

International Civil Aviation Organization

REPORT OF

THE TWENTY-FIFTH MEETING OF THE SECURE AVIATION DATA INFORMATION SERVICE (SADIS) COST RECOVERY ADMINISTRATIVE GROUP (SCRAG/25)

Virtual, 3 December 2024

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INTRODUCTION

Place and Duration

1. The Twenty-Fifth Meeting of the Secure Aviation Data Information Service (SADIS) Cost Recovery Administrative Group (SCRAG) was conducted virtually on Tuesday, 3 December 2024.

Attendance

2. The 3 December 2024 meeting was attended by the following Member from the Regions: Mr. Matthias Garke from the European Region. Also in attendance were the Provider State participants and ICAO representatives. The list of attendees is shown in Appendix A and the working papers issued for the meeting are listed in Appendix B.

Officers and Secretariat

3. Mr. Matthias Garke, from the European Region, served as Chairperson for the meeting. Ms. Joanna Zorbas, Joint Financing Officer, ICAO Headquarters in Montréal, served as Secretary.

Agenda

- 4. The following agenda was adopted:
 - **Agenda Item 1**: Review of SCRAG's Terms of Reference, Composition and Working Arrangements
 - **Agenda Item 2**: Consideration of issues relevant to the SCRAG's work addressed by the Meteorology Panel (METP) Working Group on Meteorological Operations Group (WG-MOG)
 - **Agenda Item 3**: Review of actual SADIS costs and cost-share for the period 1 January to 31 December 2023
 - Agenda Item 4: Review of estimated SADIS costs and cost-shares for the period 1 January to 31 December 2025 and estimated costs for the next two to five years
 - **Agenda Item 5**: Review of the status of SADIS payments for the current year (2024) invoices
 - Agenda Item 6: Amendments to Annexes of the SADIS Agreement
 - **Agenda Item 7**: Future work and arrangements for the SCRAG/26 Meeting
 - **Agenda Item 8**: Other business

AGENDA ITEM 1: REVIEW OF SCRAG'S TERMS OF REFERENCE, COMPOSITION AND WORKING ARRANGEMENTS

- 1.1 Mr. Matthias Garke (Germany), the first named Party from the European region and the only SCRAG member in attendance, participated in the capacity of Chairperson for the SCRAG/25 meeting.
- 1.2 Article VII, paragraph II of the SADIS Agreement states that the SCRAG shall be composed of one Party from each region and that regions, which are in the aggregate, are responsible for more than 50 per cent of the total current assessments, shall nominate an additional Party. The Group was informed that the European Region surpassed the 50 per cent aggregated total of current assessments and that the nomination of a member from the Asia region was currently outstanding. As a result, the ICAO Secretariat will coordinate with the ICAO Regional Offices for membership nominations by the planning and implementation regional groups for the regions.
- 1.3 The Group noted its Terms of Reference assigned by Article VII of the SADIS Agreement, which reads:

"The SADIS Cost Allocation and Recovery (SCAR) arrangement shall be administered by a group, the *SADIS Cost Recovery Administrative Group* (SCRAG) which shall:

- a) assess the annual cost-share attributable to each Party, including reassessments arising from new Parties adhering to this Agreement; and
- b) audit the costs of the SADIS provision, and any related financial activities, incurred by the Provider State and subject to cost sharing."
- 1.4 The Group was informed that ICAO had received a formal notification of accession to the SADIS Agreement from 72 States. Three of these States are not presently receiving the service and 13 of these States are Least Developed Countries (LDCs), which are exempt from payment of SADIS cost share. The Group was also informed that 50 other States receiving the SADIS service had not yet acceded to the SADIS Agreement. Of these States, 23 are LDCs. States that have formally acceded to the SADIS Agreement and States that have not are listed in Appendix C.
- 1.5 The Group discussed encouraging the Accession of States to the SADIS Agreement. In this regard, the following conclusion was formulated:

SCRAG Conclusion 25/1 —

The SADIS Manager will liaise with the Met Officers in the ICAO Regional Offices and present information to the relevant Planning and Implementation Regional Group (PIRG) meetings to encourage States who have not yet acceded to the SADIS agreement to do so.

SCRAG Conclusion 25/2 —

The ICAO Secretariat will liaise with ICAO Regional Offices to facilitate coordination with the PIRGS in order to ensure adequate regional representation of Parties to administer the SADIS SCRAG.

AGENDA ITEM 2: CONSIDERATION OF ISSUES RELEVANT TO THE SCRAG'S WORK ADDRESSED BY THE METEOROLOGY PANEL (METP) WORKING GROUP ON METEOROLOGICAL OPERATIONS GROUP (WG-MOG)

- 2.1 The Group was informed of the main conclusions of the Twenty Sixth Meeting of the Meteorology Panel (METP) Working Group on Meteorological Operations Group (WG-MOG) for SADIS (METP WG-MOG/26, held Exeter, UK on 6 and 7 June 2024) provided by the workstream lead of the METP WG-MOG.
- 2.2 In accordance with Action 26/03 of METP WG-MOG/26, the Group noted the Statement of SADIS operational efficacy received from the Rapporteur of the METP WG-MOG, relaying the information from the Group at its Twenty Second Meeting to the SCRAG, that the operational efficacy of the SADIS had continued to be satisfactory, meeting all operational requirements since the METP WG-MOG/22 Meeting (Kansas City, 4 and 5 May 2023).
- 2.3 The following Actions/Decisions relating to the SADIS Service were documented in the report of the METP WG-MOG/26:

MOG/SADIS Action 25/01 — Terms of Reference

That, the METP-WG/MOG (SADIS/WIFS) meeting accepts the Terms of Reference as shown in **Appendix B** to the WG-MOG/26 meeting report.

Status: Complete

MOG/SADIS Decision 26/01 – SADIS Management Report

That, the operations of the SADIS Provider State continues to meet the specification outlined in the Terms of Reference.

MOG/SADIS Conclusion 26/01 – Annual statement of operational efficacy of SADIS 2023/2024

That, the Rapporteur of the METP-WG/MOG meeting be invited to inform the Secretary of the SCRAG that SADIS continued to meet the operational requirements during the period 2023/2024.

Status: Complete.

MOG/SADIS Action 26/02 – 2023 SADIS Efficacy Survey

That the 2023 Efficacy survey information included in Appendix D [to the MOG/26 SADIS report] be turned into a separate document that is published on the METP public webpages https://www.icao.int/airnavigation/METP/Pages/METP%20Public%20Documents.aspx.

Status: Awaiting ICAO to publish this document

MOG/SADIS Action 26/03 – 2024 SADIS Efficacy Survey

That, the web hosted SADIS Efficacy questionnaire, using all of the questions shown in Appendix E to the WG-MOG/26 meeting report, is used for the 2024 survey:

- a) the survey will commence on 1 July 2024 and end on 31 December 2024;
- b) users will be notified of the survey via SADIS administrative messages and e-mail; and
- c) the Secretariat will inform the ICAO Regional Officers for Meteorology of the survey and

encourage them to issue State letters to encourage participation in the survey. The State letter should include a copy of the questions shown in Appendix E to the WG-MOG/26 meeting report.

Status: In progress

MOG/SADIS Action 26/04 - SADIS API Survey

That, the SADIS manager prepare and send out an informal survey regarding the SADIS API performance to the registered SADIS API users at the end of 2024 to seek information on how they are getting on using the service, and their plans to use it operationally instead of the SADIS FTP.

Status: This will take place in December 2024.

MOG/SADIS Action 26/05: Status of Implementation of SADIS

That, the ICAO Secretariat be invited to make available the updated Status of Implementation of SADIS document, as shown in Appendix F to the WG-MOG/26 meeting report on the ICAO public website (replacing the previous copy), once it is finalised.

Status: Awaiting ICAO to publish this document

MOG/SADIS Action 26/06 – SADIS FTP download volume information

That, information on the volume of data downloaded from SADIS FTP per State be provided at the next meeting.

Status: Pending.

MOG/SADIS Action 26/07 — Job Card 8 update

That, the WG-MOG Rapporteur present the proposed updates to the Job Card MEP.008, as shown in Appendix G to the WG-MOG/26 meeting report, to METP/6 for consideration.

Status: Pending. Papers for the METP/6 meeting will be prepared in January 2025.

MOG/SADIS Action 26/08 — SADIS Agreement Annex I and II 2024

That, the Rapporteur of the METP-WG/MOG be invited to forward the updated SADIS Agreement Annex I and II as shown in Appendixes H and I to the WG-MOG/26 meeting report, to the Secretary of SCRAG.

Status: This information is presented in WP11 and WP13.

MOG/SADIS Decision 26/09 — SADIS API User Guide

That, the copy of the SADIS API User Guide as shown in Attachment 1 to SN08 is published on the ICAO website by the ICAO Secretariat.

