



Performance Review Body Monitoring Report

Greece - 2023

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TABLE OF CONTENTS

1	OVERVIEW	3
1.1	Contextual information	3
1.2	Traffic (En route traffic zone)	3
1.3	Safety (Main ANSP)	4
1.4	Environment (Member State)	4
1.5	Capacity (Member State)	5
1.6	Cost-efficiency (En route/Terminal charging zone(s))	6
2	SAFETY - GREECE	6
2.1	PRB monitoring	6
2.2	Effectiveness of Safety Management (EoSM) (KPI#1)	7
2.3	Safety occurrences	7
2.4	Use of automated safety data recording system (ASDRS) (PI#3)	8
3	ENVIRONMENT - GREECE	9
3.1	PRB monitoring	9
3.2	En route performance	9
3.3	Terminal performance	10
3.4	Civil-Military dimension	11
4	CAPACITY - GREECE	12
4.1	PRB monitoring	12
4.2	En route performance	13
4.3	Terminal performance	15
5	COST-EFFICIENCY - GREECE	17
5.1	PRB monitoring	17
5.2	En route charging zone	18
5.3	Terminal charging zone	21

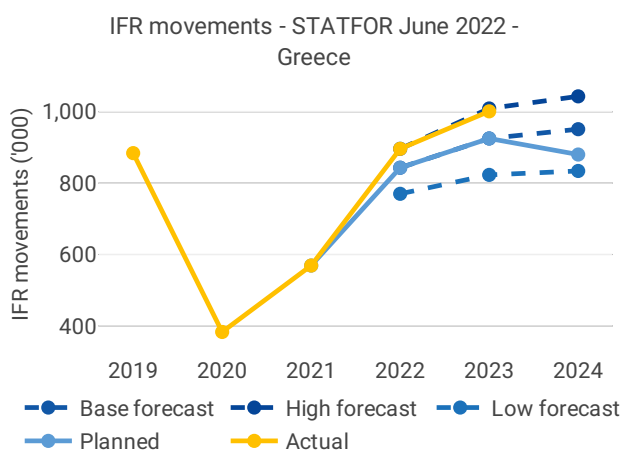
1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/2421 of 5 December 2022

List of ACCs 2	Exchange rate (1 EUR=)	Main ANSP
Athens ACC	2017: 1 EUR	• HASP
Makedonia ACC	2023: 1 EUR	
No of airports in the scope of the performance plan:	Share of Union-wide:	Other ANSPs
• ≥80'K 1	• traffic (TSUs) 2023 6.0%	—
• <80'K 0	• en route costs 2023 2.5%	MET Providers
	Share en route / terminal costs 2023 88% / 12%	• HNMS
	En route charging zone(s)	
	Greece	
	Terminal charging zone(s)	
	Greece	

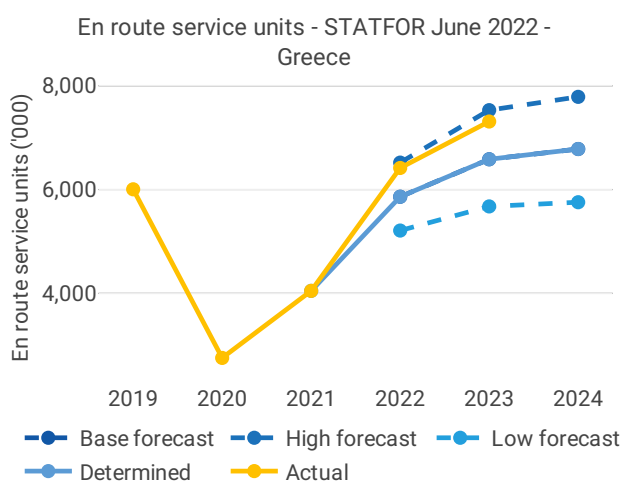
1.2 Traffic (En route traffic zone)



- Greece recorded 1,001K actual IFR movements in 2023, +12% compared to 2022 (896K).

- Actual 2023 IFR movements were +8.2% above the plan (925K).

- Actual 2023 IFR movements are +13% above the actual 2019 level (884K).



- Greece recorded 7,311K actual en route service units in 2023, +14% compared to 2022 (6,416K).

- Actual 2023 service units were +11% above the plan (6,584K).

- Actual 2023 service units are +22% above the actual 2019 level (6,005K).

1.3 Safety (Main ANSP)



- HASP achieved RP3 EoS M targets in four management objectives but is required to improve in the safety risk management area. This is in line with its planned maturity levels.

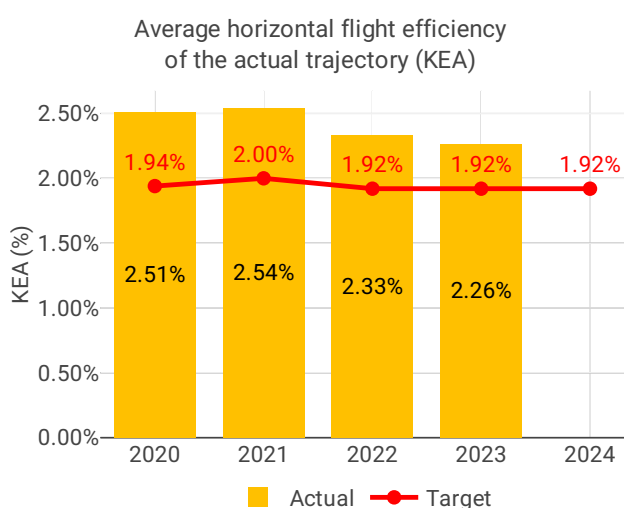
- Over 2023, HASP implemented improvements related to reporting and investigation occurrences.

- Greece recorded a significant increase in the rate of runway incursions and a minor increase of the rate of separation minima infringements in 2023. The occurrences and the effectiveness of mitigations were closely monitored and analysed by the NSA.

ing systems.

- HASP does not use automated safety data record-

1.4 Environment (Member State)



- Greece achieved a KEA performance of 2.26% compared to its target of 1.92% and did not contribute positively towards achieving the Union-wide target.

- The NSA states that the target was missed mainly due to military activity, adverse weather phenomena and high levels of traffic.

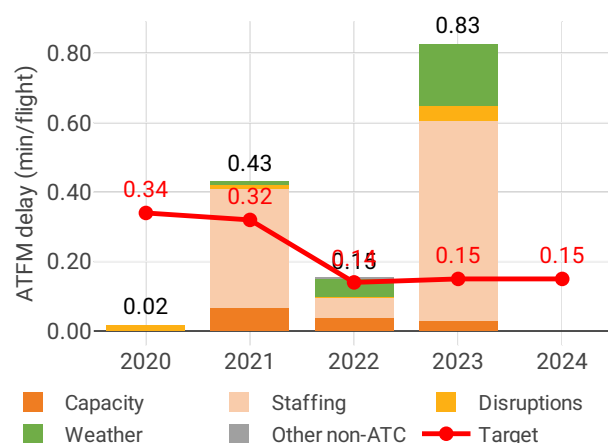
- Both KEP and SCR improved in comparison with 2022 and, according to the NSA, this is mainly because HASP implemented FRA H24 in 2023. Despite the KEA target being missed, the improvement in SCR shows that Greece has improved the environmental efficiency of its airspace when accounting for impacts outside of its control.

- The share of CDO flights increased marginally from 42.86% to 43.31% in 2023.

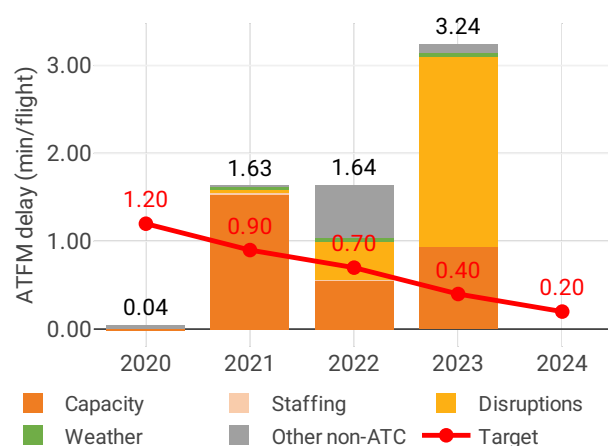
- During 2023, additional time in terminal airspace increased from 1.37 to 1.44 min/flight, while additional taxi out time decreased from 3.18 to 2.85 min/flight.

1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



Average arrival ATFM delay per flight by delay groups



- Greece registered 0.84 minutes of average en route ATFM delay per flight during 2023 which has been adjusted to 0.83 during the post-ops adjustment process, thus not achieving the local target value of 0.15. Delays in Greece increased by 0.67 minutes per flight year-on-year.

- Delays were highest between April and July, mostly driven by ATC staffing and adverse weather conditions.

- The share of delayed flights with delays longer than 15 minutes in Greece decreased by 5 p.p. compared to 2022 and was lower than 2019 values.

- The average number of IFR movements was 13% above 2019 levels in Greece in 2023.

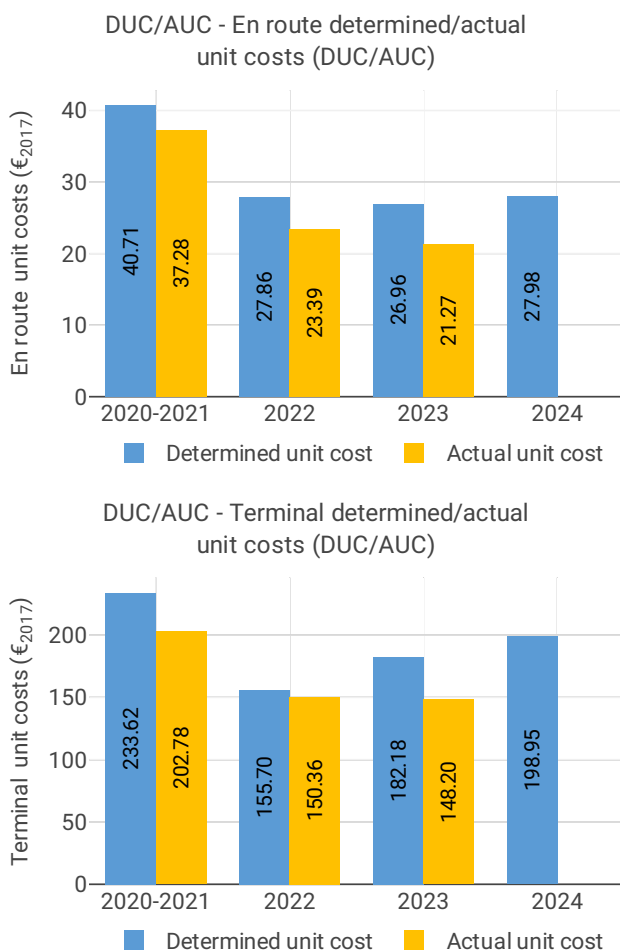
- The number of ATCOs in OPS is expected to increase by 33% by 2024, with the actual value being below the 2023 plan in Athens by 86 FTEs.

