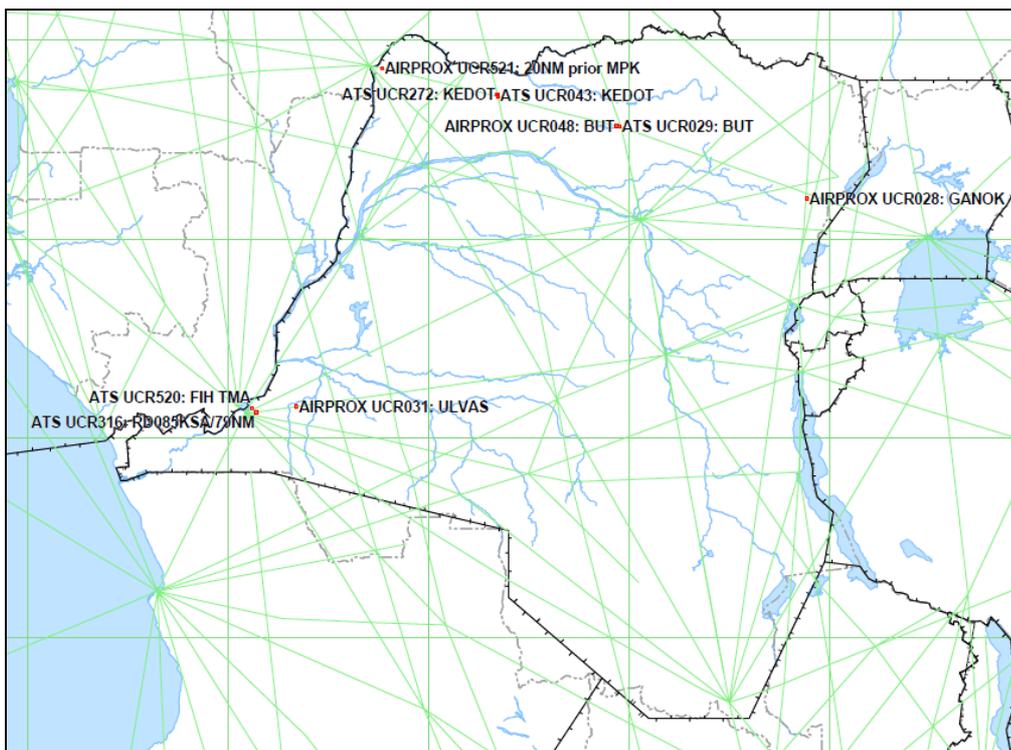
- Four (4) AIRPROX occurred;
- Five (5) ATS incidents occurred;
- Three (3) ASR was Events while two (2) ASR were Inconclusive.

AIRPROX:

- I. Combination of lack of ATC anticipation/ATC situational awareness/ATC proficiency and lack of coordination between ATS units was cause of two (2) AIRPROX.
- II. Lack of mobile communications was cause of one (1) AIRPROX.
- III. Cockpit crew discipline was cause of one (1) AIRPROX.

ATS INCIDENT:

- i. Lack of mobile communications was cause of three (3) ATS incidents:
 - Lack of coordination between ATS units was contributing factor in one (1) instance.
- ii. Cockpit crew discipline was cause of was cause of one (1) ATS incident.
- iii. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.





31. Seychelles FIR

Three (3) Air Safety Reports were reported in Seychelles FIR. Feedback had been received for three (3) incidents – 100% feedback rate.

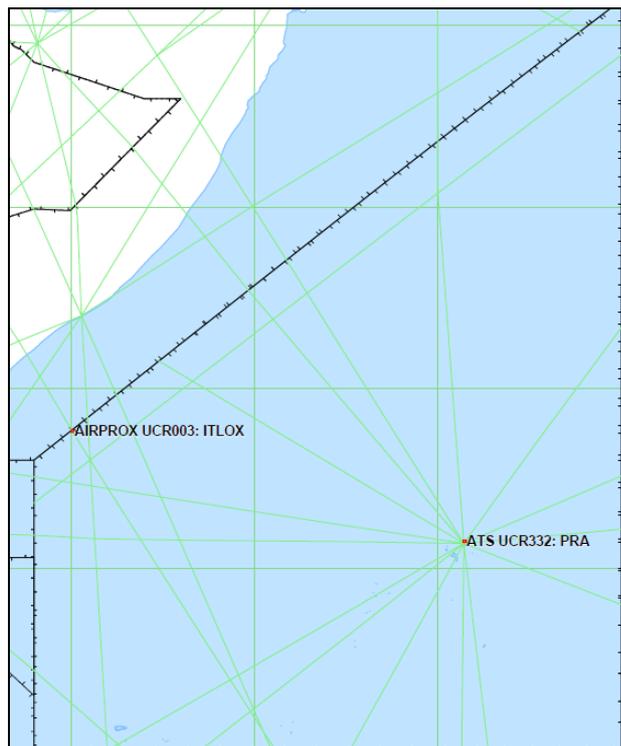
- One (1) AIRPROX occurred;
- One (1) ATS incident occurred;
- One (1) ASR was Event.