Status: Awaiting ICAO to publish this document

MOG/SADIS Action 26/10 – SADIS API workstation evaluation documents

That, the SADIS API software evaluation, and SADIS API workstation user evaluation documents, as shown in Attachment 1 and 2 to SN09, are published by the ICAO Secretariat on https://www.icao.int/airnavigation/METP/MOGWIFSSADIS%20Reference%20Documents/Forms/AllItems.aspxwebsite.

Status: Awaiting ICAO to publish this document

MOG/SADIS Action 26/11: SADIS OPMET Catalogue

That;

- a) the issue 1 2024 update to the SADIS OPMET catalogue is published on SADIS FTP and https://www.icao.int/airnavigation/METP/Pages/Public-Documents.aspx (replacing the previous version);
- b) the catalogue is updated at least annually.

Status: Awaiting ICAO to publish this document

MOG/SADIS Action 26/12: SADIS Gateway Operations Handbook

That, the ICAO Secretariat publishes the eighth edition of the SADIS Gateway Operations Handbook as shown in Attachment A to SN11 on

https://www.icao.int/airnavigation/METP/MOGWIFSSADIS%20

Reference%20Documents/Forms/AllItems.aspx and removes the seventh edition.

Status: Awaiting ICAO to publish this document

MOG/SADIS Action 26/13: Old SADIS Documents

That, the SADIS Inventory dating to 2020, and the SADIS long term plan that is published on https://www.icao.int/airnavigation/METP/MOGWIFSSADIS%20Reference%20Documents/Forms/AllItems.aspx, is removed by the ICAO Secretariat.

Status: Complete.

SCRAG Conclusion 25/3 —

The Group recommended that the Chair of the METP-WG/MOG forward the Annual Statement of Operational Efficacy to the Secretary of the SCRAG, who in turn will send the report to the Chairperson of the SCRAG subsequent to their nomination at the start of the annual SCRAG meeting.

AGENDA ITEM 3: REVIEW OF ACTUAL SADIS COSTS AND COST-SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2023

Review of the 2023 Actual SADIS Costs

3.1 The Group reviewed the actual costs of £ 537 189 for providing the SADIS services in the year 2023. These actual costs are detailed in Appendix E, Column "Actual 2023" and the cost share per State is presented in Column 4 of Appendix D. A summary of these costs is presented in **Table 1 (A)**.

TABLE 1 (A) SUMMARY OF ACTUAL SADIS COSTS FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2023

Cost Item	Actual Costs (UK £)
UK Met Office UK NATS SADIS Gateway	190 051 310 663
UK CAA administrative costs	0
Sub-total UK	500 714
ICAO support service costs	36 475
TOTAL	537 189

Review of the 2023 Actual SADIS Cost-shares

- 3.2 The Group noted that one State, Indonesia, was disconnected from SADIS services on 23 September 2022 and rejoined on 30 May 2023. Consequently, their share of the actual costs for 2023 was calculated based on 8 full months of service.
- 3.3 The Group determined that the actual cost-shares for the period 1 January to 31 December 2023 be borne by the States' party to the SADIS Agreement that are not exempted from payment because they are not categorized as LDCs. On the basis of the number of available tonne-kilometres (ATKs) in scheduled services for 2023, in accordance with Article XI, paragraph 3 of the SADIS Agreement, the cost-share in percentage terms and the share in £ sterling to be borne by each State participating in the SCAR Arrangement are shown in Appendix D.
- 3.4 The Group noted the adjustment for 2023; an over-recovery of £17 074 represents the difference between the 2023 actual costs and the 2023 estimated costs approved by the SCRAG/23 meeting, as indicated in **Table 1 (B)**.

TABLE 1 (B)

ADJUSTMENT OF ACTUAL SADIS COSTS TO ESTIMATED SADIS COSTS FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2023

	Cost Item	Actual Costs (UK £)	Reference
(1)	2023 Actual Cost	537 189	Table 1 (A)
(2)	2023 Estimated Cost	554 263	SCRAG/23 Report, Table 3
(3)	Over-recovery for 2023 (to be subtracted from the amount billed in 2025)	-17 074	(1) - (2) (see Appendix D, column 6 and Appendix H, column 2)

The Group formulated the following Conclusion:

SCRAG Conclusion 25/4 —

In accordance with Article XI, paragraph 3, of the SADIS Agreement, the SCRAG/25 meeting approves the actual cost-shares for 2023, as shown in Appendix D to the SCRAG/25 Report for the States participating in the SCAR Arrangement.

- 3.5 The Group received information from the Observer from the United Kingdom on the status of payment of the cost-shares of 2023 as of 14 November 2024. It was noted that a total amount of £ 502 038.44 was collected for 2023 (see Appendix F, page F-2). A balance of £ 6 801.60, which represents the sum of five States with balances owed, remains outstanding. Outstanding 2023 credits total £ 11 164.17, resulting in a net credit balance of £ 4 362.57, as indicated in the final column of Appendix F, page F-2.
- 3.6 The Group noted that, consistent with Conclusion 14/7, which was reached during the SCRAG/14 meeting, the small additional costs incurred in the process of obtaining payment of SADIS invoices (these include bank charges and courier costs), have been added to the administrative costs for the SADIS Provider State.
- 3.7 Having noted the information in **Table 1** (**A**), and paragraphs 3.2 to 3.6 above, the Group agreed that the under-recovery of SADIS cost-shares for the year 2023 amounts to £ 30 983, as shown in **Table 2** below. The under-recovery of 2023 is the amount subject to collection for 2023 (£ 533 021), less the amounts collected for 2023 and prior years £ 502 038.

TABLE 2

OVER-RECOVERY FOR 2023

		UK £	References
(1)	Actual costs for 2023	537 189	Table 1 (A)
(2)	Over-recovery for 2021	-4 168	SCRAG/23 Report, Table 2
(3)	Subject to collection for 2023	533 021	(1) + (2)
(4)	Collected from States for 2023 (as of 14 November 2024)	-502 038	Appendix F – page F-2 (column 3 minus column 5)
(5)	Collected from States for years prior to 2023 (as of 14 November 2024)	0	Appendix F – page F-3 (column 3)
(6)	Under-recovery for 2023 (to be subtracted from the assessments for 2025)	30 983	(3) + (4) + (5) (see Appendix G, column 5)

The Group formulated the following Conclusion:

SCRAG Conclusion 25/5 —

An under-recovery, amounting to £30 983 of the SADIS cost-shares for the year 2023, will be taken into account in the calculation of the SADIS cost-shares for the year 2025, in accordance with Article XI, paragraph 4, of the SADIS Agreement.

AGENDA ITEM 4: REVIEW OF ESTIMATED SADIS COSTS AND COST-SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2025 AND ESTIMATED COSTS FOR THE NEXT TWO TO FIVE YEARS

Review of the 2025 Estimated SADIS Costs

4.1 The cost estimates for 2025 are detailed in the column "Est 2025", in Appendix E, and total £ 617 262. A summary of these costs is presented in **Table 3**.

TABLE 3
SUMMARY OF ESTIMATED SADIS COSTS
FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2025

Cost Item	Estimated Costs
	(UK £)
UK Met Office	247 200
UK NATS SADIS Gateway	338 723
UK CAA administrative costs	1 000
Sub-total UK	586 923
ICAO support services costs	30 339
TOTAL	617 262

- 4.2 The SADIS provider described how the introduction of the SADIS API impacts on operating costs, with two elements of the SADIS API becoming operational on 19 March 2024, and the remaining element (for SIGWX) becoming operational in February 2025. The operating costs of the SADIS API from 2025 onward depend on the speed at which SADIS FTP users move over to the SADIS API, and as they do the SADIS FTP operating costs will start to decrease. The new SADIS API meets the objectives set out in the ICAO Global Air Navigation Plan (GANP) for System Wide Information Management (SWIM) something that the SADIS FTP is not able to achieve.
- 4.3 The Group considered the under-recovery in **Table 2** in the calculation of the amount to be assessed under the SADIS Agreement for 2025. The calculation of the amount to be assessed is presented in **Table 4**.

TABLE 4

AMOUNT TO BE ASSESSED UNDER THE SADIS AGREEMENT FOR 2024

		UK £	References
(1)	Under-recovery for 2023	30 983	Table 2
(2)	Estimated costs for 2025	617 262	Table 3
(3)	Amount to be assessed for 2025	648 245	(1) + (2) (see Appendix G, column 6)

4.4 The Group determined that the cost-shares for the period 1 January to 31 December 2025, be borne by the States' party to the SADIS Agreement that are not exempted from payment because they are on the list of the Least Developed Countries (LDCs), on the basis of the number of ATKs in scheduled services for 2023, in accordance with Article XI, paragraph 3, of the SADIS Agreement.

