

Performance Review Body Monitoring Report

Greece - 2021

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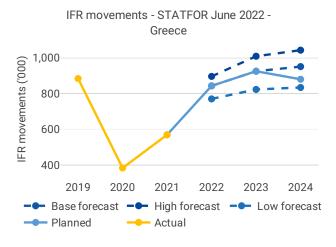
1 OVERVIEW

1.1 Contextual information

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

List of ACCs 2 Athens ACC Makedonia ACC	Exchange rate (1 EUR=) 2017: 1 EUR 2021: 1 EUR			
No of airports in the scope of the performance plan: • ≥80'K 1 • <80'K 0	Share of Union-wide: • traffic (TSUs) 2021 6.1% • en route costs 2021 2.3% Share en route / terminal costs 2021 90% / 10%			
	En route charging zone(s) Greece Terminal charging zone(s) Greece			

1.2 Traffic (En route traffic zone)



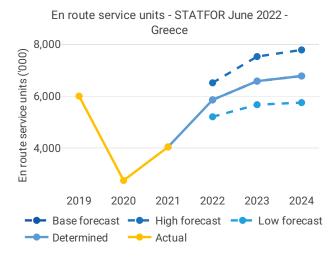
• Greece recorded 569K actual IFR movements in 2021, +49% compared to 2020 (383K).

• HASP

Other ANSPs

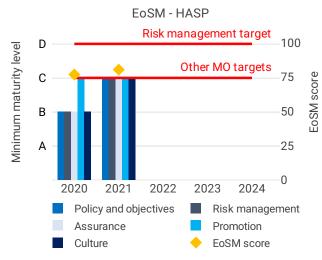
• HNMS

• Actual 2021 IFR movements represent 64% of the actual 2019 level (884K).



- Greece recorded 4,048K actual en route service units in 2021, +47% compared to 2020 (2,756K).
- Actual 2021 service units represent 67% of the actual 2019 level (6,005K).

1.3 Safety (Main ANSP)



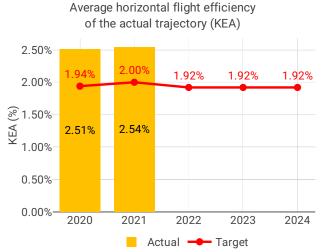
• HASP is required to improve its safety performance function only in the safety risk management area. Over 2021, a specific action plan was identified aiming at the adaptation of the safety management function in line with Regulation (EU) 373/2017. Significant initiatives are planned both by the NSA and the ANSP to restructure and improve the safety organisation in all five management areas.

• Greece recorded a stable number of safety occurrences with a decrease in the rate of separation minima infringements and an increase in runway incursions in 2021. Both rates are below the Union-

wide average rates. The occurrences and the effectiveness of mitigations are closely monitored and analysed by the NSA.

• HASP should improve its safety management by implementing automated safety data recording systems for occurrences.

1.4 Environment (Member State)



but still remain below 2019 values.

• Greece achieved a KEA performance of 2.54% compared to its target of 2.00% and did not contribute positively towards achieving the Union-wide target. KEA has worsened since 2020.

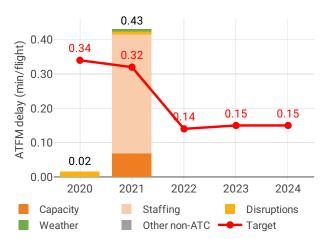
• The NSA states that the target was missed mainly due to military activity causing traffic to diverge from optimal routes.

• KEP increased by 0.10 p.p. and SCR increased by 0.14 p.p.. Both indicators are at the worse levels in five years.

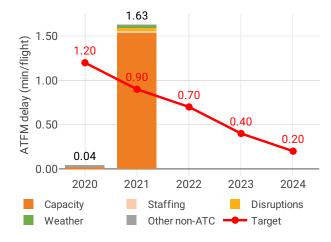
• The share of CDO flights has remained stable since 2018.

• Both additional taxi out time and additional time in terminal airspace increased compared to 2020,

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 0.43 minutes of average en route ATFM delay per flight during 2021, thus missing the local breakdown value of 0.1.

• Delays were higher than the breakdown value despite the lower traffic: in Greece IFR movements in 2021 were 36% lower than in 2019.