AIRPROX:

- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX.

ATS INCIDENT:

- i. Inadequate airspace classification was cause of was cause of one (1) ATS incident.



32. Mogadishu FIR

One (1) Air Safety Report was reported in Mogadishu FIR. Feedback had been received for one (1) incident – 100% feedback rate.

- One (1) ASR was Inconclusive due to discrepancy in position reporting.

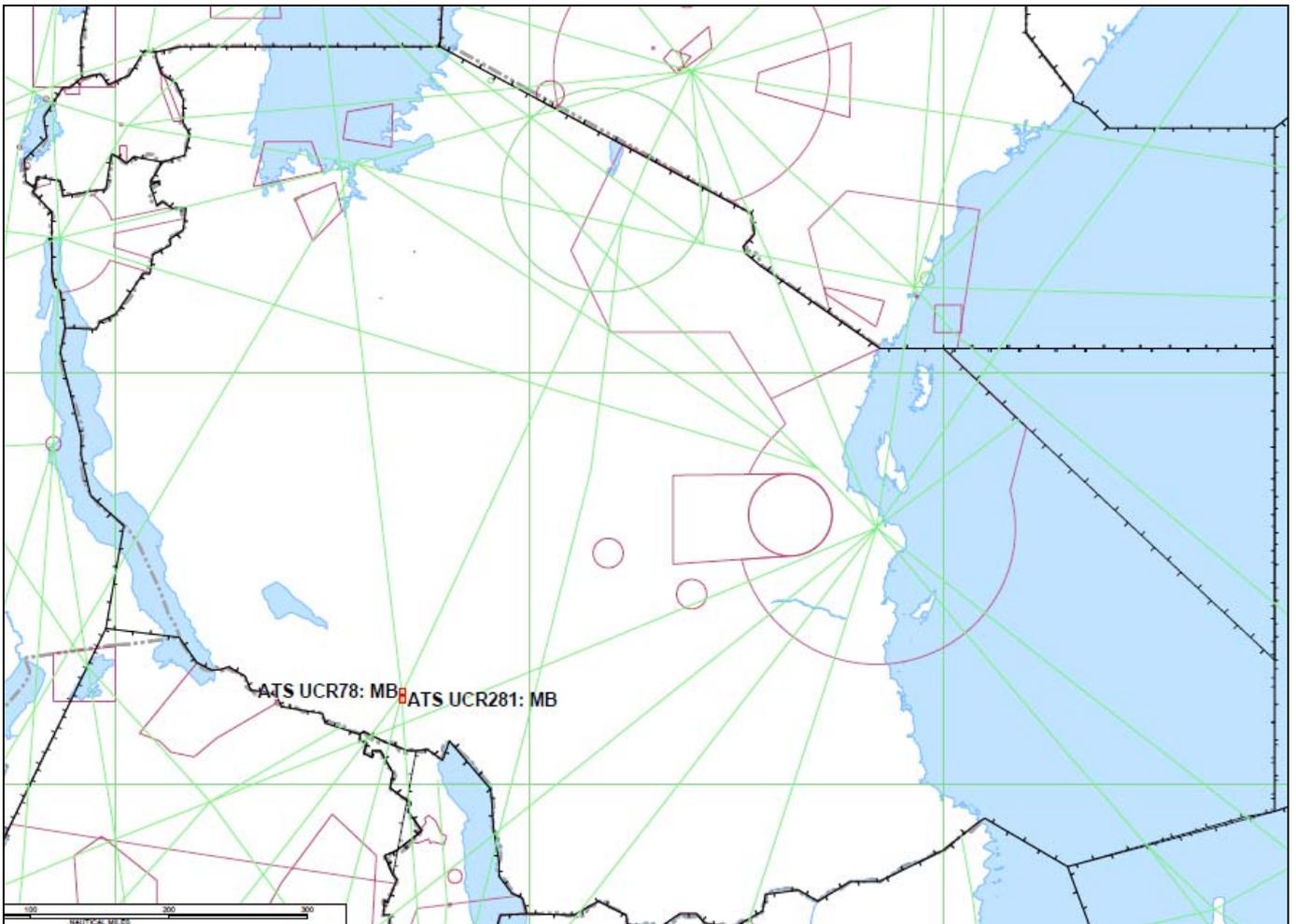
33. Dar Es Salaam FIR

Three (3) Air Safety Reports were reported in Dar Es Salaam FIR. Feedback had been received for two (2) incidents – 66% feedback rate.

- Two (2) ATS incidents occurred;
- One (1) ASR was Event.

ATS INCIDENT:

- i. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.
- ii. Cockpit crew error was cause of one (1) ATS incident.