- The yearly total of sector opening hours in Greece was 54,081, showing a 1.2% decrease compared to 2022. Sector opening hours are 5.3% below 2019 levels.

- Greece registered 17.61 IFR movements per one sector opening hour in 2023, being 18.1% above 2019 levels.

- Year-on-year traffic growth was at 12% in Greece, with IFR movements being 19% above the STATFOR 2021 October Base forecast. Some aspects of capacity provision improved compared to 2022, but the significant lack of ATCOs resulted in a capacity gap in 2023. Greece will have to resolve ATCO recruitment and training issues, as well as carry out the long-planned overhaul of the ATM system to close the capacity gap.

1.6 Cost-efficiency (En route/Terminal charging zone(s))



- The en route 2023 actual unit cost of Greece was 21.25 €2017, -21% lower than the determined unit cost (26.96 €2017). The terminal 2023 actual unit cost was 148.20 €2017, -19% lower than the determined unit cost (182.18 €2017).

- The en route 2023 actual service units (7.3M) were +11% higher than the determined service units (6.6M).

- The en route 2023 actual total costs were -26 M€2017 lower (-15%) than determined (not considering the determined exceptional items relating to 2021), marking an underspend across all cost categories. The largest reduction was in staff costs (-16 M€2017, or -12%), followed by significantly lower depreciation costs (-6.3 M€2017, or -73%), other operating costs (-2.4 M€2017, or -7.6%), and cost of capital (-2.2 M€2017, or -60%). The NSA did not provide sufficient explanations for these results. The PRB recommends that the NSA submit an updated Additional Information to the Reporting Tables, providing more comprehensive explanations for the differences between the actual and determined costs in each cost category. The PRB highlights that the actual number of ACC ATCOs in OPS FTEs for HASP were -31% below plan.

- HASP spent 1.4 M€2017 in 2023 related to costs of investments for both en route and terminal charging zones, -87% less than determined (8.9 M€2017), due to postponed investment projects. The NSA did not provide explanations for the non-implementation of the three new major investments that were scheduled for 2023. As for the previous monitoring year, the discrepancies regarding costs of investments were significant.

- The en route actual unit cost incurred by users in 2023 was 26.91€ (-6.3% below the 2023 DUC), while the terminal actual unit cost incurred by users was 148.21€ (-24% below the 2023 DUC). The difference between the AUCU and the DUC in terminal charging zone is primarily attributed to the loss of revenue relating to the application of a lower unit rate, which amounted to -5.4 M€.

- The en route regulatory result for HASP amounted to +21 M€, or 12% of the 2023 revenue. This may indicate that the airspace users are charged for costs which have not materialised in 2023.

- The PRB will take into consideration the implementation of the RP3 performance plans when assessing the RP4 cost-efficiency targets and urges Greece to take immediate, adequate, and proportionate action to implement the relevant ATCO and investment plans committed to in the RP3 performance plan.

2 SAFETY - GREECE

2.1 PRB monitoring

- HASP achieved RP3 EoS targets in four management objectives but is required to improve in the safety risk management area. This is in line with its planned maturity levels.

- Over 2023, HASP implemented improvements related to reporting and investigation occurrences.

- Greece recorded a significant increase in the rate of runway incursions and a minor increase of the rate of separation minima infringements in 2023. The occurrences and the effectiveness of mitigations were closely monitored and analysed by the NSA.
- HASP does not use automated safety data recording systems.

2.2 Effectiveness of Safety Management (EoSM) (KPI#1)



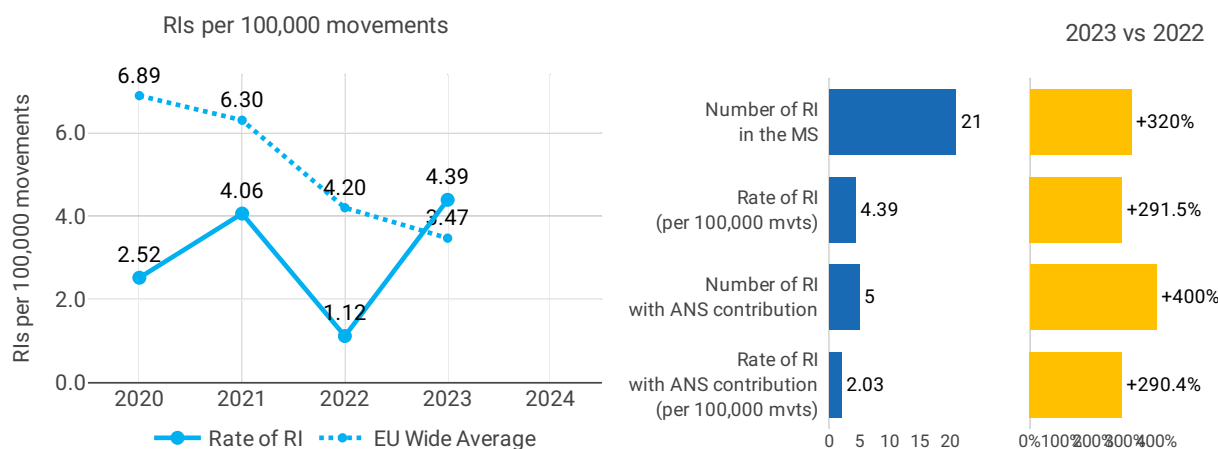
Focus on EoSM

Four out of five EoSM components of the ANSP meet already the RP3 target level. No improvements were observed over 2023, but only “Safety Risk Management” component is below 2024 target level. Three questions are to be improved to reach the RP3 target level.

Detailed information on Safety performance monitoring for the year 2023 are included in Performance Review Body Monitoring Report 2023, Annex I – Safety report

2.3 Safety occurrences

2.3.1 Rate of runway incursions (RIs) (PI#1)



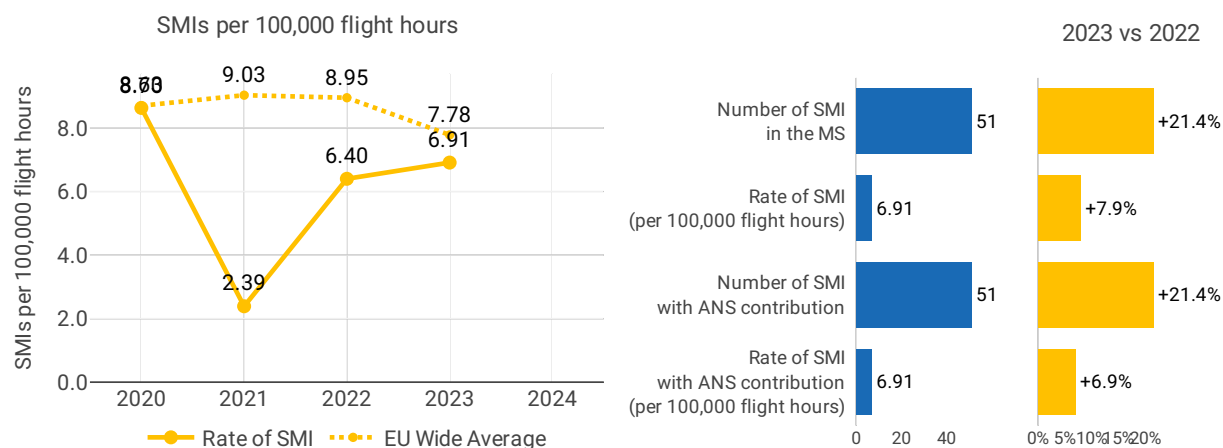
Rate of RIs per 100,000 airport movements - Greece

#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Athinaï-Eleftherios Venizelos	246,513	5	2.03

Focus on runway incursions

Detailed information on Safety performance monitoring for the year 2023 are included in Performance Review Body Monitoring Report 2023, Annex I – Safety report

2.3.2 Rate of separation minima infringements (SMIs) (PI#2)



Rate of SMI with ANS contribution per 100,000 flight hours

#	ANSP	Flight hours					Number of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	HASP	276,276	418,381	650,415	738,472	NA	24	31	42	51	NA

#	ANSP	Rate of SMI per 100,000 flight hours					% variation in rate of SMIs				
		2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
1	HASP	8.7	2.4	6.5	6.9	NA	NA	-72%	+170%	+7%	NA

Focus on separation minima

Detailed information on Safety performance monitoring for the year 2023 are included in Performance Review Body Monitoring Report 2023, Annex I – Safety report

2.3.3 Quality of occurrences reporting

Detailed information on Safety performance monitoring for the year 2023 are included in Performance Review Body Monitoring Report 2023, Annex I – Safety report

2.4 Use of automated safety data recording system (ASDRS) (PI#3)

2023	
For RIs	For SMIs
X	X

Detailed information on Safety performance monitoring for the year 2023 are included in Performance Review Body Monitoring Report 2023, Annex I – Safety report