• Capacity performance was affected by ATC staffing (contributing to more than 80% of the delay) caused by the amendment of HASP recruitment plans as a result of COVID-19.

• Traffic recovery is robust with both ACCs experiencing up to 90% of 2019 traffic during the summer. Traffic is expected to grow, with 2019 traffic levels likely being reached in 2022 (in high growth scenario) or 2023 (in base growth scenario). The number of ATCOs in OPS is planned to increase significantly by the end of RP3. However, the 2021 delay performance was similar to that of 2019, even with significantly lower traffic.

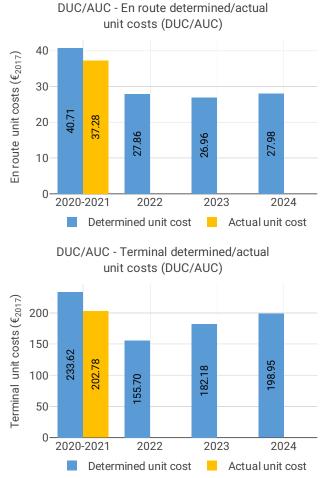
• Delays were highest between July and September, mostly due to ATC Staffing issues.

• The share of delayed flights with delays longer than 15 minutes in Greece decreased by 32.25 p.p. compared to 2020 and was lower than 2019 values.

• The yearly total of sector opening hours in Athens ACC was 49451, showing a 2.3% decrease compared to 2020. Sector opening hours are 13.4% below 2019 levels.

• Athens ACC registered 10.98 IFR movements per one sector opening hour in 2021, being 26.3% below 2019 levels.

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



• The en route 2020/2021 actual unit cost of Greece was 37.28 €2017, -8.4% lower than the determined unit cost (40.71 €2017). The terminal actual unit cost was 202.78 €2017, -13% lower than the determined unit cost (233.62 €2017).

• The en route 2021 actual service units (4,048K) were +1.9% higher than determined (3,973K).

• In 2021, actual total costs were -20 M \in 2017 lower (-13%) than determined. The reduction was mainly due to lower staff costs (-16 M \in 2017, or -14%), caused by changes of the recruitment plan due to the pandemic. Other operating costs were also significantly lower (-3.8 M \in 2017, or -11%), no explanation was provided by the NSA.

• HASP spent 1.6 M€2017 in 2021 related to costs of investments, in line with determined.

• The en route actual unit cost incurred by users in 2020/2021 was 40.72€, while the terminal actual unit cost incurred by users was 216.32€.

2 SAFETY - GREECE

2.1 PRB monitoring

• HASP is required to improve its safety performance function only in the safety risk management area. Over 2021, a specific action plan was identified aiming at the adaptation of the safety management function in line with Regulation (EU) 373/2017. Significant initiatives are planned both by the NSA and the ANSP to restructure and improve the safety organisation in all five management areas.

• Greece recorded a stable number of safety occurrences with a decrease in the rate of separation minima infringements and an increase in runway incursions in 2021. Both rates are below the Union-wide average rates. The occurrences and the effectiveness of mitigations are closely monitored and analysed by the NSA.

• HASP should improve its safety management by implementing automated safety data recording systems for occurrences.

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

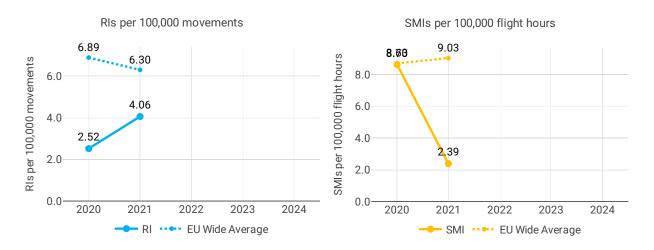


EoSM - HASP

Focus on EoSM

Four out of five EoSM components of the ANSP meet the 2024 target level, namely "Safety Promotion". Improvements have been observed in maturity with respect to 2020 levels. Only safety risk management component is below 2024 target levels, which is expected to improve in the next years of RP3.

Occurrences - Rate of runway incursions (RIs) (PI#1) & Rate of separation minima infringements (SMIs) (PI#2)



3 ENVIRONMENT - GREECE

3.1 PRB monitoring

• Greece achieved a KEA performance of 2.54% compared to its target of 2.00% and did not contribute positively towards achieving the Union-wide target. KEA has worsened since 2020.