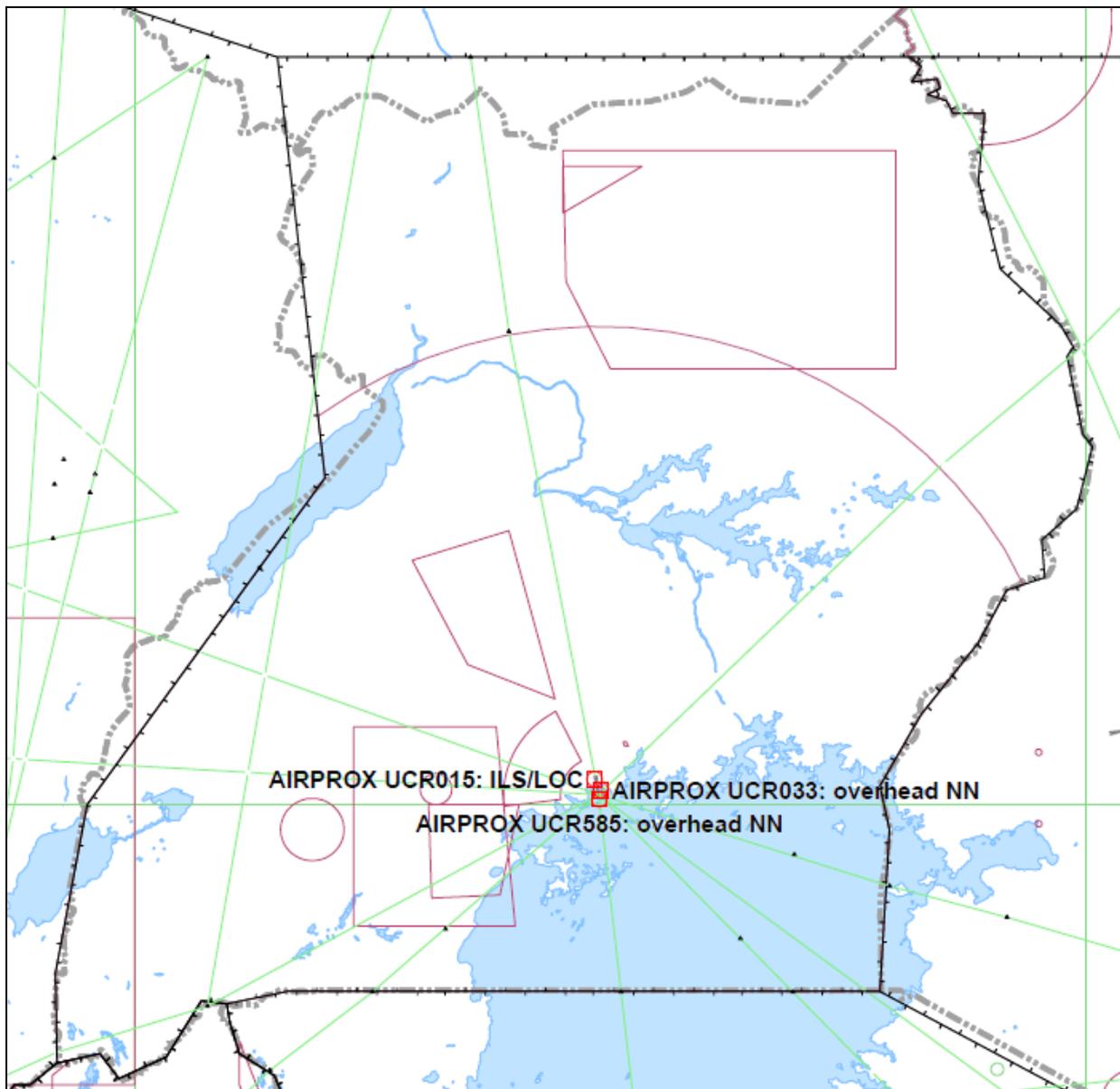
34. Entebbe FIR

Four (4) Air Safety Reports were reported in Entebbe FIR. Feedback had been received for four (4) incidents – 100% feedback rate.

- Three (3) AIRPROX occurred;
- One (1) ASR was Inconclusive.

AIRPROX:

- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of three (3) AIRPROX.



35. Lusaka FIR

Three (3) Air Safety Reports were reported in Lusaka FIR. Feedback had been received for two (2) incidents – 66% feedback rate.