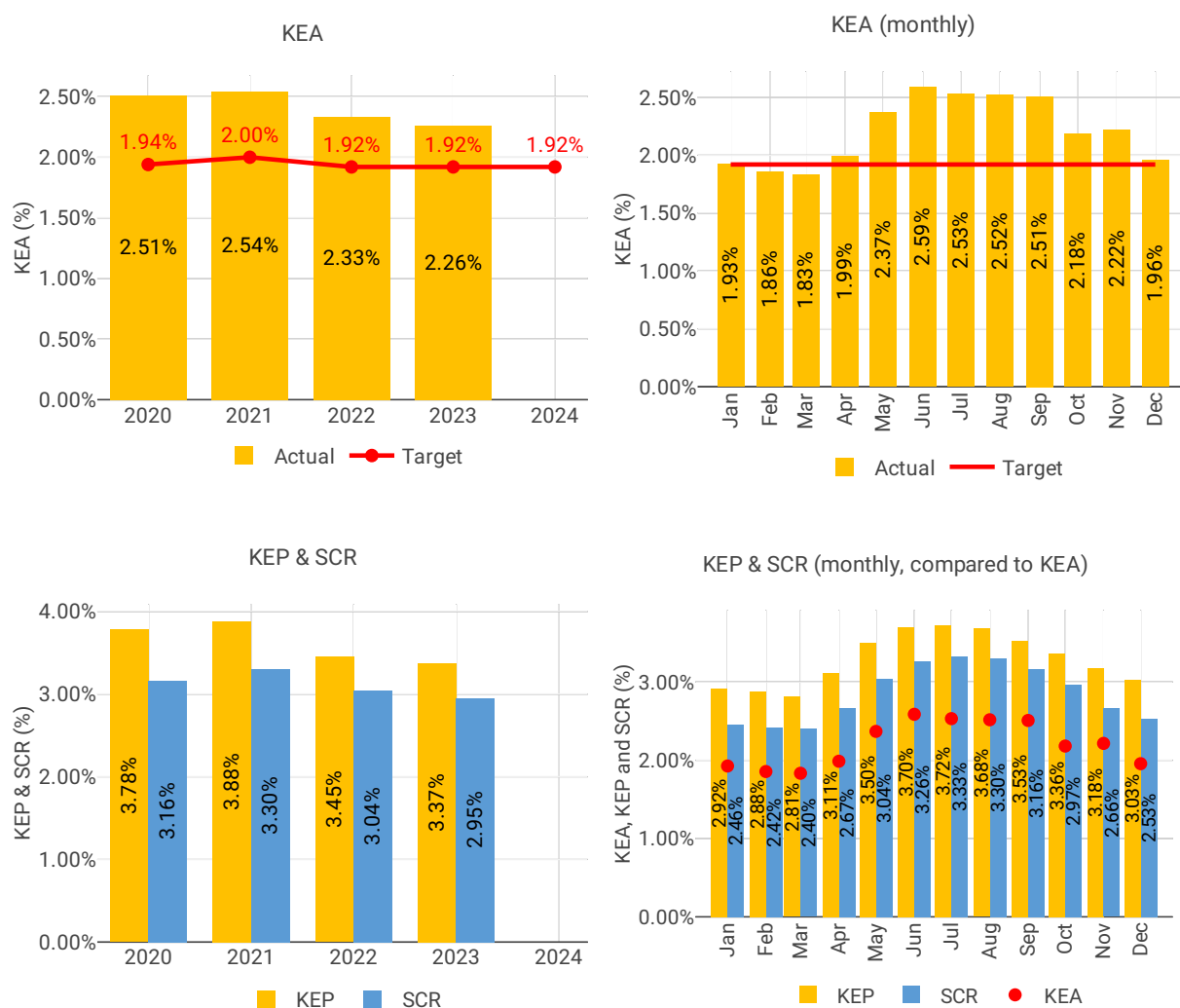
3 ENVIRONMENT - GREECE

3.1 PRB monitoring

- Greece achieved a KEA performance of 2.26% compared to its target of 1.92% and did not contribute positively towards achieving the Union-wide target.
- The NSA states that the target was missed mainly due to military activity, adverse weather phenomena and high levels of traffic.
- Both KEP and SCR improved in comparison with 2022 and, according to the NSA, this is mainly because HASP implemented FRA H24 in 2023. Despite the KEA target being missed, the improvement in SCR shows that Greece has improved the environmental efficiency of its airspace when accounting for impacts outside of its control.
- The share of CDO flights increased marginally from 42.86% to 43.31% in 2023.
- During 2023, additional time in terminal airspace increased from 1.37 to 1.44 min/flight, while additional taxi out time decreased from 3.18 to 2.85 min/flight.

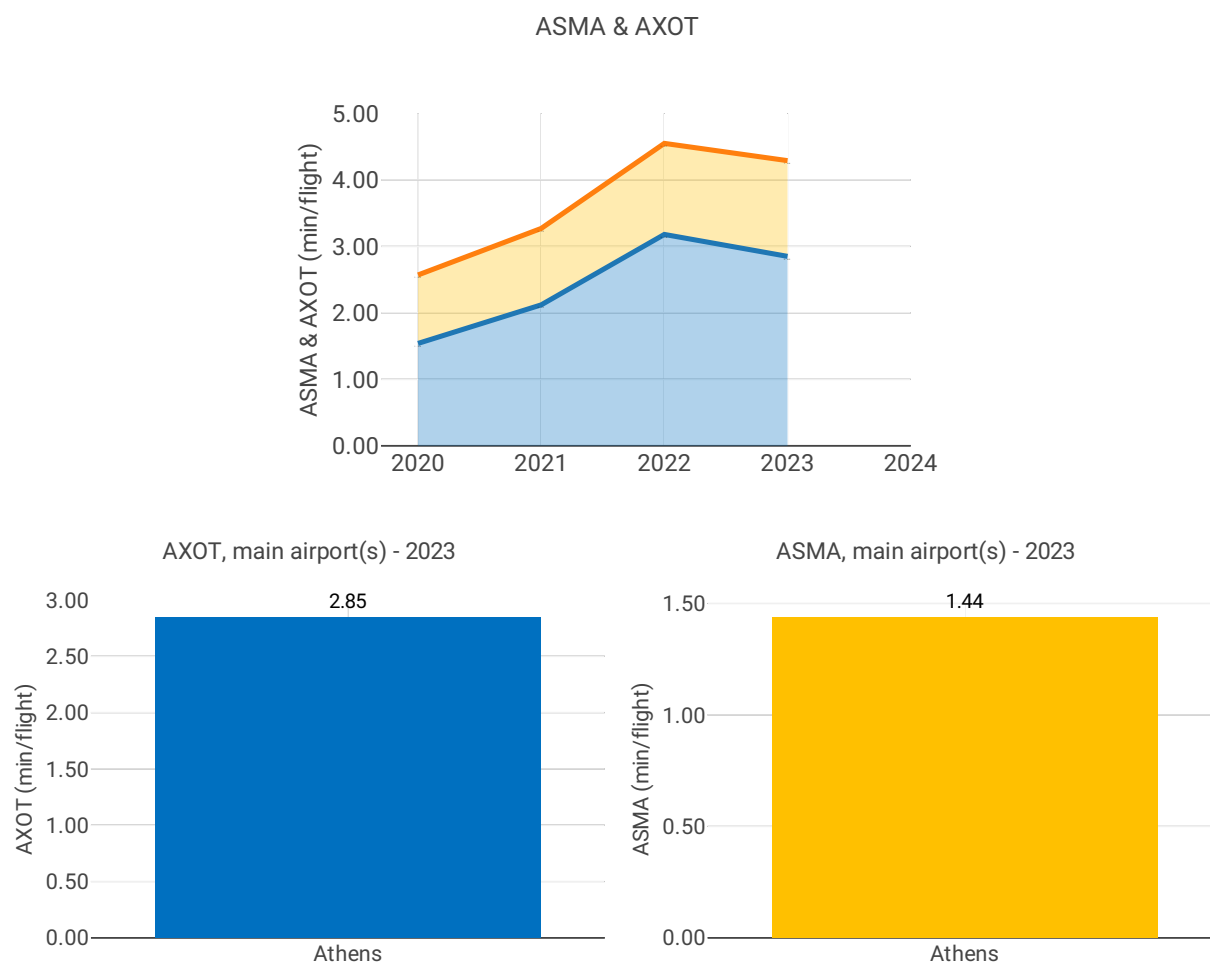
3.2 En route performance

3.2.1 Horizontal flight efficiency of the actual trajectory (KEA) (KPI#1), of the last filed flight plan (KEP) (PI#1) & shortest constrained route (SCR) (PI#2)



3.3 Terminal performance

3.3.1 Additional taxi-out time (AXOT) (PI#3) & Arrival Sequencing and Metering Area (ASMA) time (PI#4)



Focus on ASMA & AXOT

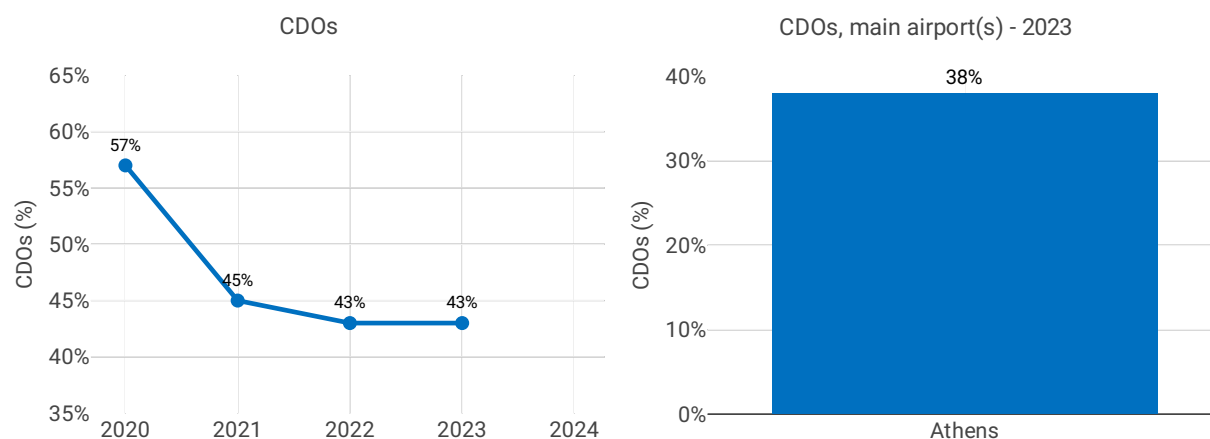
AXOT

Additional taxi-out times at Athens (LGAV; 2019: 2.61 min/dep.; 2020: 1.54 min/dep.; 2021: 2.12 min/dep.; 2022: 3.18 min/dep.; 2023: 2.85 min/dep.) decreased in 2023 after significant increases in the previous 3 years, and sit above the SES average of 2.81 min/dep.