• The NSA states that the target was missed mainly due to military activity causing traffic to diverge from optimal routes.

• KEP increased by 0.10 p.p. and SCR increased by 0.14 p.p.. Both indicators are at the worse levels in five years.

• The share of CDO flights has remained stable since 2018.

• Both additional taxi out time and additional time in terminal airspace increased compared to 2020, but still remain below 2019 values.

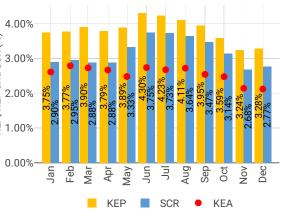
3.2 En route performance

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)



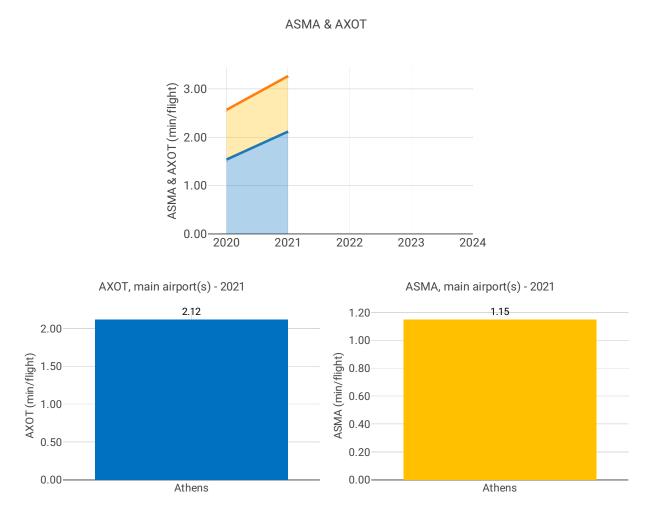


KEP & SCR (monthly, compared to KEA)



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

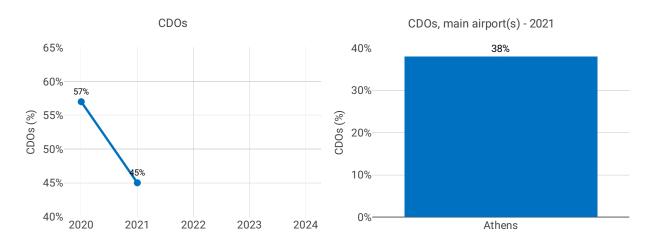
ΑΧΟΤ

Additional taxi-out times at Athens (LGAV: 2019: 2.61 min/dep.; 2020: 1.54 min/dep.; 2021: 2.12 min/dep.) increased in line with the traffic recovery and were close to 2019 values in the second part of the year.

ASMA

The additional times in the terminal airspace (LGAV; 2019: 1.30 min/arr.; 2020: 1.03 min/arr.; 2021: 1.15 min/arr.) slightly increased especially at the end of the year when they surpassed the values of 2019.

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

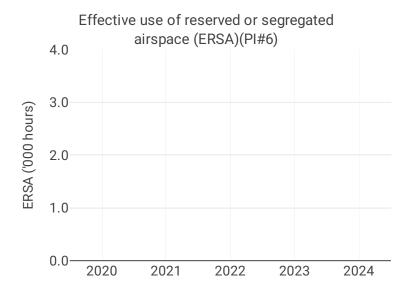


Focus CDOs

The share of CDO flights at Athinai/Eleftherios Venizelos (LGAV) has decreased from 40.6% in 2020 to 38.0% in 2021 which is still above the overall RP3 value in 2021 (30.5%). The monthly values decreased almost continuously as from May (May: 42.6%; December: 34.8%).

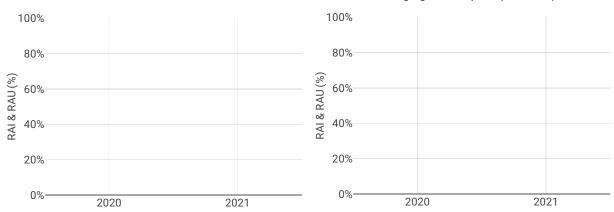
Airport level															
	ŀ	dditional	l taxi-out	time (PI#3	3)		Additional ASMA time (PI#4)		Share of arrivals applying CDO (PI#5)						
Airport Name	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024	2020	2021	2022	2023	2024
Athens	1.54	2.12	NA	NA	NA	1.03	1.15	NA	NA	NA	41%	38%	NA	NA	NA