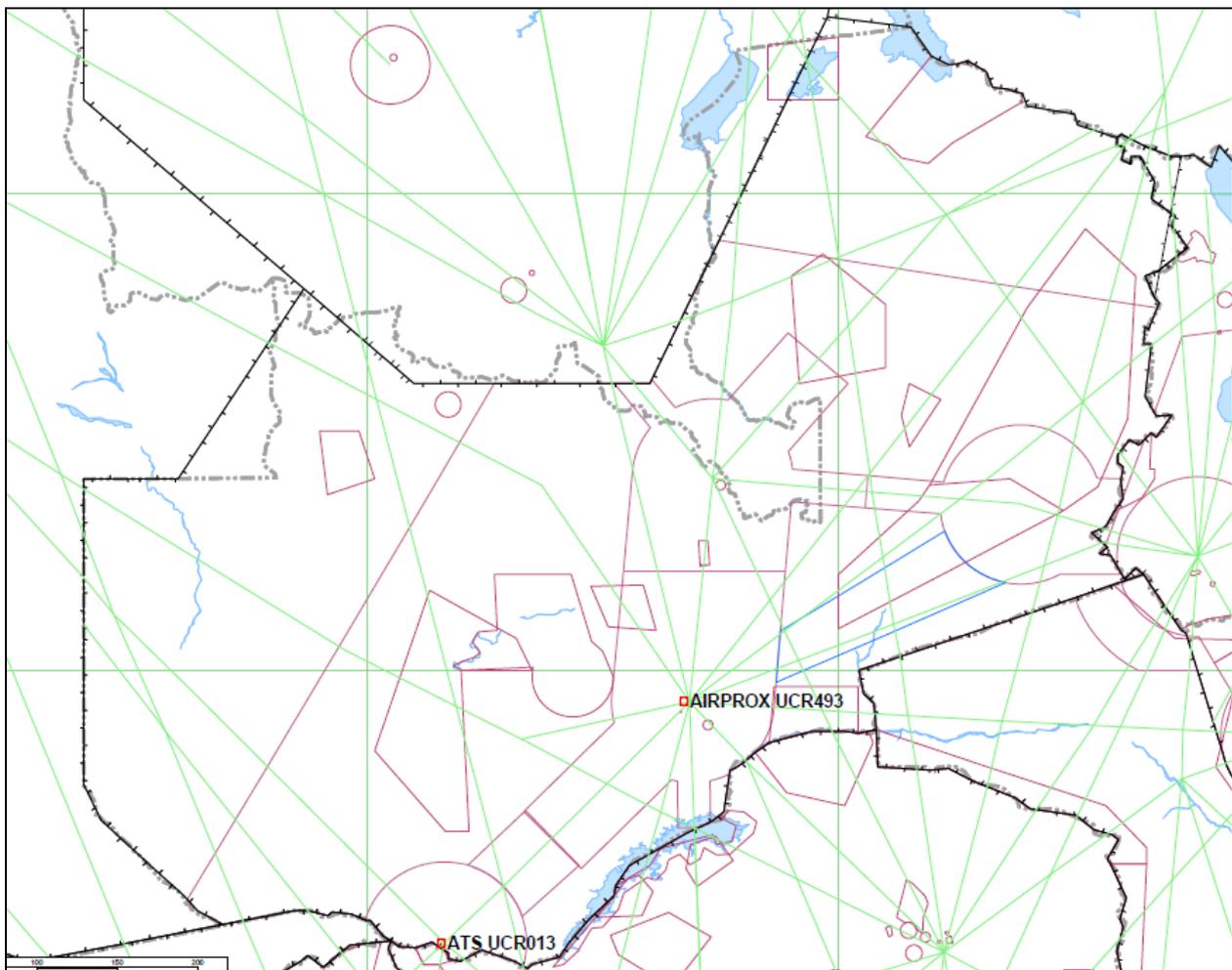
- One (1) AIRPROX occurred;
- One (1) ATS incident occurred;
- One (1) ASR was Event.

AIRPROX:

- I. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX.

ATS INCIDENT:

- i. Combination of cockpit crew discipline and ATS procedure was cause of one (1) ATS incident.