4.5 The cost-share in percentage terms and the share in £ sterling, plus the share of under-recovery for 2023, attributable to each State, are shown in Appendix G. Appendix H shows the amounts to be billed to each State in 2025, corresponding to the adjustment for 2023 (Appendix D), plus the assessment for 2025 (Appendix G), less any deduction of unused credit balances or other adjustments from previous years.

TABLE 5

AMOUNT TO BE BILLED UNDER THE SADIS AGREEMENT FOR 2025

		UK £	References
(1)	Amount to be Assessed for 2025	648 245.00	Table 4
(2)	Adjustment of Actual SADIS Costs to Estimated Costs for 2023	-17 074.00	Table 1 (B)
(3)	Deduction of Unused Credit Balances from Previous Year or Other Adjustments	-1 774.70	Appendix H (column 4)
(4)	Amount to be Billed for 2025	629 396.30	(1)+(2)+(3) (see Appendix H, column 5)

The Group formulated the following Conclusion:

SCRAG Conclusion 25/6 —

The estimated cost-shares for 2025, as shown in Appendix G to the SCRAG/25 Report for each State participating in the SCAR Arrangement, are approved by the SCRAG/25 meeting for collection by the United Kingdom.

Cost Estimates for the Years 2026 to 2028

4.6 The Group considered the estimates provided by the United Kingdom (Appendix E) and summarized in **Table 6** for SADIS services for the years 2026 to 2028, as well as the estimates for the United Kingdom administrative costs and the costs of ICAO support services.

TABLE 6
SUMMARY OF ESTIMATED SADIS COSTS
FOR THE YEARS 2026, 2027 AND 2028

Cost Item	Estimated Costs	Estimated Costs	Estimated Costs
	2026	2027	2028
	(UK £)	(UK £)	(UK £)
UK Met Office UK NATS SADIS Gateway UK CAA administrative costs	256 000	259 700	261 300
	344 859	352 768	360 176
	1 000	1 000	1 000
Sub-total UK	601 859	613 468	622 476
ICAO support services costs	32 000	34 000	36 000
TOTAL	633 859	647 468	658 476

4.7 Members noted and discussed the expected changes in SADIS operating costs attributable to the UK Met Office from 2026 to 2028. Appendix E shows how, during this period, both the SADIS FTP and SADIS API will be in operation and users will be migrating over to the API. Therefore, during these years, the operating costs of the API are expected to increase whilst the FTP costs decrease.

AGENDA ITEM 5: REVIEW OF THE STATUS OF SADIS PAYMENTS FOR THE CURRENT YEAR (2024) INVOICES

- 5.1 The Group reviewed WP/12 on the status of payment for the current (2024) year, presented by the United Kingdom.
- 5.2 The Group formulated the following Conclusion:

SCRAG Conclusion 25/7 —

With the assistance of ICAO Regional Met Officers, the SADIS Provider will continue to make all efforts to contact and remind the States of their outstanding payments. The Group agreed that the SADIS Provider State be invited to withdraw access to the secure SADIS FTP for those States who, as at 1200 UTC on 22 January 2025, have cumulative outstanding payments over GBP 100 due for any invoice dated 2024 or earlier.

AGENDA ITEM 6: AMENDMENTS TO ANNEXES OF THE SADIS AGREEMENT

- 6.1 The Group viewed the current version of Annex I, SADIS Services, to the SADIS Agreement, which was last reviewed and updated by the METP WG-MOG SADIS in June 2024.
- As a result of its review, the Group adopted the following Conclusion:

SCRAG Conclusion 25/8—

With the consent of the United Kingdom, as the SADIS Provider State, in accordance with Article XVII, paragraph 5, of the SADIS Agreement, Annex I, SADIS Services, of the SADIS Agreement is amended as indicated in Appendix I to the SCRAG/25 Report.

- 6.3 The Group reviewed the current version of Annex II, SADIS Inventory, to the SADIS Agreement, which was last reviewed and updated by the METP WG-MOG SADIS in June 2024 and incorporated into the SADIS agreement after the SCRAG/25 meeting. No additional changes are required at the present time.
- As a result of its review, the Group adopted the following Conclusion:

SCRAG Conclusion 25/9 —

With the consent of the United Kingdom, as the SADIS Provider State, in accordance with Article XVII, paragraph 5, of the SADIS Agreement, Annex II, SADIS Inventory, of the SADIS Agreement is amended as indicated in Appendix J to the SCRAG/25 Report.

AGENDA ITEM 7: FUTURE WORK AND ARRANGEMENTS FOR THE SCRAG/24 MEETING

7.1 The Group determined the provisional location and date for the Twenty-Sixth SCRAG meeting to be held 3 December 2025 in the UK or virtually, and it was noted that if an in-person meeting is held, it will also be hosted virtually to enable remote attendance.

AGENDA ITEM 8: OTHER BUSINESS

8.1 The Group expressed its appreciation for the assistance provided by the UK Met Office in conducting the virtual meeting.

APPENDIX A

LIST OF PARTICIPANTS

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APPENDIX B

LIST OF SCRAG/25 WORKING PAPERS

Working Paper No.	Agenda Item	Subject	Presented by
1	1 to 9	Provisional agenda	Secretariat
2	1, 3 & 4	Status of accession to the SADIS Agreement	Secretariat
3	2, 4 & 6	Reports on Conclusions of the METP WG-MOG/26 meeting	United Kingdom
4	3	2023 ICAO actual SADIS administrative costs	Secretariat
5	3	2023 actual SADIS costs	United Kingdom
6	3	Status of payments for the year 2023	United Kingdom
7	3	Summary of actual costs and cost-shares for the year 2023	Secretariat
8	4	2025 ICAO estimated SADIS administrative costs	Secretariat
9	4	Estimated SADIS costs: two to five years	United Kingdom
10	4	Summary of estimated costs and assessments for the year 2025	Secretariat
11	6	Amendment to Annex II, SADIS Inventory, to the SADIS Agreement	Secretariat
12	5	Status of payments for the current (2024) year	United Kingdom
13	6	Amendments to Annex I of the SADIS Agreement	United Kingdom
14	5	Credit balances	Secretariat
15	4	Annual Support Costs to SADIS Provided by ICAO under the Meteorology Panel Structure	Secretariat

Appendix C-1

STATES WHICH FORMALLY ACCEDED TO THE SADIS AGREEMENT

STATES WHICH FORMALLY ACCEDED TO THE SADIS AGREEM STATES	LDC's Exempted
Albania	EDC s Exempted
Armenia	
Australia	
Austria	
Bahrain	
Bangladesh	X
Belgium	A
Botswana	
Cameroon	
China	
Congo	+
Côte d'Ivoire	
Croatia	
Cyprus	
Czechia	
Democratic People's Republic of Korea *	
Democratic Republic of the Congo	X
Denmark	
Egypt	
Estonia	
Finland	
France	
Gabon	
Gambia	X
Georgia	
Germany	
Greece	
Hungary	
Israel	
Italy	
Jordan	
Kazakhstan	
Kuwait	
Kyrgyzstan	
Lao People's Democratic Republic	X
Latvia	
Lesotho	X
Lithuania	
Madagascar	X
Malta	
Mauritius	
Mongolia *	
Morocco	
Netherlands	
Norway	
Oman	
Pakistan	
Poland	
Portugal	
Republic of Moldova	
Romania	
Senegal	X
Slovakia	

Appendix C-1 (cont'd) STATES WHICH FORMALLY ACCEDED TO THE SADIS AGREEMENT

Somalia	X
Spain	
Sweden	
Switzerland	
Tajikistan	
Thailand	
Togo	X
Tunisia	
Turkmenistan *	
Uganda	X
Ukraine	
United Arab Emirates	
United Kingdom	
United Republic of Tanzania	X
Uzbekistan	
Viet Nam	·
Yemen	X
Zambia	X

^{*} Although they formally acceded to the SADIS Agreement, these States do not presently receive the service.