ASMA

The additional times in the terminal airspace (LGAV; 2019: 1.30 min/arr.; 2020: 1.03 min/arr.; 2021: 1.15 min/arr.; 2022: 1.37 min/arr.; 2023: 1.44 min/arr.) observed a gradual increase during RP3, and in 2023 was higher than in 2019 and than the SES average for 2023 (1.16 min/arr.).

3.3.2 Share of arrivals applying continuous descent operations (CDOs) (PI#5)



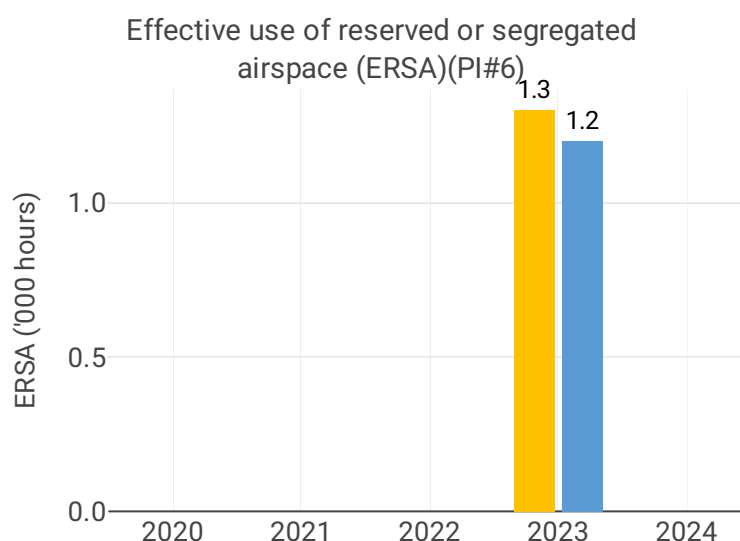
Focus CDOs

The share of CDO flights at Athens (LGAV) has stayed stable in 2023 at 38% which is above the overall RP3 value in 2023 (28.8%).

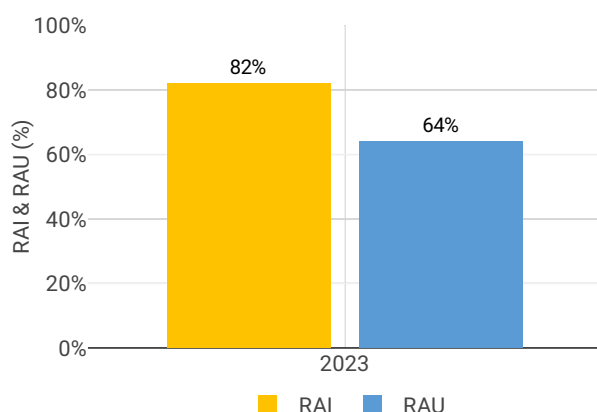
The monthly values ranged from 36.5% in November to 41.5% in December.

Airport Name	Airport level														
	Additional taxi-out time (PI#3)					Additional ASMA time (PI#4)					Share of arrivals applying CDO (PI#5)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Athens	1.54	2.12	3.18	2.85	NA	1.03	1.15	1.37	1.44	NA	41%	38%	38%	38%	NA

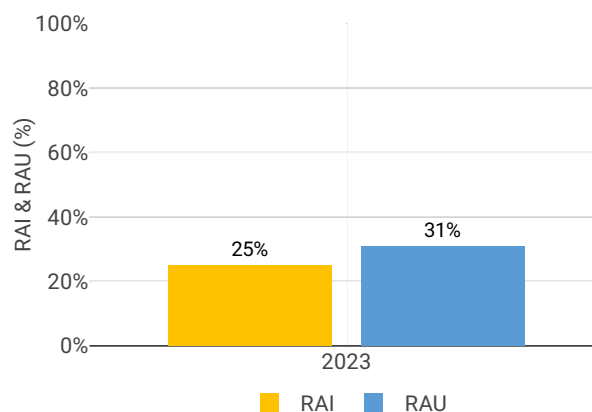
3.4 Civil-Military dimension



RAI & RAU via available conditional routes (PIs#7 & 8)



RAI & RAU via available restricted and segregated airspace (PIs#7 & 8)



Focus on Civil-Military dimension

Update on Military dimension of the plan

The activation of military areas obviously degrade performance indicators. Airspace design could minimize the impact on GAT flights by modifying appropriately the limits of requested military areas as much as possible so as major flows of traffic not to be affected.

Military - related measures implemented or planned to improve capacity

Use of designing tools could improve the situation in assessing the impact. Transformation of military areas in AMA areas activated by EAUP/EUUP could also minimize the impact, and subsequently it's a method used for improvement.

Initiatives implemented or planned to improve PI#6

No data available.

Initiatives implemented or planned to improve PI#7

No data available.

Initiatives implemented or planned to improve PI#8

No data available.

4 CAPACITY - GREECE

4.1 PRB monitoring

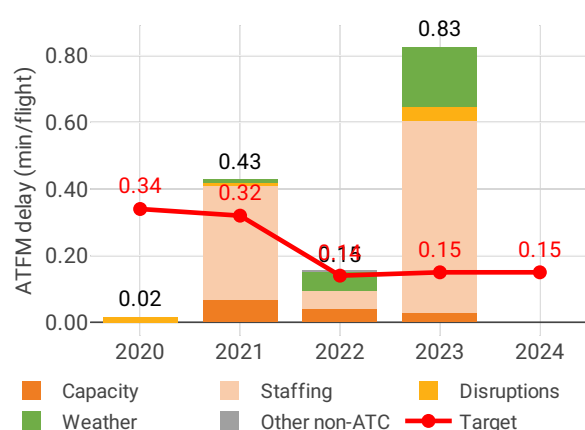
- Greece registered 0.84 minutes of average en route ATFM delay per flight during 2023 which has been adjusted to 0.83 during the post-ops adjustment process, thus not achieving the local target value of 0.15. Delays in Greece increased by 0.67 minutes per flight year-on-year.
- Delays were highest between April and July, mostly driven by ATC staffing and adverse weather conditions.
- The share of delayed flights with delays longer than 15 minutes in Greece decreased by 5 p.p. compared to 2022 and was lower than 2019 values.
- The average number of IFR movements was 13% above 2019 levels in Greece in 2023.
- The number of ATCOs in OPS is expected to increase by 33% by 2024, with the actual value being below the 2023 plan in Athens by 86 FTEs.
- The yearly total of sector opening hours in Greece was 54,081, showing a 1.2% decrease compared to 2022. Sector opening hours are 5.3% below 2019 levels.

- Greece registered 17.61 IFR movements per one sector opening hour in 2023, being 18.1% above 2019 levels.
- Year-on-year traffic growth was at 12% in Greece, with IFR movements being 19% above the STATFOR 2021 October Base forecast. Some aspects of capacity provision improved compared to 2022, but the significant lack of ATCOs resulted in a capacity gap in 2023. Greece will have to resolve ATCO recruitment and training issues, as well as carry out the long-planned overhaul of the ATM system to close the capacity gap.

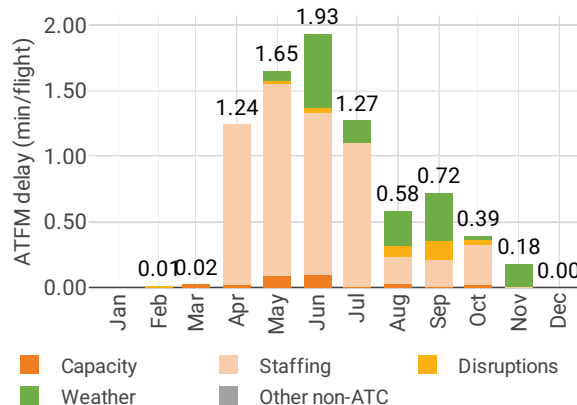
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)

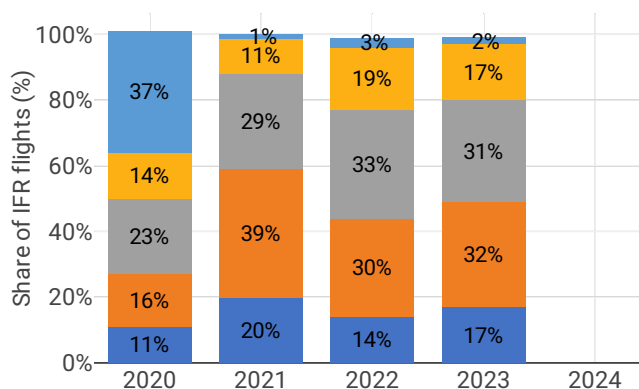
Average en route ATFM delay per flight by delay groups



Monthly distribution of en route ATFM delay
by delay groups - 2023



Distribution of IFR flights per
the duration of en route ATFM delay



Focus on en route ATFM delay

Summary of capacity performance

Greece experienced an increase in traffic from 896k flights in 2022 to 1001k flights in 2023. For reference, traffic in 2019 was 884k flights). En route ATFM delays increased significantly from 138k minutes in 2022 to 827k minutes in 2023. (For comparison, 2019 saw delays of 375k minutes).

NSA's assessment of capacity performance

In the operational level, traffic in Greece showed increase in 2023 both in IFR movments and SU compared to the actual IFR movements and SU of 2022 and the planned in 2023 as presented in the Performance Plan. The actual average en route ATFM delay per flight in 2023 was 0.83 minutes per flight, 0.68 minutes per flight above the target (0.15).

Capacity showed delays in both en route and terminal. En route capacity target was not met primarily

due to ATC staffing and Weather and secondarily by ATC disruptions and ATC capacity. Airport and terminal capacity was not met primarily due to by ATC disruptions, capacity and staffing and secondarily by Weather.

Monitoring process for capacity performance

HCAA took into consideration the regulatory requirements and the evolution of the targets as contained in the approved performance plan , in order to monitor the performance of the ANSPs by means of audits, questionnaires and collection of data.

Continuous consultation with relevant division of HASP and exploitation of relevant Eurocontrol data through appropriate tools such as NMIR, NOP, MIRROR ect.

Capacity planning

Capacity values are greater than the required performance target. About 70% of total en-route ATFM delays are due to ATCO in OPS shortage (ATC Staffing). Recruitment plan is in progress.