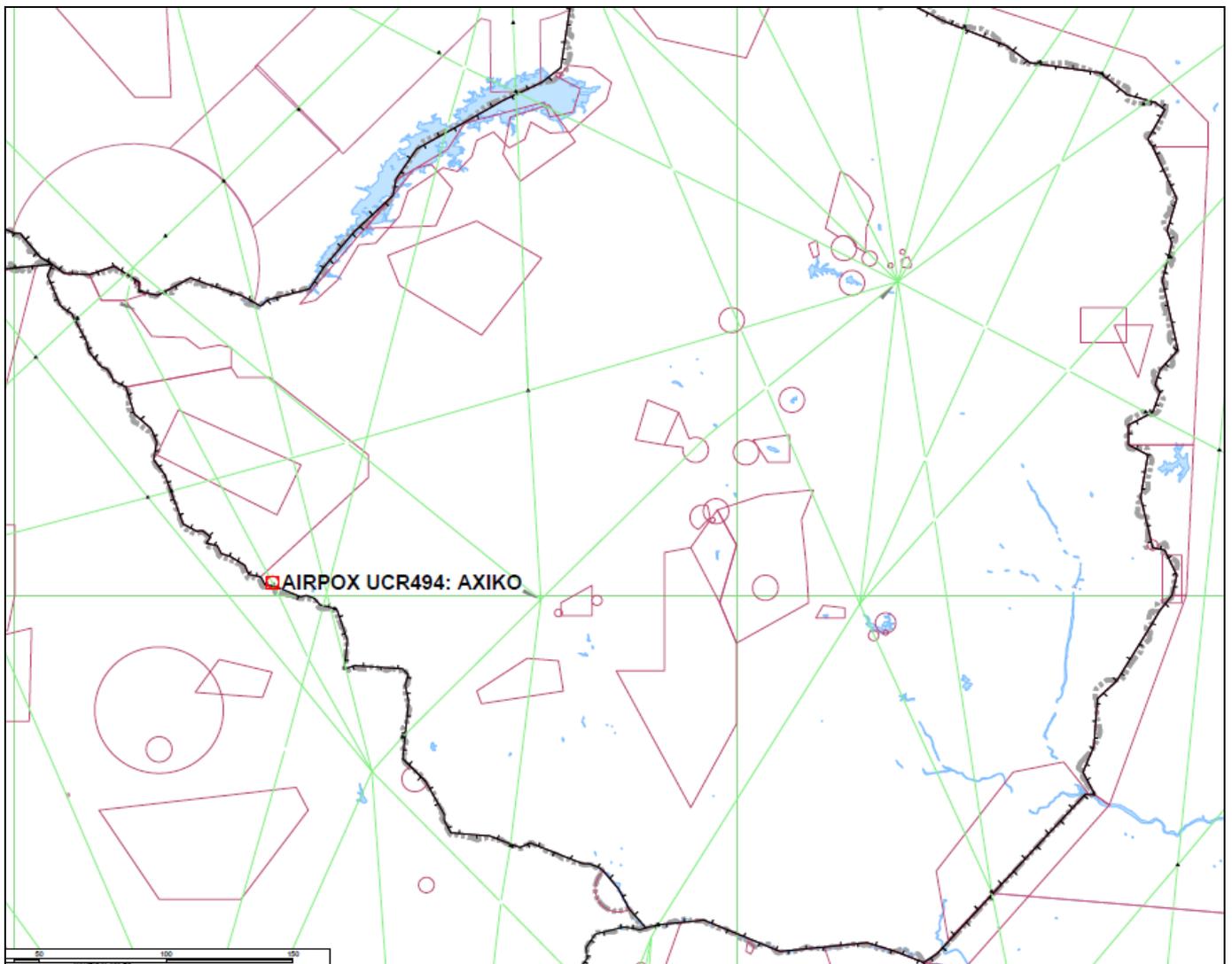
36. Harare FIR

Two (2) Air Safety Reports were reported in Harare FIR. Feedback had been received for two (2) incidents – 100% feedback rate.

- One (1) AIRPROX occurred;
- One (1) ASR was Event.

AIRPROX:

- I. Combination of lack of coordination between ATS units and lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) AIRPROX.