Appendix C-2

STATES WHICH HAVE NOT YET ACCEDED TO THE SADIS AGREEMENT

STATES STATES	LDC's Exempted
Algeria	EDC 3 Exempted
Angola	X
Azerbaijan	
Benin	X
Bosnia and Herzegovina	A
Bulgaria	
Burkina Faso	X
Burundi	X
Cabo Verde	A
Cambodia	X
Central African Republic	X
Chad	X
Comoros	X
Djibouti	X
Equatorial Guinea	A
Eswatini Eswatini	
Ethiopia	X
Ghana	Λ
Guinea	X
Guinea-Bissau	X
Iceland	A
India	
Indonesia	
Ireland	
Kenya	V
Liberia	X
Libya	
Luxembourg	V
Malawi	X
Maldives	V
Mali	X
Mauritania	X
Montenegro	
Mozambique	X
Namibia N	v
Niger	X
Nigeria	
North Macedonia	
Qatar	
Rwanda	X
Sao Tome and Principe	X
Saudi Arabia	
Serbia	
Seychelles	
Somalia	X
South Africa	
South Sudan	X
Sudan	X
Turkey	
Zimbabwe	

ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2023* AND ADJUSTMENT FOR 2023

AND ADJUSTMENT FOR 2023									
STATES	2023 Available Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2023 Actual Costs (£ Sterling)	Share of 2023 Estimated Costs SCRAG/23 Appendix G (£ Sterling)	Adjustment for 2023 (£ Sterling)				
Albania	40 094	0.005%	27.07	23.91	3.16				
Algeria (note 1)	1 128 287	0.142%	761.81	286.81	475.00				
Armenia	455 121	0.057%	307.29	31.56	275.73				
Australia (note 1)	20 151 585	2.533%	13 606.10	8 060.63	5 545.47				
Austria	7 309 060	0.919%	4 934.99	4 218.68	716.31				
Azerbaijan	2 782 415	0.350%	1 878.65	4 200.62	- 2 321.97				
Bahrain	4 134 089	0.520%	2 791.29	2 379.53	411.76				
Belgium (note 1)	6 051 136	0.761%	4 085.65	5 336.05	- 1 250.40				
Bosnia and Herzegovina (note 2)	0	0.000%	0.00	0.00	0.00				
Botswana	703 178	0.088%	474.78	15.01	459.77				
Bulgaria	111 339	0.014%	75.17	7.26	67.91				
Cabo Verde	38 378	0.005%	25.91	2.74	23.17				
Cameroon	23 555	0.003%	15.90	15.77	0.13				
China: - Beijing	172 832 960	21.723%	116 694.67	141 088.86	- 24 394.19				
- Hong Kong	24 062 656	3.024%	16 246.81	15 312.14	934.67				
- Macao	562 495	0.071%	379.79	268.89	110.90				
Congo (note 2)	30 273	0.004%	20.44	13.80	6.64				
Côte d'Ivoire	191 435	0.024%	129.25	197.10	- 67.85				
Croatia	194 691	0.024%	131.45	132.10	- 0.65				
Cyprus	163 951	0.021%	110.70	42.57	68.13				
Czechia	505 602	0.02176	341.38	419.08	- 77.70				
Denmark	1 826 694	0.230%	1 233.36	1 041.94	191.42				
Egypt (note 1)	5 983 220	0.752%	4 039.80	3 910.36	129.44				
Equatorial Guinea	6 883	0.001%	4.65	2.90	1.75				
Estonia (note 3)	0 883	0.001%	0.00	0.00	0.00				
Eswatini	9 833	0.000%	6.64	1.67	4.97				
Finland	5 200 290	0.654%	3 511.17	2 996.89	514.28				
France	36 615 242	4.602%	24 722.16	25 596.57	- 874.41				
Gabon (note 2)	20 359	0.003%	13.75	0.00	13.75				
Georgia (note 1)	138 850	0.017%	93.75	51.32	42.43				
Germany	42 521 076	5.344%	28 709.70	32 753.05	- 4 043.35				
Ghana	23 019	0.003%	15.54	32.29	- 16.75				
Greece	2 397 248	0.301%	1 618.59	1 534.56	84.03				
Hungary	11 339 158	1.425%	7 656.06	4 938.87	2 717.19				
Iceland	2 067 453	0.260%	1 395.92	1 087.56	308.36				
India	33 485 887	4.209%	22 609.25	16 749.83	5 859.42				
Indonesia (note 4)	10 074 162	1.266%	6 801.95	8 558.97	- 1 757.02				
Ireland	25 487 632	3.204%	17 208.93	13 081.44	4 127.49				
Israel	3 991 765	0.502%	2 695.19	2 278.72	416.47				
Italy (note 1)	4 356 089	0.548%	2 941.18	2 530.16	411.02				
Jordan	1 713 813	0.348%	1 157.15	1 076.15	81.00				
Kazakhstan (note 1)	990 617	0.215%	668.85	1 972.45	- 1 303.60				
` ´			1 880.44						
Kenya	2 785 064 2 748 694	0.350%		1 610.68	269.76				
Kuwait		0.345%	1 855.88	1 460.82	395.06				
Kyrgystan	247 848	0.031%	167.34	42.40	124.94				
Latvia	987 688	0.124%	666.87	586.15	80.72				
Libya (note 2)	420 189	0.053%	283.71	251.20	32.51				
Lithuania	3 291	0.000%	2.22	0.31	1.91				

ACTUAL COST SHARES FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2023* AND ADJUSTMENT FOR 2023

STATES	2023 Available Tonne-Kilometres in Scheduled Services (000)	Percentage (000)	Share of 2023 Actual Costs (£ Sterling)	Share of 2023 Estimated Costs SCRAG/23 Appendix G (£ Sterling)	Adjustment for 2023 (£ Sterling)
Luxembourg (note 1)	10 832 132	1.361%	7 313.72	14 214.46	- 6 900.74
Maldives	3 645	0.000%	2.46	23.41	- 20.95
Malta (note 1)	503 492	0.063%	339.95	172.00	167.95
Mauritius	1 142 603	0.144%	771.47	375.59	395.88
Montenegro	38 339	0.005%	25.89	0.24	25.65
Morocco	4 301 549	0.541%	2 904.35	2 417.01	487.34
Namibia	8 461	0.001%	5.71	0.18	5.53
Netherlands	19 853 448	2.495%	13 404.80	18 943.50	- 5 538.70
Nigeria (note 1)	388 802	0.049%	262.51	438.28	- 175.77
North Macedonia (note 5)	0	0.000%	0.00	0.00	0.00
Norway (note 2)	4 107 338	0.516%	2 773.22	2 356.80	416.42
Oman	3 925 930	0.493%	2 650.74	1 141.92	1 508.82
Pakistan	2 569 587	0.323%	1 734.95	1 747.63	- 12.68
Poland	3 346 447	0.421%	2 259.48	1 846.62	412.86
Portugal	7 250 387	0.911%	4 895.37	4 412.30	483.07
Qatar	49 146 984	6.177%	33 183.43	48 225.32	- 15 041.89
Republic of Moldova	209 901	0.026%	141.72	165.20	- 23.48
Romania	547 943	0.069%	369.96	448.01	- 78.05
Saudi Arabia (note 1)	12 765 510	1.604%	8 619.11	10 170.44	- 1 551.33
Senegal (note 1)	347 528	0.044%	234.65	103.97	130.68
Serbia	780 251	0.098%	526.82	355.66	171.16
Seychelles	59 580	0.007%	40.23	39.46	0.77
Slovakia (note 3)	0	0.000%	0.00	1.29	- 1.29
Slovenia (note 3)	0	0.000%	0.00	2.66	- 2.66
South Africa (note 1)	1 918 821	0.241%	1 295.56	1 559.02	- 263.46
Spain	21 034 451	2.644%	14 202.20	12 479.20	1 723.00
Sweden	1 656 302	0.208%	1 118.31	998.74	119.57
Switzerland	10 799 491	1.357%	7 291.68	6 720.68	571.00
Tajikistan (note 2)	251 259	0.032%	169.65	80.35	89.30
Thailand	13 882 468	1.745%	9 373.27	3 447.23	5 926.04
Tunisia (note 1)	1 087 701	0.137%	734.40	494.17	240.23
Turkey	48 791 412	6.133%	32 943.35	37 807.77	- 4 864.42
Ukraine	0	0.000%	0.00	0.00	0.00
United Arab Emirates	76 267 400	9.586%	51 494.80	50 375.78	1 119.02
United Kingdom	47 619 244	5.985%	32 151.95	22 316.68	9 835.27
Uzbekistan	2 204 378	0.277%	1 488.37	1 040.61	447.76
Viet Nam	11 018 192	1.385%	7 439.35	3 123.11	4 316.24
Zimbabwe (note 2)	39 128	0.005%	26.42	17.34	9.08
TOTAL	795 614 468	100.000%	537 189.00	554 263.00	- 17 074.00

^{*} Least Developed Countries are exempted.

Note 1: The total state ATKs include an estimated value for one or more airlines associated with the State or some airline data is incomplete.

Estimates determined in accordance with the process outlined in Section 5.3 of the paper.

Note 2: Fully estimated ATKs taken from OAG and payload from ICAO reference files.

Estimates determined in accordance with the process outlined in Section 5.3 of the paper.

Note 3: Four States, Bosnia and Herzegovina, Estonia, Slovakia and Slovenia did not perform scheduled service during 2023 and therefore had zero ATKs reported.

Note 4: In accordance with the months for which services were received, Indonesia's share of actual 2023 costs was calculated based on 7 full months of service.

Note 5: No ATKs were received and no data is available for North Macedonia.