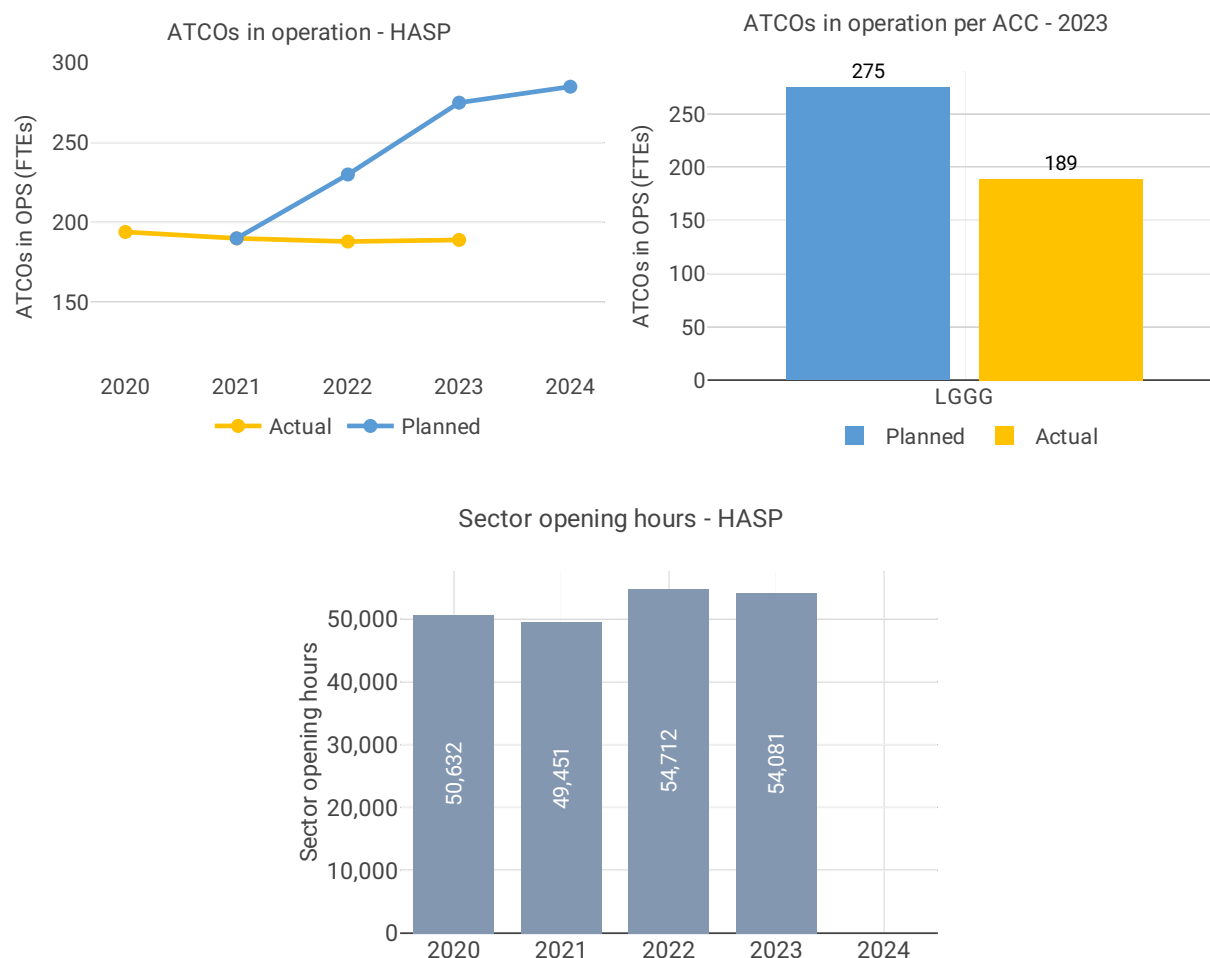
Application of Corrective Measures for Capacity (if applicable)

Recruitment planning of adequate personnel, proper rostering to meet anticipated capacity and modernisation of infrastructure. Planned recruitment targets have not been met so far, modernisation of infrastructure still pending.

En route Capacity Incentive Scheme

HASP: According to incentive scheme defined in monitoring report a penalty of 3,187,131 € is due. In accordance with Article 3(3)(a) of Implementing Regulation (EU) 2020/1627: The incentive scheme shall cover only the calendar years 2022 to 2024.

4.2.2 Other indicators

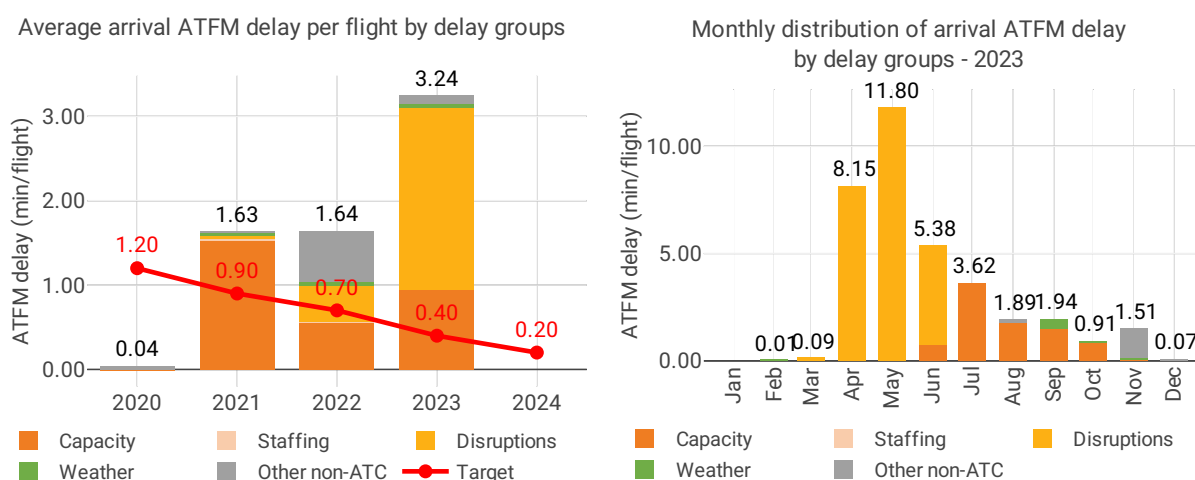


Focus on ATCOs in operations

The ACCs are physically co-located in terms of system and personnel, however the ATC procedures, staff and corresponding infrastructure throughout Greece concern two distinct ACCs.

4.3 Terminal performance

4.3.1 Arrival ATFM delay (KPI#2)



Focus on arrival ATFM delay

Operational ANS performance at airports is monitored for one airport in Greece (i.e. Athens (LGAV)), the only airport subject to RP3 monitoring. The Airport Operator Data Flow is fully established and the monitoring of all capacity indicators can be performed. Nevertheless, the quality of the reporting does not allow for the calculation of the ATC pre-departure delay. Traffic at Athens in 2023 increased by 14% with respect to 2022 and it was not only recovered but even 7% higher than in 2019.

Average arrival ATFM delays in 2023 was 3.24 min/arr, compared to 1.64 min/arr in 2022. The national target was not met. ATFM slot adherence remains close to 95% (2023: 94.4%; 2022: 94.7%).

Average arrival ATFM delays at Athens increased significantly (LGAV: 2019: 3.57 min/arr.; 2020: 0.04 min/arr.; 2021: 1.63 min/arr.; 2022: 1.67 min/arr.; 2023: 3.24 min/arr.), resulting in one of the highest across the SES monitored airports. These delays were attributed mainly to ATC Equipment (66%, caused by RADAR failures according to the Greek monitoring report) and ATC Capacity (29%) followed by Aerodrome Capacity (3%).

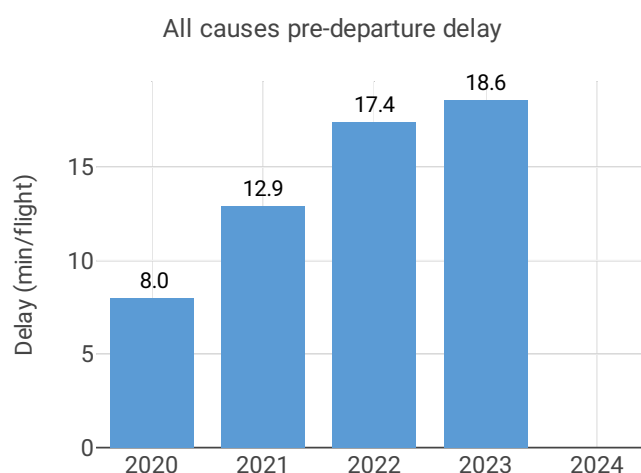
Greece reports: *About 65% of total ATFM arrival delay per flight occurred from April until June, due to radar malfunction (ATC Equipment). The rest of the delays were attributed to ATC Capacity.*

The Greek performance plan sets a national target on arrival ATFM delay for 2023 of 0.4 min/arr. This target was not met in 2023 with an actual performance of 3.24 min/arr.

According to the Greek monitoring report, this performance corresponds to the maximum penalty (1%), computed by the NSA as € 465 521.02.

Greece reports: *The 2023 target was not met primarily due to by ATC disruptions. Capacity and staffing and Weather also affected capacity.* The Greek monitoring report also mentions the following recommendation to the ANSP to rectify the situation: *Expedition of procurement and implementation of ANS infrastructure and recruitment of appropriate and sufficient personnel.*

4.3.2 Other terminal performance indicators (PI#1-3)



Airport level										
Airport name	Avg arrival ATFM delay (KPI#2)					Slot adherence (PI#1)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Athens	0.04	1.63	1.64	3.24	NA	94.5%	93.9%	94.7%	94.4%	NA%

Airport name	ATC pre departure delay (PI#2)					All causes pre departure delay (PI#3)				
	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Athens	0.03	0.15	NA	0.08	NA	8.0	12.9	17.4	18.6	NA

Focus on performance indicators at airport level

ATFM slot adherence

Athens's ATFM slot compliance was 94.4%, similar to 2022 (94.7%). With regard to the 5.6% of flights that did not adhere, 3.5% was early and 2.1% was late.

ATC pre-departure delay

The quality of the airport data reported by Athens airport is too low, which prevents the calculation of this indicator. The calculation of the ATC pre-departure delay is based on the data provided by the airport operators through the Airport Operator Data Flow (APDF) which is properly implemented at Athens. However, there are several quality checks before EUROCONTROL can produce the final value which is established as the average minutes of pre-departure delay (delay in the actual off block time) associated to the IATA delay code 89 (through the APDF, for each delayed flight, the reasons for that delay have to be transmitted and coded according to IATA delay codes).