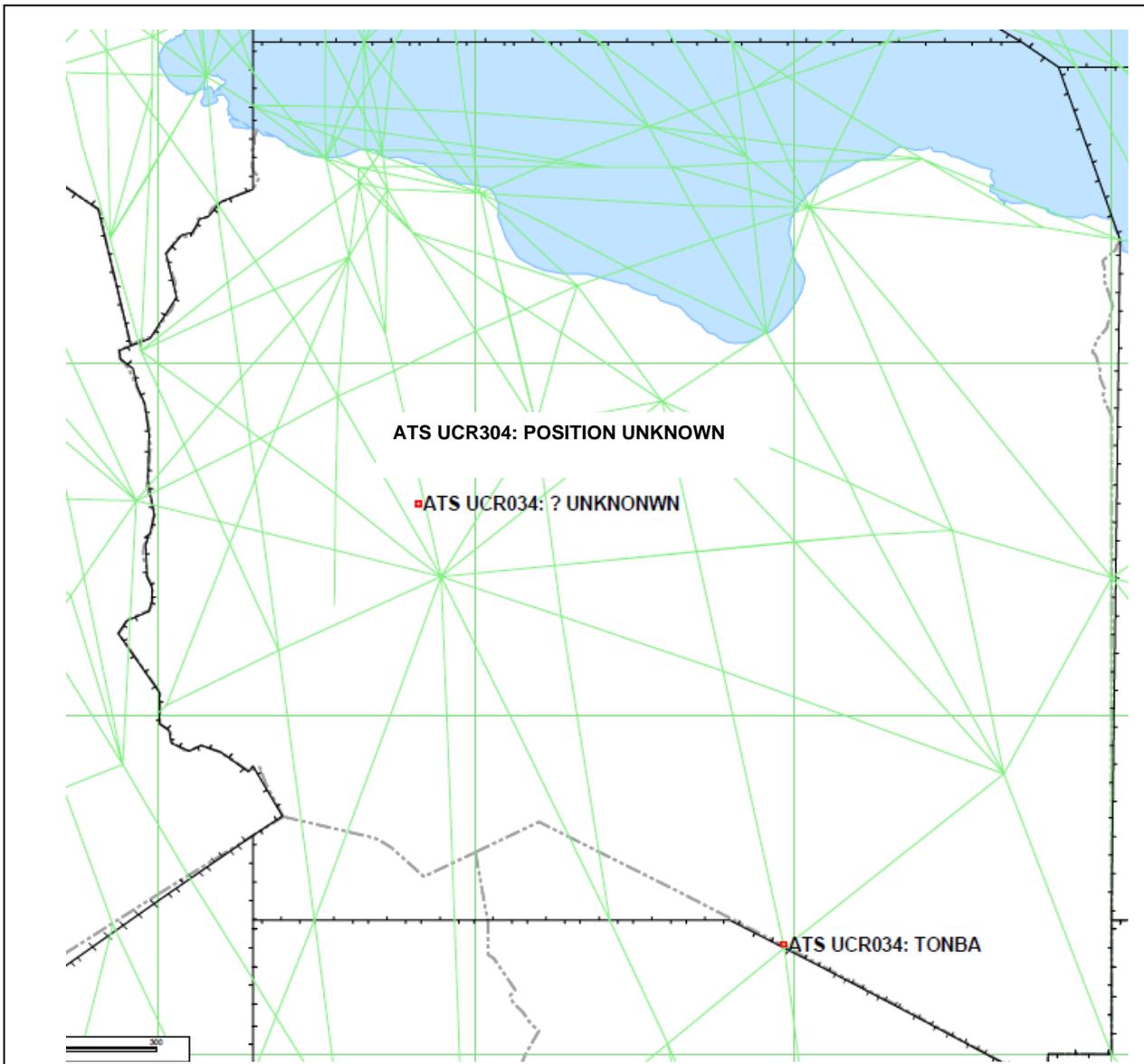
37. Tripoli FIR

Four (4) Air Safety Reports were reported in Tripoli FIR. Feedback had been received for one (1) incident – 25% feedback rate.

- Two (2) ATS incidents occurred;
- One (1) ASR was Event and that one (1) ASR was inconclusive.

ATS INCIDENT:

- i. Lack of mobile communication was cause of one (1) ATS incident.
- ii. Lack of ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.



38. Khartoum FIR

Three (3) Air Safety Reports were reported in Khartoum FIR. Feedback had been received for two (2) incidents – 66% feedback rate.

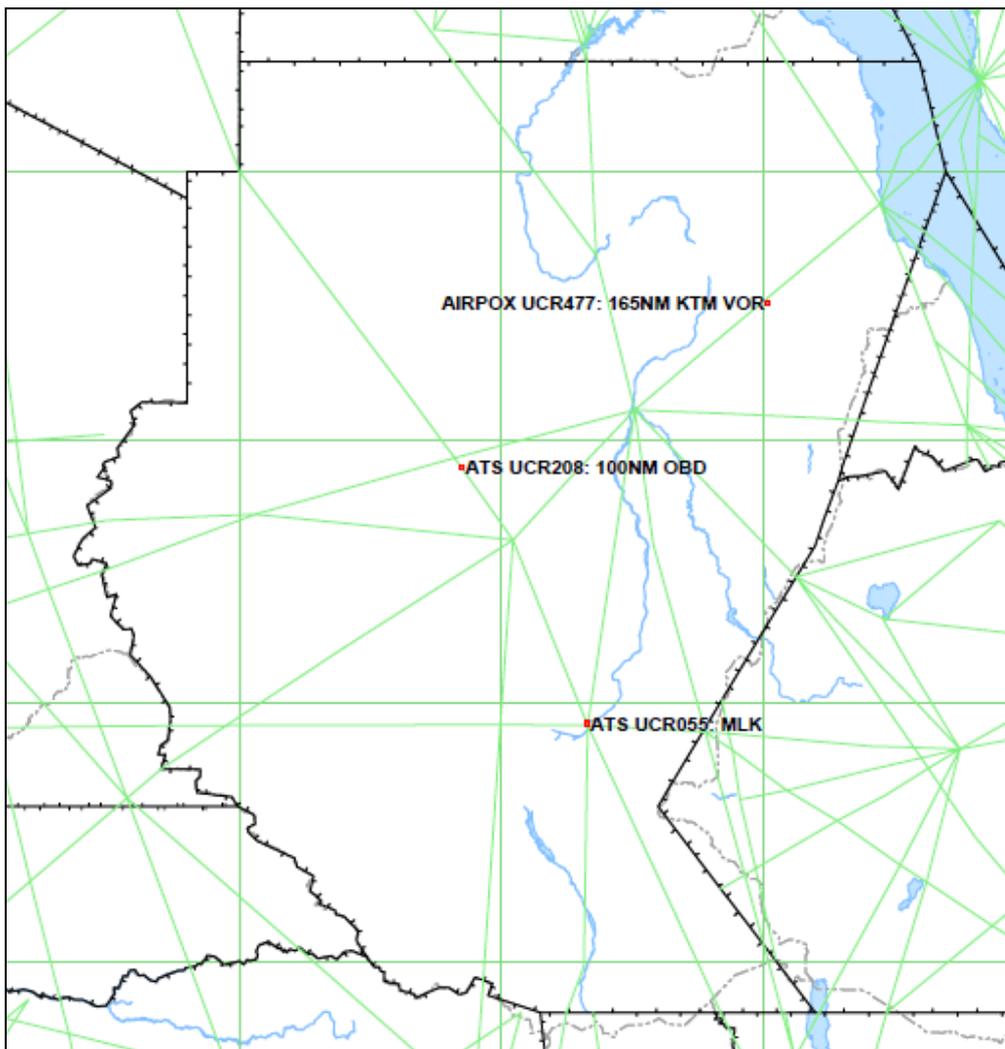
- One (1) AIRPROX occurred;
- Two (2) ATS incident occurred.