SADIS COST ESTIMATES FOR 2026 TO 2028 FOR SADIS SERVICES PROVIDED BY THE UNITED KINGDOM METEOROLOGICAL OFFICE

TABLE 1: UKMO Cost and manpower resou	ırce pr	ojections until year 2028 (at 2024 prices)						
INVENTORY REF:	Note	DESCRIPTION	Actual 2023	Revised Estimate 2024	Est 2025	Est 2026	Est 2027	Est 2028
UK MET OFFICE COSTS								
OK MET OFFICE GOOTS								
1. Equipment								
Not procured principally for SADIS								
AWS Server running costs for SADIS FTP	а		51,404	35,000	35,000	35,000	30,000	25000
SADIS API OPMET running costs	b		-	14,000	18,000	22,000	24,000	26000
SADIS API WAFS Gridded data running costs			-	34,000	42,000	45,000	48,000	50000
SADIS API WAFS SIGWX running costs	b		-	0	5,000	6,000	7,000	8000
		Equipment sub total	51,404	83,000	100,000	108,000	109,000	109,000
3. Annual Staff Requirements Operating Support								
Operating Support	С	First Line Support	4,837	2,600	4,000	4,000	4,000	4000
	d	Second Line Support	4,864	2.700	4.000	4,000	4,000	4.000
	е	Third and Fourth Line Support	13,714	10,700	20,000	20,000	20,000	20,000
Additional Support								
Administrator	f	Executive Officer	69,150	70,000	71,000	72,000	73,000	74000
International Aviation Management	f	Aviation Manager	8,400	8,500	8,600	8,700	8,800	8900
Contract Procurement and Management	f	Senior Procurement Officer	1,700	1,700	1,800	1,800	1,900	1900
Invoice Administration	f	Finance Officer & Business Acct	12,700	13,000	13,500	14,000	14,500	15000
Travel Costs	g	METP-WG/MOG meetings & SCRAG	1,900	0	2,000	1,200	1,200	1,200
		Staff Requirement and travel sub total	117,265	109,200	124,900	125,700	127,400	129,000
Administrative costs	h	Cost of Capital	21,183	21,500	22,000	22,000	23,000	23000
	i	Admin charges	199	200	300	300	300	300
		Total UKMO Costs	190,051	213,900	247,200	256,000	259,700	261,300

2 TABLE 2: NATS and other SADIS Cost Projections until year 2028 (at 2024 prices)

INVENTORY REF:	Note	DESCRIPTION	Actual 2023	Revised Estimate 2024	Est 2025	Est 2026	Est 2027	Est 2028
NATS Gateway Costs								
Staff Costs								
Operational Staff	i	Air Traffic Services Asst.	256,525	261,699	276,092	282,994	289,503	295,583
Engineering Staff	í	Maintenance Engineer	8,669	8,624	9,098	9,325	9,540	9,740
Administration Staff	j	Administration Officer	35,260	36,387	38,388	39,348	40,253	41,098
		Staff Costs sub total	300,454	306,710	323,578	331,667	339,296	346,42
	k	Maintenance	10,209	10,745	11,145	11,424	11,686	11,931
	1	T&RE	0	226	4,000	1,768	1,786	1,824
		Total NATS Gateway Costs	310,663	317,681	338,723	344,859	352,768	360,170
CAA Administration Costs	m		0	0	1,000	1,000	1,000	1,000
ICAO Administration Costs	n		36,475	29,804	30,339	32,000	34,000	36,000
		TOTAL SADIS COSTS	537,189	561,385	617,262	633,859	647,468	658,47

STATUS OF PAYMENTS OF THE ASSESSMENTS FOR 2023 AS AT 14 NOVEMBER 2024

(£ Sterling)

		(£ Sterling)			1
	Total amount	Amount			Unpaid
	billed for 2023	Collected	Administrative	Application of	amount
STATES	(SCRAG/23 Report, Appendix H)	as at 14 November 2024	Charges Applied	credit balance (or part of)	(excess paid) as at 14 November 2024
Albania	0.00	14 1\0\cmbc1 2024	приси	(or part or)	0.00
Algeria	- 76.15				- 76.15
8					13.76
Armenia	13.76				
Australia	- 318.82	2 620 55			- 318.82
Austria	3 638.55	3 638.55			0.00
Azerbaijan	7 056.53	7 056.53			0.00
Bahrain	2 613.24	2 613.24			0.00
Belarus	- 44.36			- 44.36	0.00
Belgium	6 040.20	6 040.20			0.00
Bosnia and Herzegovina	- 1.43				- 1.43
Botswana	5.16				5.16
Bulgaria	- 76.07				- 76.07
Cabo Verde	- 111.82				- 111.82
Cameroon	0.00				0.00
China: - Beijing	147 105.97	147 105.97			0.00
- Hong Kong	5 798.82	5 798.82			0.00
- Macau	- 37.55			- 37.55	0.00
Congo	- 6.46			- 6.46	0.00
Côte d'Ivoire	115.62	115.62			0.00
Croatia	106.39	106.39			0.00
Cyprus	0.00				0.00
Czechia	164.72	164.72			0.00
Denmark	482.65	482.65			0.00
Egypt	3 882.73	3 882.73			0.00
Equatorial Guinea	- 24.75	3 002.73		- 24.75	0.00
Estonia	- 0.04			21.73	- 0.04
Eswatini	0.70				0.70
Finland	1 344.62	1 344.62			0.00
France	24 882.74	24 882.74			0.00
Gabon	- 1.77	24 002.74		- 1.77	0.00
	- 20.39			- 1.//	- 20.39
Georgia		22 250 50			
Germany	33 258.58	33 258.58			0.00
Ghana	34.92	34.92			0.00
Greece	1 733.83	1 733.83			0.00
Hungary	4 567.15	4 567.15			0.00
Iceland	0.00				0.00
India	12 639.17	12 639.17			0.00
Indonesia	5 987.03	5 987.03			0.00
Iraq	- 457.98			- 457.98	0.00
Ireland	8 882.52	8 882.52			0.00
Israel	1 491.69	1 491.69			0.00
Italy	- 4.05				- 4.05
Jordan	921.23	921.23			0.00
Kazakhstan	2 350.47	2 350.47			0.00
Kenya	1 053.91	1 053.91			0.00
Kuwait	0.00				0.00
Kyrgyzstan	- 129.78				- 129.78

STATUS OF PAYMENTS OF THE ASSESSMENTS FOR 2023 AS AT 14 NOVEMBER 2024 cont.

(£ Sterling)

(£ Sterling)								
	Total amount	Amount			Unpaid			
	billed for 2023	Collected	Administrative	Application of credit balance	amount			
STATES	(SCRAG/23 Report, Appendix H)	as at 14 November 2024	Charges Applied	(or part of)	(excess paid) as at 14 November 2024			
Latvia	539.96	539.96	трриси	(or part or)	0.00			
Libya	276.74	276.74			0.00			
Lithuania	0.00	270.74			0.00			
Luxembourg	18 802.79	18 802.79			0.00			
Maldives	- 43.38	16 602.79			- 43.38			
Malta	42.18	42.10			0.00			
		42.18						
Mauritius	- 84.79			26.24	- 84.79			
Montenegro	- 36.34			- 36.34	0.00			
Morocco	1 811.16	1 811.16			0.00			
Namibia	- 41.25				- 41.25			
Netherlands	19 613.46	19 613.46			0.00			
Nigeria	474.33	474.33			0.00			
North Macedonia	- 29.89			- 28.66	- 1.23			
Norway	- 25.42				- 25.42			
Oman	- 570.31			- 12.64	- 557.67			
Pakistan	1 249.96	1 249.96			0.00			
Poland	1 195.02	1 195.02			0.00			
Portugal	3 713.20	3 713.20			0.00			
Qatar	56 912.10	56 912.10			0.00			
Republic of Moldova	118.97	118.97			0.00			
Romania	246.02	246.02			0.00			
Russian Federation	6 780.84				6 780.84			
Saudi Arabia	9 639.91	9 639.91			0.00			
Senegal	147.91	147.91			0.00			
Serbia	345.69	345.69			0.00			
Seychelles	0.00				0.00			
Slovakia	1.14				1.14			
Slovenia	- 57.87				- 57.87			
South Africa	- 935.79				- 935.79			
Spain	10 741.37	10 741.37			0.00			
Sweden	361.95	361.95			0.00			
Switzerland	5 167.06	5 167.06			0.00			
Tajikistan	- 72.52	3 107.00			- 72.52			
Thailand	- 7 464.56				- 7 464.56			
		267.05						
Tunisia	367.05	367.05			0.00			
Turkey	45 991.06	45 991.06			0.00			
Ukraine	- 600.18				- 600.18			
United Arab Emirates	38 006.91	38 006.91			0.00			
United Kingdom	8 950.79	8 950.79			0.00			
Uzbekistan	1 169.57	1 169.57			0.00			
Viet Nam	- 540.96				- 540.96			
Zimbabwe	0.00				0.00			
TOTAL	497 025.36	502 038.44	0.00	- 650.51	-4 362.57			

STATUS OF PAYMENT OF BALANCES FOR YEARS PRIOR TO 2023 AS AT 14 NOVEMBER 2024

OTLATED C	Balance due for years	Amount Collected as at	Administrative Charges	Application of credit balance	Unpaid amount (excess paid) as at
STATES	prior to 2023	01 November 2024	Applied	(or part of)	01 November 2024
Belarus	167.26				167.26
Democratic People's Republic of Korea	140.33				140.33
Eswatini*	13.85				13.85
Iran (Islamic Republic of)	14 548.16				14 548.16
Iraq	536.80				536.80
Russian Federation	11,935.61				11 935.61
Slovakia*	0.92				0.92
Syrian Arab Republic	2 266.26				2 266.26
Turkmenistan	1 228.35				1 228.35
TOTAL	30 837.54	0.00	0.00	0.00	30 837.54

^{*} As per SCRAG Conclusion 19/6, invoices under GBP 30 are not invoiced.