However, sometimes the airport operator has no information concerning the reasons for the delay in the off block, or they cannot convert the reasons to the IATA delay codes. In those cases, the airport operator might:

- Not report any information about the reasons for the delay for that flight (unreported delay)
- Report a special code to indicate they do not have the information (code ZZZ)
- Report a special code to indicate they do not have the means to collect and/or translate the information (code 999)

To be able to calculate with a minimum of accuracy the PI for a given month, the minutes of delay that are not attributed to any IATA code reason should not exceed 40% of the total minutes of pre-departure delay observed at the airport. Finally, to be able to produce the annual figure, at least 10 months of valid data is requested by EUROCONTROL.

The reporting by Athens improved in 2023 but the share of unidentified delay was still above 40% for many months in the year, so this indicator cannot be calculated.

All causes pre-departure delay

The total (all causes) delay in the actual off block time at Athens increased again in 2023 (LGAV: 2020: 8 min/dep.; 2021: 12.90 min/dep.; 2022: 17.44 min/dep.; 2023: 18.63 min/dep.).

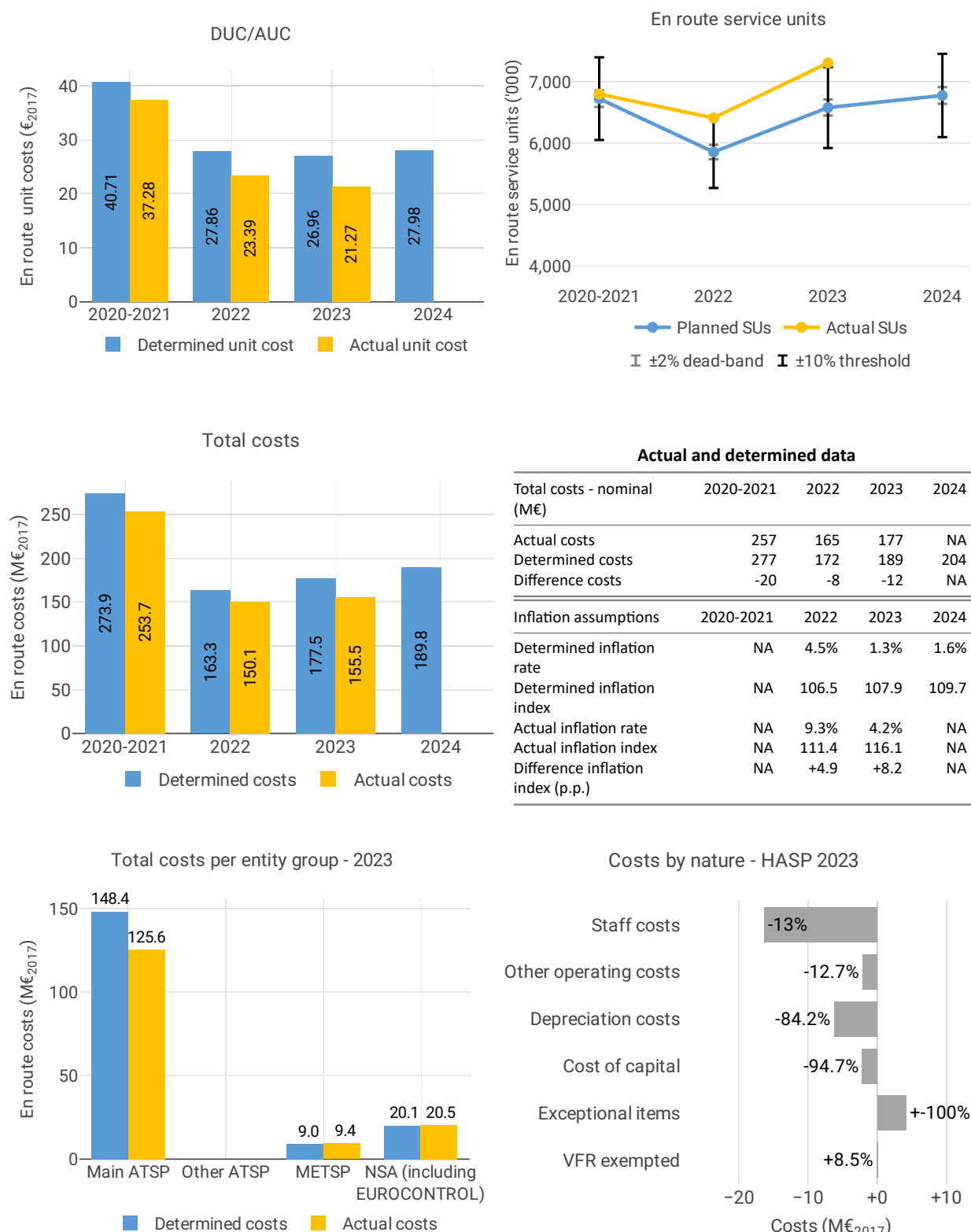
5 COST-EFFICIENCY - GREECE

5.1 PRB monitoring

- The en route 2023 actual unit cost of Greece was 21.25 €2017, -21% lower than the determined unit cost (26.96 €2017). The terminal 2023 actual unit cost was 148.20 €2017, -19% lower than the determined unit cost (182.18 €2017).
- The en route 2023 actual service units (7.3M) were +11% higher than the determined service units (6.6M).
- The en route 2023 actual total costs were -26 M€2017 lower (-15%) than determined (not considering the determined exceptional items relating to 2021), marking an underspend across all cost categories. The largest reduction was in staff costs (-16 M€2017, or -12%), followed by significantly lower depreciation costs (-6.3 M€2017, or -73%), other operating costs (-2.4 M€2017, or -7.6%), and cost of capital (-2.2 M€2017, or -60%). The NSA did not provide sufficient explanations for these results. The PRB recommends that the NSA submit an updated Additional Information to the Reporting Tables, providing more comprehensive explanations for the differences between the actual and determined costs in each cost category. The PRB highlights that the actual number of ACC ATCOs in OPS FTEs for HASP were -31% below plan.
- HASP spent 1.4 M€2017 in 2023 related to costs of investments for both en route and terminal charging zones, -87% less than determined (8.9 M€2017), due to postponed investment projects. The NSA did not provide explanations for the non-implementation of the three new major investments that were scheduled for 2023. As for the previous monitoring year, the discrepancies regarding costs of investments were significant.
- The en route actual unit cost incurred by users in 2023 was 26.91€ (-6.3% below the 2023 DUC), while the terminal actual unit cost incurred by users was 148.21€ (-24% below the 2023 DUC). The difference between the AUCU and the DUC in terminal charging zone is primarily attributed to the loss of revenue relating to the application of a lower unit rate, which amounted to -5.4 M€.
- The en route regulatory result for HASP amounted to +21 M€, or 12% of the 2023 revenue. This may indicate that the airspace users are charged for costs which have not materialised in 2023.
- The PRB will take into consideration the implementation of the RP3 performance plans when assessing the RP4 cost-efficiency targets and urges Greece to take immediate, adequate, and proportionate action to implement the relevant ATCO and investment plans committed to in the RP3 performance plan.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)



Focus on unit cost

AUC vs. DUC

In 2023, the en route AUC was -21.2% (or -5.71 €2017) lower than the planned DUC. This results from the combination of significantly lower than planned en route costs in real terms (-12.5%, or -22.2 M€2017) and significantly higher than planned TSUs (+11.0%). It should be noted that actual inflation index in 2023 was +8.2 p.p. higher than planned.

En route service units

The difference between actual and planned TSUs (+11.0%) falls outside the $\pm 10\%$ threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional en route revenues is therefore shared between the ANSP and the airspace users .

En route costs by entity

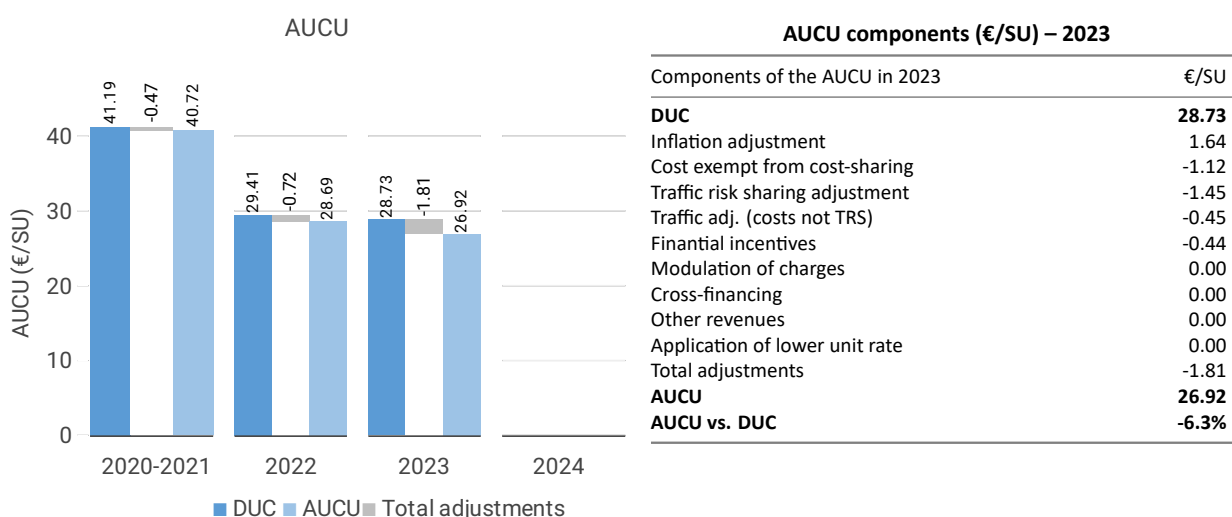
Actual real en route costs are -12.5% (-22.2 M€2017) lower than planned. This is the result of lower costs for the main ANSP, HASP (-15.4%, or -22.8 M€2017) and higher costs for the NSA/ EUROCONTROL (+1.2%, or +0.2 M€2017), the MET service provider (+4.5%, or +0.4 M€2017).