AIRPROX:

- I. Combination of lack of ATC anticipation/ATC situational awareness/ATC proficiency and lack of mobile communications was cause of one (1) AIRPROX.

ATS INCIDENT:

- i. Combination of cockpit crew discipline and ATC anticipation/ATC situational awareness/ATC proficiency was cause of one (1) ATS incident.
- ii. Cause for one (1) ATS incident could not be determined.





39. General

- The number of incidents due to lack of ATC anticipation/ATC situational awareness/ATC proficiency, has doubled as compared to 2008⁵. This was either the main cause of incident or a contributing factor in fifty (50) instances.
- On board discipline/procedures need to be promoted with operators as this has increasingly become a contributing factor each year⁶. It was either the main cause of incident or a contributing factor to in twenty three (23) instances.
- The lack of coordination between ATC is becoming increased contributing factor from previous year⁷. It was either the main cause of incident or a contribution factor in twenty one (21) instances.
 - Due to lack of communications;
 - Due to ATC error during coordination
- The lack of mobile communications has increasingly become a contributing factor from previous year⁸. It was either the main cause of incident or a contributing factor to incident in eighteen (18) instances.
- The Airspace organisation was either the main cause of incident or a contributing factor in twelve (12) instances.
 - No airway should be classified as “Class F or G airspace”.
- The crew not using IFBP was either main cause of incident or contributing factor in seven (7) instances.
- ATS procedures were either main cause of incident or contributing factor in six (6) instances.

40. Recommendations

- I. For almost half of analyzed incidents, the contributing factor is either ATC or crew – HUMAN FACTORS. In order to ensure prevention, we all need to understand Human Factors through a proper. Training programme including CRM or Team Resource Management. intended for Authorities, ANSPs and ATCOs

The ATS providers are urged to monitor ATC fatigue and improve the proficiency and number of Air Traffic Controllers.
- II. The pursuit of the SMS concept “Just Culture” is a concern. Many investigation reports show authorities “seriously reprimanding ATCO’s”. ANSPs should be committed to the adoption of a non-punitive attitude toward the persons involved in air navigation occurrences by virtue of the exercise of their respective professions.

⁵ 27 instances in 2008

⁶ 14 instances in 2008

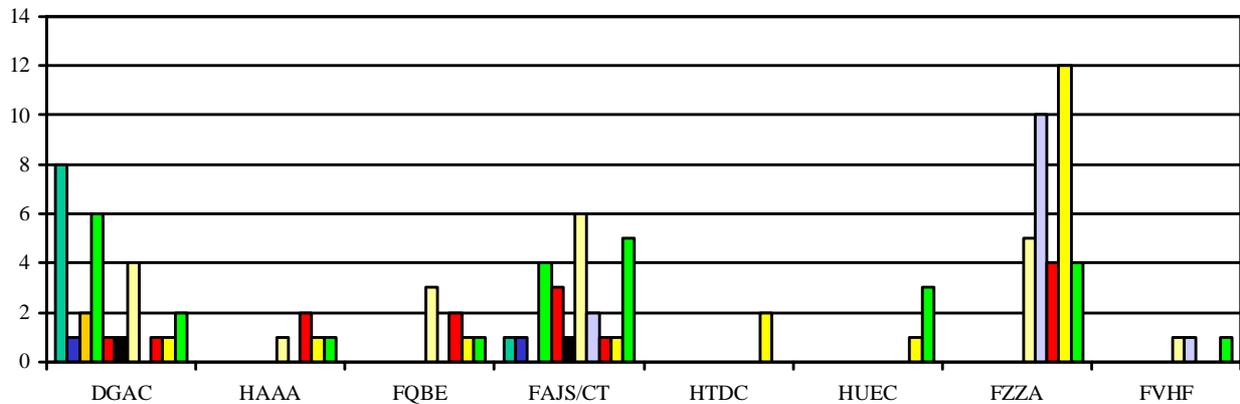
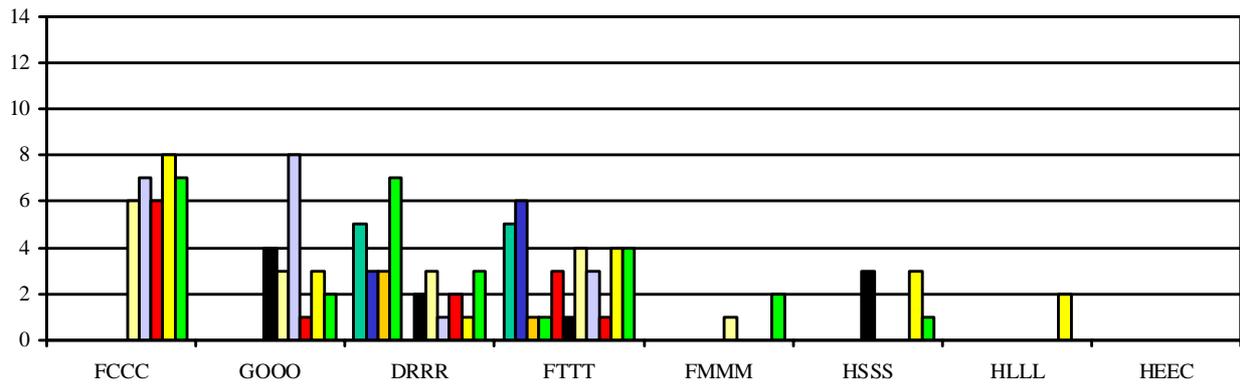
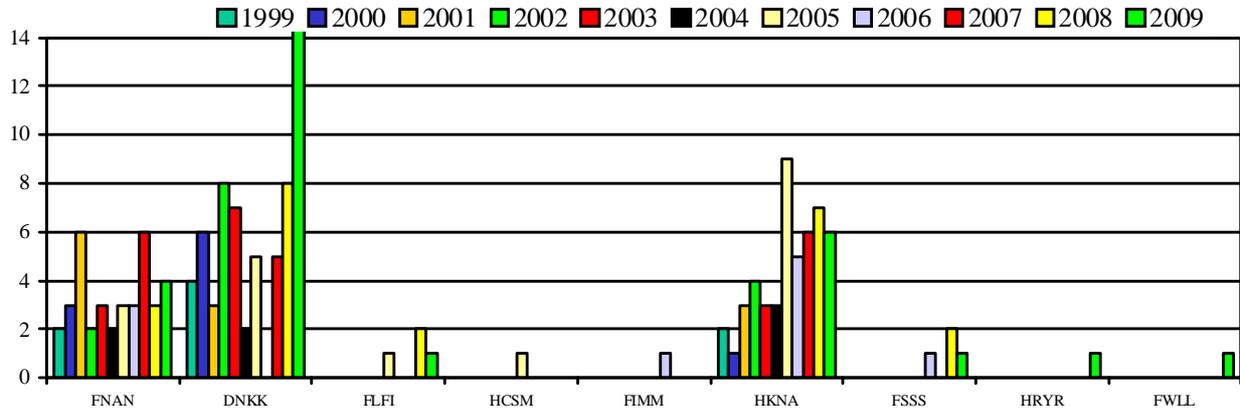
⁷ 15 instances in 2008