ESTIMATED COST SHARES AND ASSESSMENTS FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2025 *

	FOR THE PERIOD 1 JA	NUARY TO	J 31 DECEMBE		
	2023 Available Tonne-Kilometres in		Share of 2025	Share of Under-recovery	Amount to be
	Scheduled Services	Percentage	Estimated Costs	for 2023	Assessed for 2025
STATES	(000)	Cost Share	(£ Sterling)	(£ Sterling)	(£ Sterling)
Albania	40 094	0.006%	39.42	1.98	41.40
Algeria	1 128 287	0.180%	1 109.32	55.68	1 165.00
Armenia	455 121	0.072%	447.47	22.46	469.93
Australia	20 151 585	3.210%	19 812.74	994.49	20 807.23
Austria	7 309 060	1.164%	7 186.16	360.70	7 546.86
Azerbaijan	2 782 415	0.443%	2 735.63	137.31	2 872.94
Bahrain	4 134 089	0.658%	4 064.58	204.02	4 268.60
Belgium	6 051 136	0.964%	5 949.39	298.63	6 248.02
Bosnia and Herzegovina	0	0.000%	0.00	0.00	0.00
Botswana	703 178	0.112%	691.35	34.70	726.05
Bulgaria	111 339	0.018%	109.47	5.49	114.96
Cabo Verde	38 378	0.006%	37.73	1.89	39.62
Cameroon	23 555	0.004%	23.16	1.16	24.32
- Hong Kong	24 062 656	3.833%	23 658.05	1 187.50	24 845.55
- Macao	562 495	0.090%	553.04	27.76	580.80
Congo	30 273	0.005%	29.76	1.49	31.25
Côte d'Ivoire	191 435	0.030%	188.22	9.45	197.67
Croatia	194 691	0.031%	191.42	9.61	201.03
Cyprus	163 951	0.026%	161.19	8.09	169.28
Czechia	505 602	0.081%	497.10	24.95	522.05
Denmark	1 826 694	0.291%	1 795.98	90.15	1 886.13
Egypt	5 983 220	0.953%	5 882.61	295.27	6 177.88
Equatorial Guinea	6 883	0.001%	6.77	0.34	7.11
Estonia	0	0.000%	0.00	0.00	0.00
Eswatini	9 833	0.002%	9.67	0.49	10.16
Finland	5 200 290	0.828%	5 112.85	256.64	5 369.49
France	36 615 242	5.832%	35 999.57	1 806.97	37 806.54
Gabon	20 359	0.003%	20.02	1.00	21.02
Georgia	138 850		136.52	6.85	143.37
Germany	42 521 076		41 806.10	2 098.43	43 904.53
Ghana	23 019			1.14	
Greece	2 397 248			118.30	2 475.24
Hungary	11 339 158			559.59	11 708.08
Iceland	2 067 453			102.03	2 134.72
India	33 485 887		32 922.83	1 652.54	34 575.37
Indonesia	15 111 243		14 857.15	745.74	15 602.89
Ireland	25 487 632			1 257.82	26 316.88
Israel	3 991 765			196.99	4 121.63
Italy	4 356 089			214.97	4 497.81
Jordan	1 713 813			84.58	1 769.58
Kazakhstan	990 617	0.158%	973.96	48.89	1 022.85
Kenya	2 785 064		2 738.23	137.44	2 875.67
Kuwait	2 748 694		2 702.48	135.65	2 838.13
Kyrgyzstan	247 848			12.23	255.91
Latvia	987 688	0.157%	971.08	48.74	1 019.82

ESTIMATED COST SHARES AND ASSESSMENTS FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2025 *

	FOR THE PERIOD 1 JA 2023 Available	NUAKY IC) 31 DECEMBE	Share of	
STATES	Tonne-Kilometres in Scheduled Services (000)	Percentage Cost Share	Share of 2025 Estimated Costs (£ Sterling)	Under-recovery for 2023 (£ Sterling)	Amount to be Assessed for 2025 (£ Sterling)
Libya	420 189	0.067%	413.12	20.74	433.86
Lithuania	3 291	0.001%	3.24	0.16	3.40
Luxembourg	10 832 132	1.725%	10 649.99	534.57	11 184.56
Maldives	3 645	0.001%	3.58	0.18	3.76
Malta	503 492	0.080%	495.03	24.85	519.88
Mauritius	1 142 603	0.182%	1 123.39	56.39	1 179.78
Montenegro	38 339	0.006%	37.69	1.89	39.58
Morocco	4 301 549	0.685%	4 229.22	212.28	4 441.50
Namibia	8 461	0.001%	8.32	0.42	8.74
Netherlands	19 853 448	3.162%	19 519.62	979.77	20 499.39
Nigeria	388 802	0.062%	382.26	19.19	401.45
North Macedonia	0	0.000%	0.00	0.00	0.00
Norway	4 107 338	0.654%	4 038.27	202.70	4 240.97
Oman	3 925 930	0.625%	3 859.92	193.75	4 053.67
Pakistan	2 569 587	0.409%	2 526.38	126.81	2 653.19
Poland	3 346 447	0.533%	3 290.18	165.15	3 455.33
Portugal	7 250 387	1.155%	7 128.47	357.81	7 486.28
Qatar	49 146 984	7.828%	48 320.59	2 425.42	50 746.01
Republic of Moldova	209 901	0.033%	206.37	10.36	216.73
Romania	547 943	0.087%	538.73	27.04	565.77
Saudi Arabia	12 765 510	2.033%	12 550.86	629.98	13 180.84
Senegal	347 528	0.055%	341.68	17.15	358.83
Serbia	780 251	0.124%	767.13	38.51	805.64
Seychelles	59 580	0.009%	58.58	2.94	61.52
Slovakia	0	0.000%	0.00	0.00	0.00
Slovenia	0	0.000%	0.00	0.00	0.00
South Africa	1 918 821	0.306%	1 886.56	94.69	1 981.25
Spain	21 034 451	3.350%	20 680.76	1 038.06	21 718.82
Sweden	1 656 302	0.264%	1 628.45	81.74	1 710.19
Switzerland	10 799 491	1.720%	10 617.90	532.96	11 150.86
Tajikistan	251 259	0.040%	247.03	12.40	259.43
Thailand	13 882 468	2.211%	13 649.04	685.10	14 334.14
Tunisia	1 087 701	0.173%	1 069.41	53.68	1 123.09
Turkey	48 791 412	7.772%	47 971.00	2 407.87	50 378.87
Ukraine	0	0.000%	0.00	0.00	0.00
United Arab Emirates	76 267 400	12.148%	74 984.99	3 763.81	78 748.80
United Kingdom	47 619 244	7.585%	46 818.54	2 350.02	49 168.56
Uzbekistan	2 204 378	0.351%	2 167.31	108.79	2 276.10
Viet Nam	11 018 192	1.755%	10 832.92	543.75	11 376.67
Zimbabwe	39 128	0.006%	38.47	1.93	40.40
TOTAL	627 818 589	100.000%	617 262.00	30 983.00	648 245.00

^{*} Excludes exempted Least Developed Countries, States for which the access to SADIS is not operational and States which do not receive SADIS service.