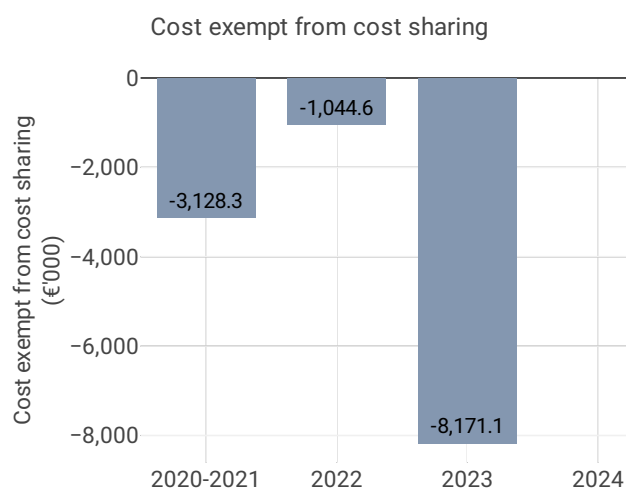
En route costs for the main ANSP at charging zone level

Significantly lower than planned en route costs in real terms for HASP in 2023 (-15.4%, or -22.8 M€2017) result from:

- Significantly lower staff (-13.0% in real terms) and other operating costs (-12.7%). According to information provided by Greece *"The operating costs reflect payments of HASP that were incurred in 2023 on a cash basis"*.
- Significantly lower depreciation (-84.2%), due to the delays in the implementation of the investment projects.
- Significantly lower cost of capital (-94.7%), due to lower than expected level of fixed assets resulted from the delays in the implementation of the investment projects.
- No actual exceptional costs reported (-100% decrease), while determined exceptional costs present the negative amount of *"the reimbursement of the difference between determined and actual costs of year 2021"*. Without the effect of artificial negative exceptional costs (in determined costs), the difference between actual and determined costs in 2023 would be -17.7%, or -27.0 M€2017.
- Significantly higher deduction for VFR exempted flights (+8.5%).

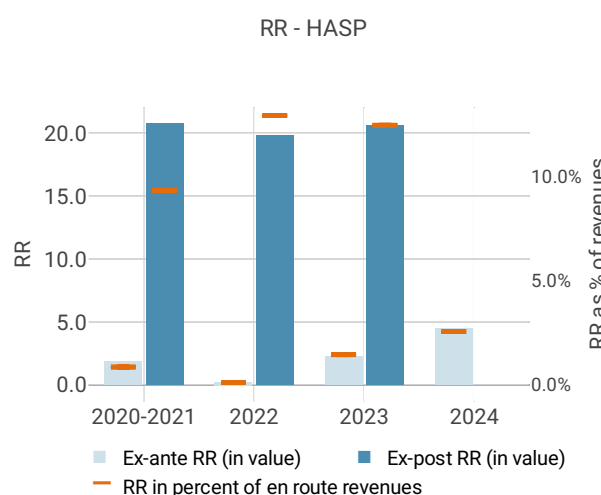
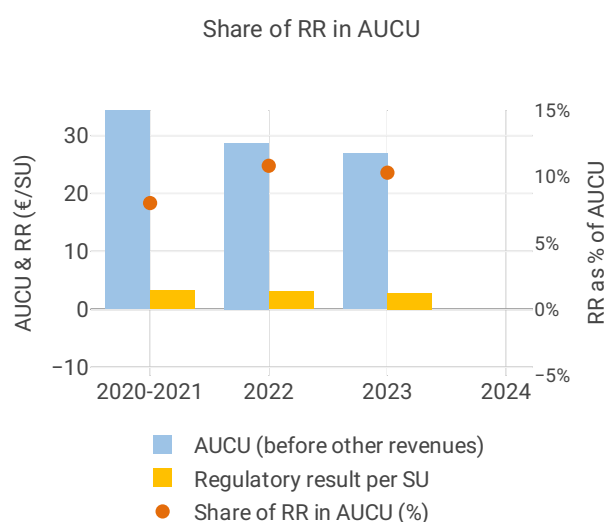
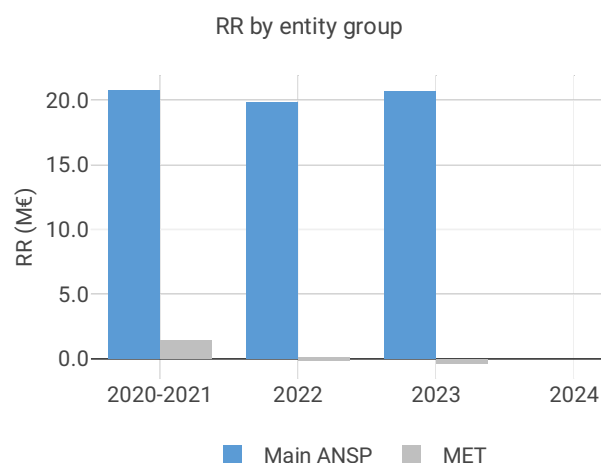
5.2.2 Actual unit cost incurred by the users (AUCU) (PI#1)



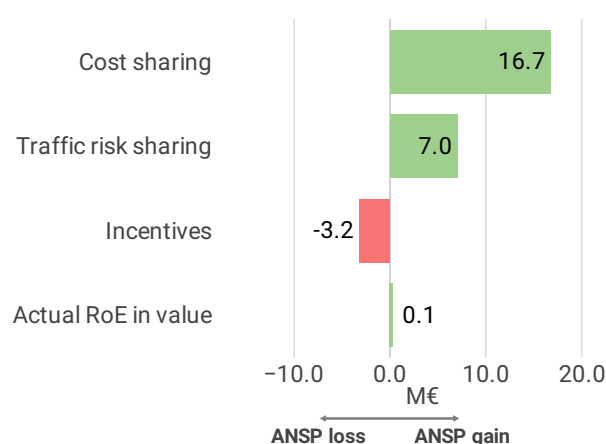


Cost exempt from cost sharing by item - 2023	€'000	€/SU
New and existing investments	-8,545.5	-1.17
Competent authorities and qualified entities costs	-196.2	-0.03
Eurocontrol costs	570.7	0.08
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	-8,171.1	-1.12

5.2.3 Regulatory result (RR)



Net result from en route activity - HASP 2023



Focus on regulatory result

HASP net gain on activity in the Greece en route charging zone in the year 2023

HASP reported a net gain of +20.5 M€, as a combination of a gain of +16.7 M€ arising from the cost sharing mechanism, with a gain of +7.0 M€ arising from the traffic risk sharing mechanism and a loss of -3.2 M€ relating to financial incentives.

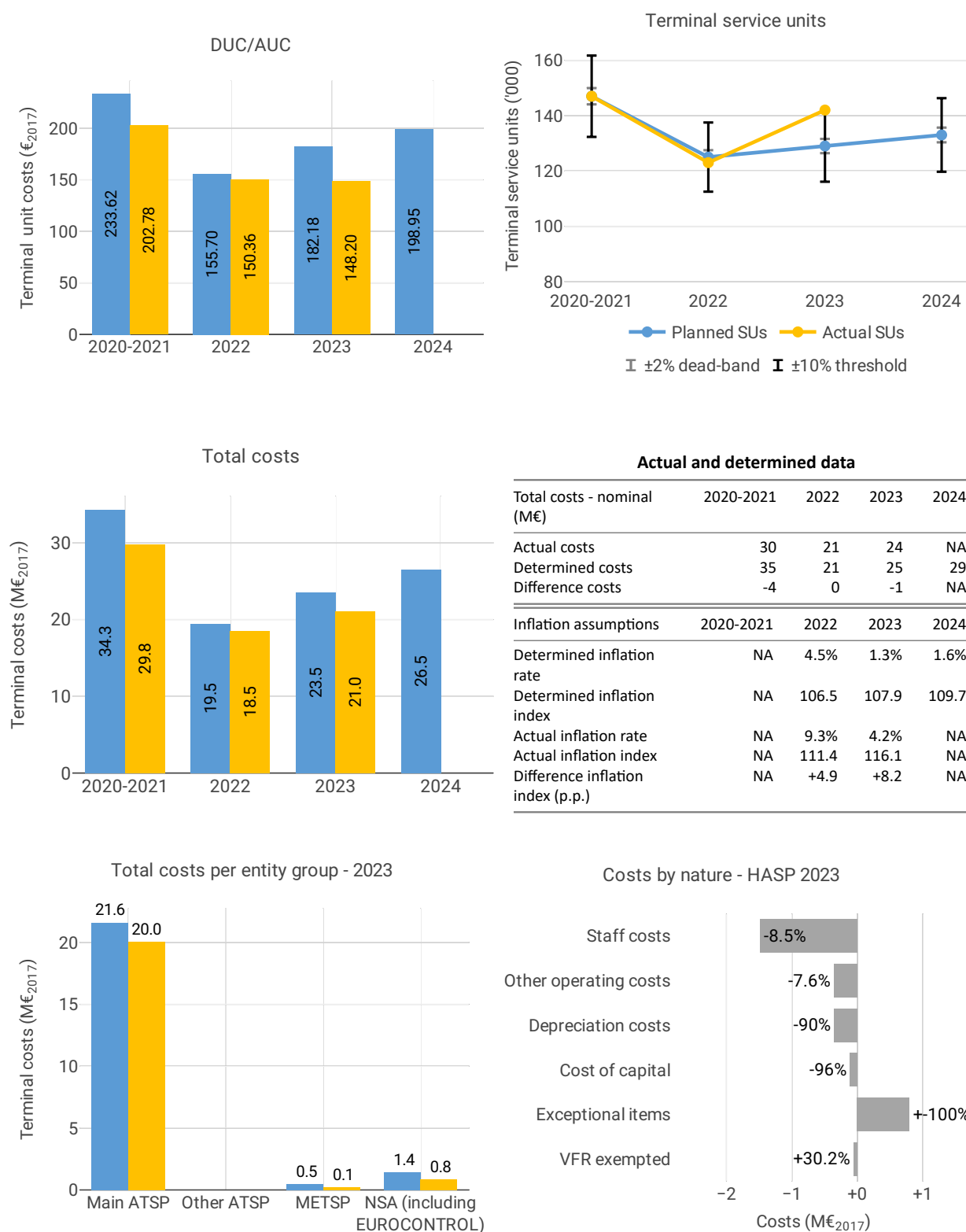
HASP overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+20.5 M€) and the actual RoE (+0.1 M€) amounts to +20.7 M€ (12.4% of the en route revenues).