⁸ 11 instances in 2008



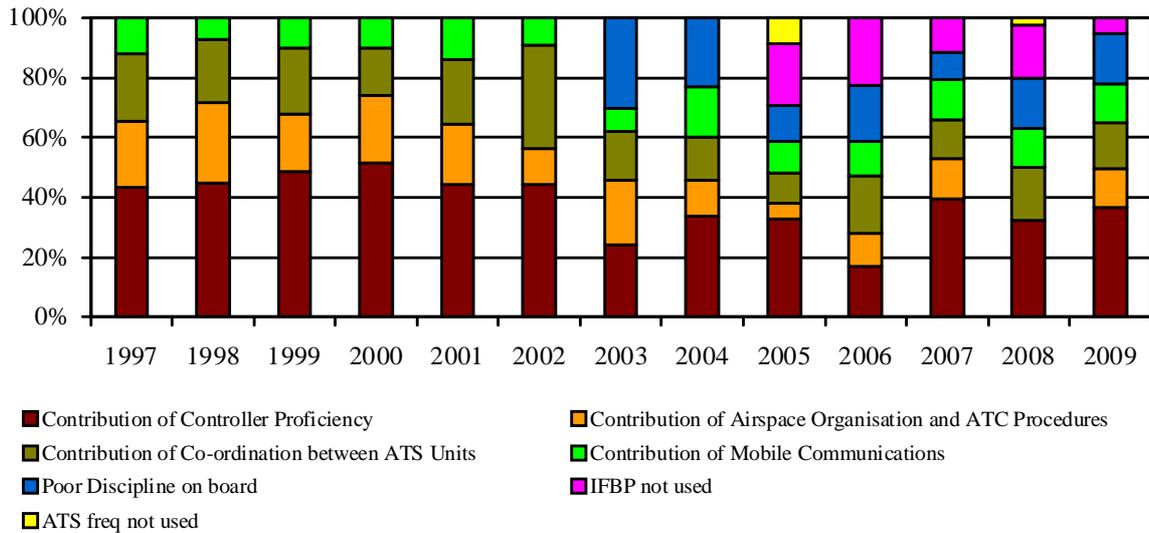
- III. VHF/HF communications need to be enhanced in order to enable positive Air Traffic Control. Controller-pilot data link communications (CPDLC) for en-route operations in accordance with the Regional Air Navigation Plan (ICAO Doc 7474) should also be implemented.
- IV. Airspace re-organisation where more sectors are required and clarifying ATC procedures. Appropriate classification of airways and airspace.
- IV. Encourage the use of IFBP in the corresponding applicability area.
The lack of positive Control by ATC remains a reason for IFBP to be maintained as a safety in the African region.

Contribution of AIRPROX per FIR





Contributing factors of AIRPROX:



Date & Venue of the Next Meeting

41. AIAG will meet in March 2011 at IATA premises in Johannesburg.