AMOUNTS TO BE BILLED FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2025

(£ Sterling)

(£ Sterling)								
STATES	Adjustment for 2023 (SCRAG/25-WP/7)	Assessment for 2025 (Attachment A)	Deduction of Unused Credit Balance from Previous Years	Total Amount to be Billed for 2025				
Albania	3.16	41.40	- 44.56	0.00				
Algeria	475.00	1 165.00	41.30	1 640.00				
Armenia	275.73	469.93		745.66				
Australia	5 545.47	20 807.23		26 352.70				
Austria	716.31	7 546.86		8 263.17				
Azerbaijan	- 2 321.97	2 872.94	- 550.97	0.00				
Bahrain	411.76	4 268.60	- 330.97	4 680.36				
Belarus	0.00	0.00		0.00				
Belgium	- 1 250.40	6 248.02		4 997.62				
2								
Bosnia and Herzegovina	0.00	0.00		0.00				
Botswana	459.77	726.05		1 185.82				
Bulgaria	67.91	114.96	62.50	182.87				
Cabo Verde	23.17	39.62	- 62.79	0.00				
Cameroon	0.13	24.32	- 24.45	0.00				
China: - Beijing	- 24 394.19	0.00		- 24 394.19				
- Hong Kong	934.67	24 845.55		25 780.22				
- Macao	110.90	580.80		691.70				
Congo	6.64	31.25		37.89				
Côte d'Ivoire	- 67.85	197.67		129.82				
Croatia	- 0.65	201.03		200.38				
Cyprus	68.13	169.28	- 219.94	17.47				
Czechia	- 77.70	522.05		444.35				
Denmark	191.42	1 886.13		2 077.55				
Egypt	129.44	6 177.88		6 307.32				
Equatorial Guinea	1.75	7.11		8.86				
Estonia	0.00	0.00		0.00				
Eswatini	4.97	10.16		15.13				
Finland	514.28	5 369.49		5 883.77				
France	- 874.41	37 806.54		36 932.13				
Gabon	13.75	21.02	- 34.77	0.00				
Georgia	42.43	143.37		185.80				
Germany	- 4 043.35	43 904.53		39 861.18				
Ghana	- 16.75	23.77		7.02				
Greece	84.03	2 475.24		2 559.27				
Hungary	2 717.19	11 708.08		14 425.27				
Iceland	308.36	2 134.72	- 705.87	1 737.21				
India	5 859.42	34 575.37		40 434.79				
Indonesia	- 1 757.02	15 602.89		13 845.87				
Ireland	4 127.49	26 316.88		30 444.37				
Israel	416.47	4 121.63		4 538.10				
Italy	411.02	4 497.81		4 908.83				
Jordan	81.00	1 769.58		1 850.58				
Kazakhstan	- 1 303.60	1 022.85		- 280.75				
Kenya	269.76	2 875.67		3 145.43				
Kuwait	395.06	2 838.13		3 233.19				

AMOUNTS TO BE BILLED FOR THE PERIOD 1 JANUARY TO 31 DECEMBER 2025

(£ Sterling)

	(£ Ster	ling)		
	Adjustment for 2023	Assessment for 2025	Deduction of Unused Credit Balance from	Total Amount to be Billed
STATES	(SCRAG/25-WP/7)	(Attachment A)	Previous Years	for 2025
Kyrgyzstan	124.94	255.91		380.85
Latvia	80.72	1 019.82		1 100.54
Libya	32.51	433.86		466.37
Lithuania	1.91	3.40	- 5.31	0.00
Luxembourg	- 6 900.74	11 184.56		4 283.82
Maldives	- 20.95	3.76		- 17.19
Malta	167.95	519.88		687.83
Mauritius	395.88	1 179.78		1 575.66
Montenegro	25.65	39.58		65.23
Morocco	487.34	4 441.50		4 928.84
Namibia	5.53	8.74	- 14.27	0.00
Netherlands	- 5 538.70	20 499.39		14 960.69
Nigeria	- 175.77	401.45		225.68
North Macedonia	0.00	0.00		0.00
Norway	416.42	4 240.97		4 657.39
Oman	1 508.82	4 053.67		5 562.49
Pakistan	- 12.68	2 653.19		2 640.51
Poland	412.86	3 455.33		3 868.19
Portugal	483.07	7 486.28		7 969.35
Qatar	- 15 041.89	50 746.01		35 704.12
Republic of Moldova	- 23.48	216.73		193.25
Romania	- 78.05	565.77		487.72
Russian Federation	0.00	0.00		0.00
Saudi Arabia	- 1 551.33	13 180.84		11 629.51
Senegal	130.68	358.83		489.51
Serbia	171.16	805.64		976.80
Seychelles	0.77	61.52	- 62.29	0.00
Slovakia	- 1.29	0.00		- 1.29
Slovenia	- 2.66	0.00		- 2.66
South Africa	- 263.46	1 981.25		1 717.79
Spain	1 723.00	21 718.82		23 441.82
Sweden	119.57	1 710.19		1 829.76
Switzerland	571.00	11 150.86		11 721.86
Tajikistan	89.30	259.43		348.73
Thailand	5 926.04	14 334.14		20 260.18
Tunisia	240.23	1 123.09		1 363.32
Turkey	- 4 864.42	50 378.87		45 514.45
Ukraine	0.00	0.00		0.00
United Arab Emirates	1 119.02	78 748.80		79 867.82
United Kingdom	9 835.27	49 168.56		59 003.83
Uzbekistan	447.76	2 276.10		2 723.86
Viet Nam	4 316.24	11 376.67		15 692.91
Zimbabwe	9.08	40.40	- 49.48	0.00
TOTAL	- 17 074.00	648 245.00	- 1 774.70	629 396.30

AMENDMENT TO ANNEX I, SADIS SERVICES, TO THE SADIS AGREEMENT

SADIS SERVICES

SADIS Agreement Annex I.

Additions are shown with grey shading, whilst deletions are as a red strikethrough.

ANNEX I

SADIS SERVICES

(2022-2023-2024)

Note.— A glossary of abbreviations as used in this Annex is provided at the end of the Annex.

1. Internet based (FTP) and API services

Products available on SADIS:

- a) distribution of WAFS upper-air forecasts in GRIB2 code form;
- b) distribution of WAFS SIGWX forecasts in BUFR code form;
- c) distribution of WAFS SIGWX forecasts in PNG chart form;
- d) distribution of OPMET information in alphanumeric format (METARs, TAFs, SIGMET, special AIREPs, volcanic ash advisories, tropical cyclone advisories and space weather advisories) from those regions whose OPMET information is needed to satisfy approved requirements in the regions served by SADIS;
- e) distribution of OPMET information in IWXXM format (METARs, TAFs, SIGMET, AIRMET, volcanic ash advisories, tropical cyclone advisories and space weather advisories) from those States who are distributing their data internationally via the Regional Opmet Centres;
- f) distribution of meteorological information in graphical format (e.g. Volcanic Ash Graphics).

Note: Detailed descriptions are contained within the SADIS User Guides (Parts 1 and 2) of the service.

2. Collection service

- a) collection of OPMET information by the SADIS Gateway from States in accordance with approved requirements stated by PIRGs and actioned by Meteorological Operations Working Group (WG-MOG/SADIS);
- b) monitoring, validation and repair of data received at the SADIS Gateway to the required standards, for the provision of real-time scheduled reports and for off-line quality control analysis.

3. Back-up service

The recognised back-up to failure of the SADIS FTP service is via the USA administered, WAFS Information File Service (WIFS). SADIS FTP users are encouraged to arrange back-up accounts with the WIFS provider via https://aviationweather.gov/wifs/.

Note 1: - Usage restrictions apply. Further information is provided in the SADIS User Guides Part 1 (Administrative).

Note 2: - It is the responsibility of the SADIS FTP user to arrange and test back-up accounts with WIFS.

4. User support service

- a) 24-hour help line/faults desk;
- b) dissemination of administrative messages, including amendments to bulletin headers given in the SADIS User Guide (Parts 1 and 2).

5. File transfer protocol service Connection to SADIS

Two versions of SADIS are in operation

The SADIS FTP has a more limited selection of WAFS gridded data sets, the T+24 SIGWX products, and OPMET data. Provision of facilities dedicated to establishing and receiving an FTP connection, using password protected access, to the SADIS FTP server that enables the transfer of WAFS upper air forecasts in GRIB code, WAFS SIGWX forecasts in BUFR code, WAFS SIGWX forecasts in PNG chart form and OPMET data over the Public Internet. The FTP service implements Digital Signatures and Digital Certificates are used to confirm data integrity and authenticity of the data.

The SADIS API is a SWIM compliant API which uses the Open Geospatial Consortium Environmental Data Retrieval framework to deliver the full WAFS gridded and multi timestep SIGWX data sets as well as OPMET data. The API confirms to the EUROCONTROL SWIM Yellow Profile, and access is controlled by secure OAuth2 authentication.

6. Fair Use of SADIS Products

- The use of SADIS is continually monitored to ensure the volume of data being downloaded is not excessive and does not impede the operation of the SADIS FTP Servers;
- b) A user who is responsible for >10% of the total volume of data being downloaded from SADIS FTP Server in a single week will be considered as excessive usage;
- Users of the SADIS API are subject to a daily cap in the number of data requests that can be made;
- d) If users are deemed to be excessively downloading data then the SADIS Manager will contact the user with a request to the use to reduce the volume data being downloaded. The SADIS Manager may at their discretion, limit or terminate access to the SADIS FTP server without recourse to the user if the excessive use continues.