Note1: Ex-post RoE cannot be correctly calculated due to a very low total asset base, due to: 1) the exclusion of net current assets from the calculation of the total asset base starting from 2021, 2) a very low net book value of fixed assets (as these are nearly fully depreciated).

5.3 Terminal charging zone

5.3.1 Unit cost (KPI#1)



Focus on unit cost

AUC vs. DUC

In 2023, the terminal AUC was -18.6% (or -33.97 €2017) lower than the planned DUC. This results from the combination of significantly lower than planned terminal costs in real terms (-10.5%, or -2.5 M€2017) and significantly higher than planned TNSUs (+10.0%). It should be noted that actual inflation index in 2023 was +8.2 p.p. higher than planned.

Terminal service units

The difference between actual and planned TNSUs (+10.0%) falls outside the $\pm 2\%$ dead band, but does not exceed the $\pm 10\%$ threshold foreseen in the traffic risk sharing mechanism. The resulting gain of additional terminal revenues is therefore shared between the ANSP and the airspace users.

Terminal costs by entity

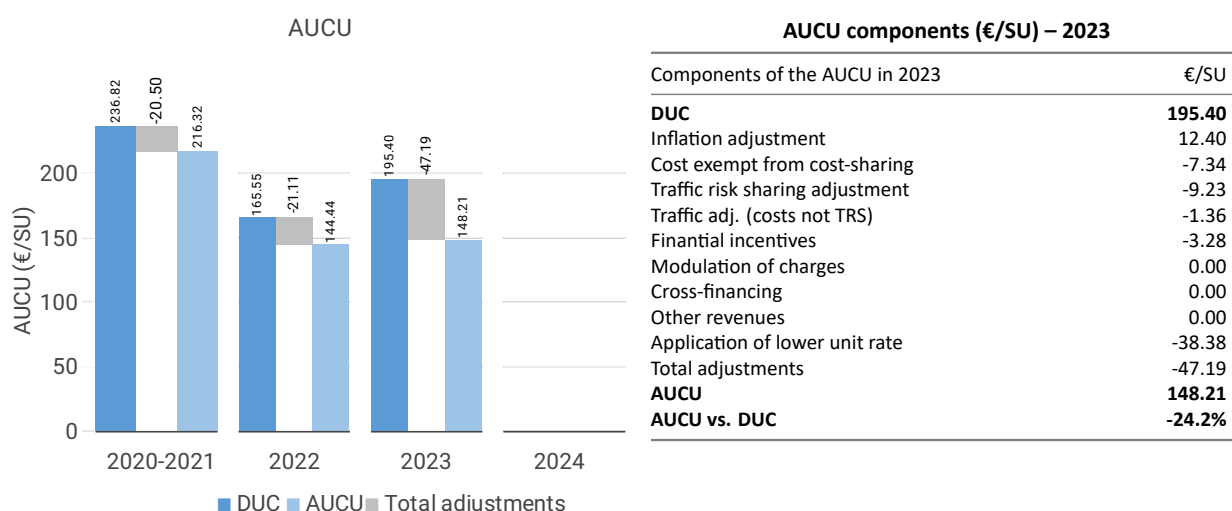
Actual real terminal costs are -10.5% (-2.5 M€2017) lower than planned. This is the result of lower costs for the main ANSP, HASP (-7.2%, or -1.6 M€2017), the NSA (-40.7%, or -0.6 M€2017) and the MET service provider (-68.9%, or -0.3 M€2017).

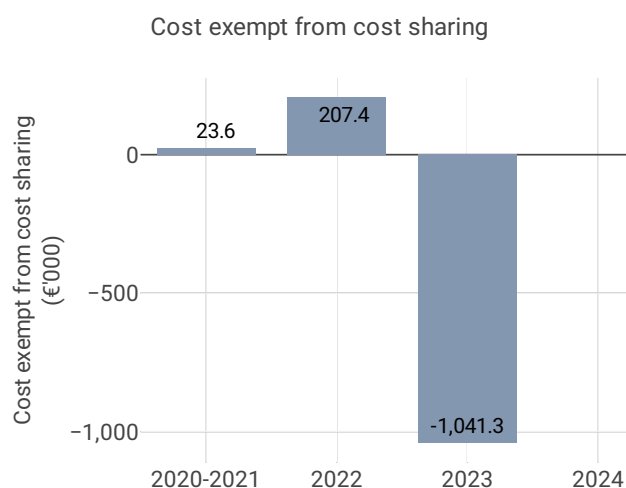
Terminal costs for the main ANSP at charging zone level

Significantly lower than planned terminal costs in real terms for HASP in 2023 (-7.2%, or -1.6 M€2017) result from:

- Significantly lower staff (-8.5% in real terms) and other operating costs (-7.6%). According to information provided by Greece *"The operating costs reflect payments of HASP that were incurred in 2023 on a cash basis"*.
- Significantly lower depreciation (-90.0%), due to the delays in the implementation of the investment projects, including SMR/A-SMGCS/MLT project for LGAV.
- Significantly lower cost of capital (-96.0%), due to the delays in the implementation of the investment projects, including SMR/A-SMGCS/MLT project for LGAV.
- Significantly lower exceptional costs (-100.0%), without the effect of artificial negative exceptional costs (in determined costs), the difference between actual and determined costs in 2023 would be -10.5%, or -2.4 M€2017.
- Significantly higher deduction for VFR exempted flights (+30.2%).

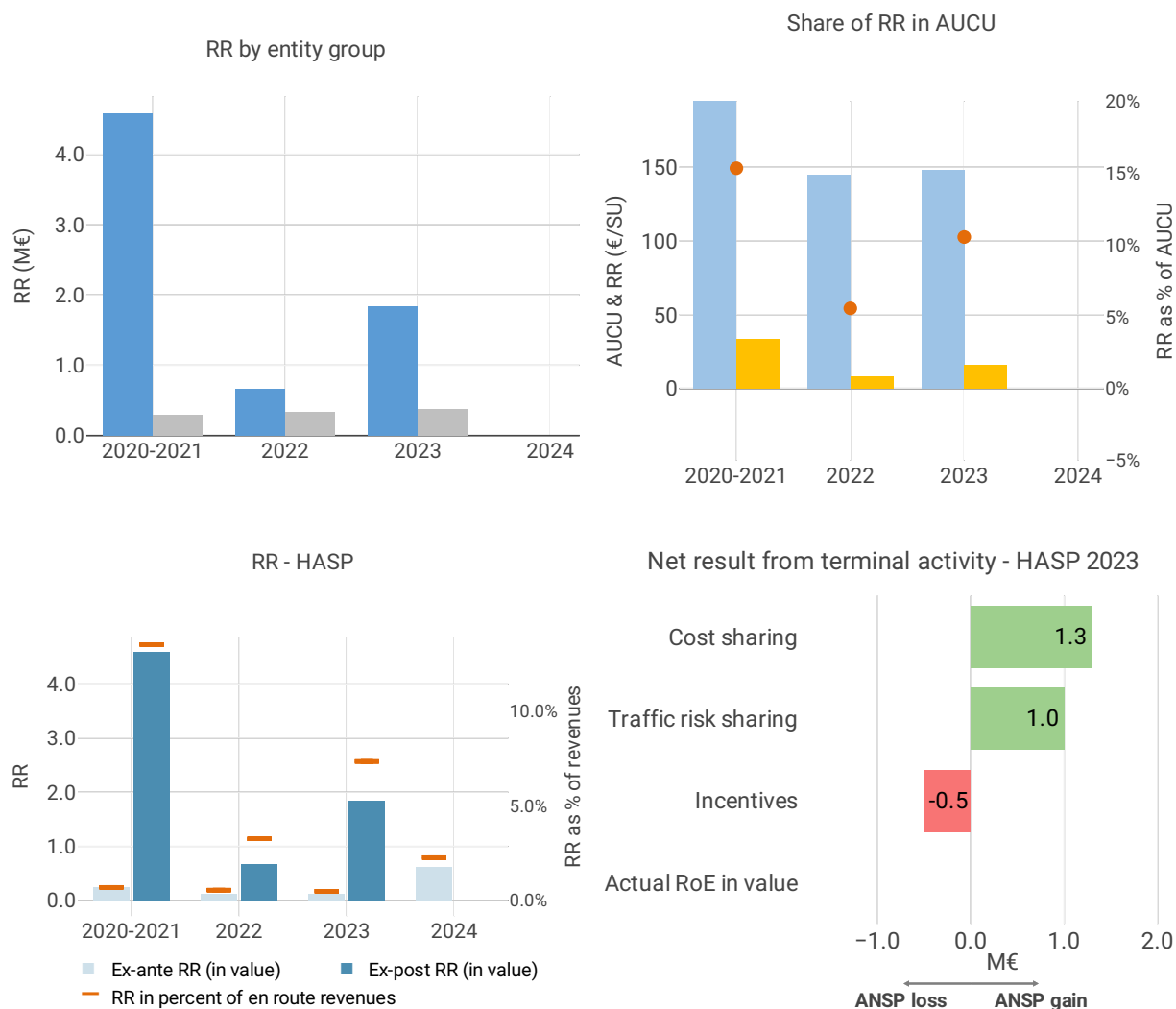
5.3.2 Actual unit cost incurred by the users (AUCU) (PI#1)





Cost exempt from cost sharing by item - 2023	€'000	€/SU
New and existing investments	-461.0	-3.25
Competent authorities and qualified entities costs	-580.3	-4.09
Eurocontrol costs	0.0	0.00
Pension costs	0.0	0.00
Interest on loans	0.0	0.00
Changes in law	0.0	0.00
Total cost exempt from cost risk sharing	-1,041.3	-7.34

5.3.3 Regulatory result (RR)



Focus on regulatory result

HASP net gain on activity in the Greece terminal charging zone in the year 2023

HASP reported a net gain of +1.8 M€, as a combination of a gain of +1.3 M€ arising from the cost sharing mechanism, with a gain of +1.0 M€ arising from the traffic risk sharing mechanism and a loss of -0.5 M€ relating to financial incentives.

HASP overall regulatory results (RR) for the terminal activity

Ex-post, the overall RR taking into account the net gain from the terminal activity mentioned above (+1.8 M€) and the actual RoE (+0.005 M€) amounts to +1.8 M€ (7.3% of the terminal revenues).