SCRAG/25 WP/9
12/11/24

SADIS COST RECOVERY ADMINISTRATIVE GROUP

TWENTY-FIFTH MEETING

(Virtual Meeting, 3 December 2024)

ESTIMATED SADIS COSTS : 2 to 5 YEARS

(Presented by the United Kingdom)

REFERENCES
SADIS Agreement
SCRAG Reports 1-21
METP WG-MOG/3 Report
METP WG-MOG/4 Report
METP WG-MOG/6 Report
METP WG-MOG/10 Report
METP WG-MOG/13 Report
METP WG-MOG/15 Report
METP WG-MOG/18 Report
METP WG-MOG/22 Report
METP WG-MOG/26 Report

1. INTRODUCTION

1.1 The medium term (two to five years) forecast of the expected costs of operating the SADIS Services are provided in this Working Paper. Resource requirements will vary due to changing demand and these have been anticipated where possible and identified in the tables presented. Where the METP WG-MOG has identified potential changes to the SADIS inventory, these will be reflected as appropriate.

2. DISCUSSION

2.1 The attached Table 1 and 2 identifies expected budgets for the years 2025 to 2028 based on expected trends for expenditure by the Met Office and NATS. 2023 actual costs and 2024 forecast costs are provided for comparison, as requested by the SCRAG/12 meeting.

2.2 The WAFS gridded data and OPMET elements of the SADIS API became operational on 19 March 2024, and the WAFS SIGWX part will become operational in February 2025. Cost projections for the API elements are based on assumptions about exactly what different organisations will download, and how quickly organisations will set up their systems to use the API, but it is hoped that they will give a good measure of likely costs.

2.3 It should be noted that the existing SADIS FTP system is not, and cannot be made to be SWIM compliant, something that is a fundamental requirement of the ICAO Global Air Navigation Plan (GANP) in its Aviation System Block Upgrades, in particular AMET-B2/4 and AMET-B3/4. These require meteorological information to be fully integrated into the SWIM environment by supporting request/reply or publish/subscribe access mechanisms.

2.4 It should be noted that even if had been possible to simply add the new, much larger WAFC gridded data sets to the current FTP, there would be a large increase in its annual operating costs, of similar magnitude (or larger) to the new SADIS API operating costs. The new WAFC London data sets are 200 times larger than the existing data sets (12GB compared to 0.07 GB for a full set), and in addition the system publishes the WAFC Washington data sets (so >400 times larger overall).

2.5 There will of course be a period of dual running with the old and new systems, and it is expected that costs for operating the SADIS FTP will decrease through time as users migrate to use the SADIS API.

2.6 The following notes should be read in conjunction with Table 1 which is contained in the Appendix to this WP, and relates to Met Office costs.

a. AWS server running costs for SADIS FTP

The cost of operating SADIS FTP using Amazon Web Services (AWS) cloud computing reflects all the individual elements that make up SADIS.

The cost increased in 2024 as the 1.25 degree hazard data sets were retired in November 2023, and optimisation work was carried out n the system. Operating costs are expected to hold steady through 2025 then decrease as more and more users migrate to use the newer SADIS API.

b. SADIS API running costs

The cost projections for each of the three SADIS API elements are shown separately. The SADIS provider has worked out likely user downloading profiles, and then forecast the number of users over time.

The costs relate to the user authentication part of the system (for which the cost relates to the number of requests for data made by the users) and then a background operating cost for the data distribution part of the system.

c. First Line Support Costs

This includes 24x7 incident handling functions (call and e-mail) provided by the Met Office Service Desk. A set figure is estimated for each year, but will ultimately depend on the actual number of incidents handled.

d. Second Line Support

This includes 24x7 system monitoring and incident handling functions to ensure the timely resolution of any SADIS operating problems. For each year the initial estimate is shown, but the exact figure will relate to the number of incidents handled.

e. Third and Fourth Line Support

This includes incident investigation and resolution provide by the development team that supports SADIS. For each year the initial estimate is as shown in the table below, but the exact figure will relate to the number of incidents handled. Support costs are maintained at a steady level from 2025 onwards, and apply to both the SADIS API and the SADIS FTP.

f. Administration support staff cost

Support is primarily provided by the SADIS Manager in the day to day operation of SADIS, management of user accounts, liaison with users, invoicing and planning and development work within the remit of the METP-WG/MOG (SADIS). Procurement and Finance support is required to implement the SADIS Cost Recovery process (SCRAG).

g. Travel Costs

Travel and subsistence costs for Met Office staff to attend appropriate Meteorological Panel Working Groups (Meteorological Operations Group, WG-MOG, in relation to SADIS) and SCRAG meetings are included here. The MOG meeting in 2025 is expected to be held in the United States and future meetings could also be held away from the United Kingdom.

h. Cost of Capital

Cost of capital for future years has been estimated using the revised methodology applied in 2008 and described in SCRAG/10 WP/13. It is increasing as the part of the cost that relates to satellite assets is increasing.

i. Administrative costs (bank charges, couriered invoices etc)

Following SCRAG Conclusion 14/7, this item includes costs relating to the processing of invoices (usually when administration charges reduce the amount actually received by the SADIS Provider by a small amount), or the cost of couriered invoices where normal surface mail is unreliable.

2.7 Notes on SADIS Gateway costs.

j. NATS gateway costs

The NATS SADIS Gateway Costs are as described in SCRAG19-WP/16 and were simplified for future NATS gateways costs.

k. Travel Costs

Travel and subsistence costs for NATS staff to attend appropriate Meteorological Panel Working Groups (Meteorological Operations Group, WG-MOG, in relation to SADIS) and SCRAG meetings are included here.

l. T&RE

2.6 Notes on CAA and ICAO costs

m. CAA Administration costs

This encompasses Met Authority Regulatory oversight and travel costs that relate to the SCRAG meetings.

n. ICAO Administration costs are detailed in WP/8

3. CONCLUSIONS

3.1 Operating costs from the Met Office will increase from 2025 onwards as the SIGWX part of the SADIS API becomes operational, and more users start using the SADIS API system (it is attracting new organisations who never used the SADIS FTP). The new SADIS API system modernises the SADIS provision making it SWIM compliant and future proofs SADIS provision for many years to come.

3.2 It should be noted that 15 years ago the annual SADIS operating cost (when there was a satellite based SADIS and also the first SADIS FTP) reached a peak of GBP 680,000 per year, and operating costs have been decreasing ever since. Introduction of the new SADIS API system will increase the operating costs once more, but will also allow a much, much larger data WAFS gridded set to be made available to users, while giving them the ability to sub-set the data so that it suits their needs better, and it will be SWIM compliant.

4. ACTION

4.1 The SCRAG/25 is requested to note these provisional figures for the SADIS Costs.

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SCRAG/25 WP/9 Annex 1.

TABLE 1: UKMO Cost and manpower resource projections 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								
1. Equipment								
Not procured principally for SADIS								
AWS Server running costs for SADIS FTP	a		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	b		-	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								
	c	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
	e	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	j	Air Traffic Services Asst.	256,525	261,699	276,092	282,994	289,503	295,583
Engineering Staff	j	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**	**346,421**
	k	Maintenance	10,209	10,745	11,145	11,424	11,686	11,931
	l	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**	**360,176**
3 **CAA Administration Costs**	m		**0**	**0**	**1,000**	**1,000**	**1,000**	**1,000**
4 **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**	**658,476**

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