7. Security

a) The SADIS FTP server systems will be continually monitored for lawful security purposes;

- b) Users are not permitted to share passwords or API authentication credentials and are responsible for keeping these passwords secure;
- c) The SADIS Manager reserves the right to suspend or terminate a user's access to the SADIS FTP Server if the obligations set out in 6b, 6d, 7b or the SADIS API licence agreement the users use of the system or the user has failed to observe the obligations of 7 b) has resulted or is likely to result in an increased risk to security of the SADIS FTP Server;
- d) The SADIS Manager reserves the right to restrict access to the SADIS FTP Server systems in the event of a security threat and users acknowledge that access to the SADIS FTP Server systems may be restricted or unavailable until such time the security threat has been resolved.

Glossary of abbreviations

API	Application Programming Interface
BUFR	Binary Universal Form for the Representation of meteorological data (code)
FTP	File Transfer Protocol (Internet based)
GRIB2	Gridded binary edition 2 (code)
IWXXM	The ICAO Meteorological Information Exchange Model is a data format for reporting aviation weather information in XML/GML format
METAR	Routine aviation weather report in code form
METP	Meteorology Panel
OPMET	Operational meteorological (information or data)
PIRG	ICAO planning and implementation regional group
PNG	Portable Network Graphics (image format)
SADIS	Secure Aviation Data Information Service
SADIS FTP	Internet based provision of SADIS
SADIS Gateway	The United Kingdom message-handling system which receives data from the Aeronautical Fixed Service for transmission on SADIS
SADISOPSG	SADIS Operations Group. Tasked with the oversight of SADIS until its dissolution in 2015. Superseded by Meteorological Operations Working Group (WG-MOG) under the Meteorology Panel (METP). Reference retained for historical purposes.
SIGMET	Information of specified en-route weather phenomena which may affect the safety of aircraft operations
SIGWX	Significant weather
SWIM	System Wide Information Management
TAF	Aerodrome forecast in code form
WAFS	World area forecast system
WG-MOG	The oversight of the SADIS service is undertaken by the Meteorological Panel (METP) which has tasked Met Operations Group (WG-MOG/SADIS) to carry out this responsibility, each year they meet to ensure the service is meeting the users needs.

AMENDMENT TO ANNEX II, SADIS INVENTORY, TO THE SADIS AGREEMENT

SADIS Agreement Annex II.

Additions are shown with grey shading, whilst deletions are as a red strikethrough.

ANNEX II

SADIS INVENTORY

(2022-2023-2024)

The inventory items identified below cover the equipment and staffing required to provide, operate and maintain the Secure Aviation Data Information Service (SADIS). The inventory includes: communications circuits, communications back-up system, procured services, and staff. It should be noted that some equipment items form part of a wider infrastructure. Costs of some individual items cannot be separated from the required infrastructure that includes a significant part of the development of the software and technical configuration. The inventory is in accordance with the SADIS User Guide.

1. EQUIPMENT

A. Key components of SADIS FTP infrastructure and communications circuits

SADIS infrastructure consists of the following:

i) Solely procured for SADIS (major components)

NIL - SADIS FTP and SADIS API operates primarily on cloud infrastructure

Note: In November 2019 SADIS FTP was migrated to use Amazon Web Services infrastructure (see Section 2A) which is a procured service.

ii) Not procured principally for SADIS

- a) Met Office Message switch (MetSwitch): routes data to the operational FTP service;
- b) NATS SADIS gateway function software (developed specifically for the gateway as part of the NATS CoreMet system);
- c) Met Office operational monitoring software;
 - Note. This enables the operational monitoring of the SADIS FTP service and ensures problems can be identified and resolved in a timely manner.
- d) Met Office Service Desk equipment;

B. SADIS data back-up system

The recognised back-up for SADIS FTP in the event of a failure is via the USA administered, WAFS Information File Service (WIFS). The recognised back-up for SADIS API is the WIFS API. SADIS FTP users are encouraged to arrange back-up accounts with the WIFS provider via https://aviationweather.gov/wifs/.

Note 1: - Usage restrictions apply. Further information is provided in the SADIS User Guides Part 1 (Administrative)

Note 2: - It is the responsibility of the SADIS FTP-user to arrange and test back-up accounts with WIFS

2. PROCURED SERVICES

A. Amazon Web Services (AWS) elements used by the Met Office in the operation of SADIS FTP:

AWS Service	Specification	Quantity	What the service is used for:	
EC2	t3.medium 2* vCPU (Intel Xeon Platinum 8000 series) 4 GiB Memory Network Bandwidth: ≤5Gbps; EBS Bandwidth ≤1.50 Gbps)	2	2* FTP Server and	
S3	N/A	14	Data ingestion; data storage; data egress; large data store; logging and reporting.	
DynamoDB	3x Table	3	Stores incoming TAC and IWXXM reports as well as information needed WAFS data report compilation	
Route53	N/A	1	DNS	
Lambda	N/A	N/A	Various Serverless Functions used for the following: data debatch; concatenate and sign; packaging IWXXM data; logging; reporting; alerting; housekeeping.	
Cloudwatch	N/A	N/A	Log Aggregation	
NAT Gateway	N/A	1	Access	
VPC	N/A	1		
Kinesis Data Stream	N/A	1	Log Entry Routing	
Kinesis Firehose	N/A	2		

B. Amazon Web Services (AWS) elements used by the Met Office in the operation of SADIS API:

AWS Service	Quantity	What the service is used for:
Route53	2	DNS
CloudFront	4	CDN - Caching of assets at edge locations to enable efficient data transfer
		to end users
CloudWatch	N/A	Log Aggregation; Alerts; Dashboards
API Gateway	2	User Auth and Auth provision; API request handling
SNS	20	Monitoring; data ingest; data egress
SQS	N/A	Monitoring; data ingest; data egress; DLQs,
AWS Certificate	1	Certificate provider for Route53
Manager		
S3	18	Data ingestion; data storage; data egress; archiving; logging and reporting.

Lambda	4	Query executor and builder; response generator; archiving Various Serverless Functions used for: fetching files via pre-signed url; logging; reporting; alerting; authentication; data ingestion; pre-signed url generation; packaging data; data debatch; concatenate and sign;
AWS Secrets Manager (SSM)	N/A	Configuration
DynamoDB	4 x Table	Storage of incoming OPMET reports (and multi-part bulletins) ready for processing
EventBridge Rule	28	Used to trigger Lambdas.

C. NATS Gateway function:

- i) Communication circuits between Met Office and NATS infrastructure site; and
- ii) System maintenance.

3. ANNUAL STAFF REQUIREMENTS

A. Met Office

i) First Line Support

Help Desk Skill

1. Service desk (first point of contact) enquiries

Incident Management and customer

Note.— The Service Desk acts as a first point of contact for all inquiries, including those concerning the OPMET Gateway function. Complex inquiries will be passed to a relevant expert. Experts are available either on a 24-hour rota basis, or as a daytime support with limited on-call capability

ii) Second Line Support

24-hour IT Operations support

Skill

Shift Leader (ITCS)
 handling
 Networks Incident Manager (NIM)
 Technical Supervisor, incident
 Service Continuity, system monitoring

iii) Third and Fourth Line Support

Normal working hours support and "best endeavors"

Skill

1. Message Switching ManagerIncident handling, server adjustments2. Message Switching StaffIncident handling and account changes3. AWS Technical SupportAWS expertise, support and guidance

iv) Additional support

Day support Resource

Administrator
 International aviation management
 International aviation management
 Staff-days of senior stakeholder relationship manager (SADIS manager)
 Staff-days of aviation business head
 Contract procurement and management
 Staff-days of senior procurement manager
 Invoice Administration
 Staff-days of finance assistant and

B. NATS infrastructure site – Data Services (OPMET Gateway function)

Note 1.—Data Services provide the OPMET Gateway function, which is provided from a single operational site, but with a full capability at an alternative site. Staff are available either on a 24-hour basis, or as a daytime support with on-call capability.

Note 2. — The resource demand to provide the SADIS Gateway service is the standard required staff days needed to provide the SADIS service. It comprises 6 watches providing the H24 element of the service and day support administrative staff. The cost recovery NATS submits to the SCRAG will represent actual staff-days required to provide the service

Role and Responsibilities

Resource

8 staff-days of senior finance manager

1. Operational Staff

521 staff-days per annum

- Operational Staff relates to the H24 function in ROC LONDON. Monitor, validate, record & report on issues raised through the SADIS Gateway operation.
- 2. Engineering Staff

20 staff-days per annum

- Engineering Staff includes the duties carried out by the Engineering Day support team and an H24 engineers for the support of SADIS.
- 3. Administration Staff

63 staff-days per annum

- The Administration Office carries out the documentation creation and amendments, adaptation changes, investigations and meeting attendance of the SADIS Gateway operation.

C. Bought-in services

Additional support and maintenance agreements with third parties are in place to provide additional third line AWS support of the SADIS FTP services.