3.4 Civil-Military dimension



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





Focus on Civil-Military dimension

Update on Military dimension of the plan

Airspace design reorganizes the airspace structure in order to decrease aircraft emissions and noise, therefore implementing certain airspace structures (FRA, TSA/TRA, torte case, etc) airspace connectivity, as well as certain regulations for controlling over the emissions (having in mind i.e. that the average age of the military fleet is 21 years versus13 years for the commercial fleet) we try to affect and minimise the impact of military dimension on the environment KPA.

Airspace design provides a more integrated management of the airspace, without the limitations of national borders, in order to maximise capacity through initiatives such as Flexible Use of Airspace, harmonisation of airspace categories and free routing, starting with upper airspace above a certain altitude and continuing in stages to optimise capacity

Military - related measures implemented or planned to improve capacity

Classification of airspace, implementation of FRA, implementation of certain TSA/TRA for specific military use. Reorganization of airspace structures for capacity optimization.

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 0.43 minutes of average en route ATFM delay per flight during 2021, thus missing the local breakdown value of 0.1.

• Delays were higher than the breakdown value despite the lower traffic: in Greece IFR movements in 2021 were 36% lower than in 2019.

• Capacity performance was affected by ATC staffing (contributing to more than 80% of the delay) caused by the amendment of HASP recruitment plans as a result of COVID-19.

• Traffic recovery is robust with both ACCs experiencing up to 90% of 2019 traffic during the summer. Traffic is expected to grow, with 2019 traffic levels likely being reached in 2022 (in high growth scenario) or 2023 (in base growth scenario). The number of ATCOs in OPS is planned to increase significantly by

the end of RP3. However, the 2021 delay performance was similar to that of 2019, even with significantly lower traffic.

• Delays were highest between July and September, mostly due to ATC Staffing issues.

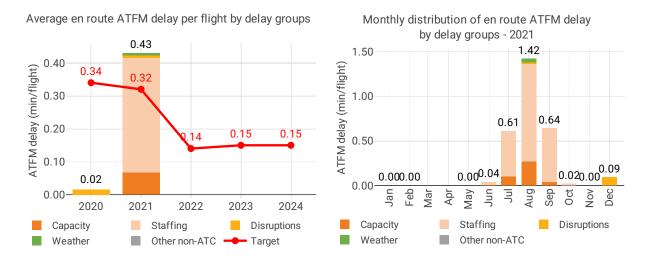
• The share of delayed flights with delays longer than 15 minutes in Greece decreased by 32.25 p.p. compared to 2020 and was lower than 2019 values.

• The yearly total of sector opening hours in Athens ACC was 49451, showing a 2.3% decrease compared to 2020. Sector opening hours are 13.4% below 2019 levels.

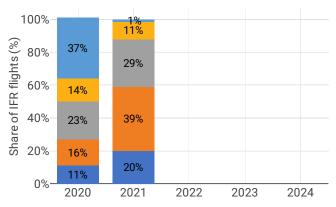
• Athens ACC registered 10.98 IFR movements per one sector opening hour in 2021, being 26.3% below 2019 levels.

4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)



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 383k flights in 2020 to 569k flights in 2021. However, traffic levels were still substantially below the 884k flights in 2019.

In 2021, Greece had 245k minutes of ATFM delay - with the highest number of minutes of delay occurring in August (135k). There were 95k flights in August 2021. For comparison, in September 2019 there were 66k minutes of delay for just over 99k flights.

NSA's assessment of capacity performance

Greece experienced capacity gap due to ATC capacity and staffing. The feasibility of capacity enhancement measures is still questionable. The plan is heavily sensitive to the implementation of the new ATM system and to the recruitment plan for new ATCOs.

The enroute performance was negatively affected by staff shortages caused by the amendment of HASP' s recruitment plans due to the covid -19 crisis. More specifically, the majority of the imposed restrictions during summer season of 2021, at a rate of more than 80%, were caused by these shortages (reason ATC STAFFING - S). Moreover the delay in the implementation of the investment plan due to covid-19 crisis resulted in delayed procedures for the procurement of a new ATM/CNS DPS.

Monitoring process for capacity performance

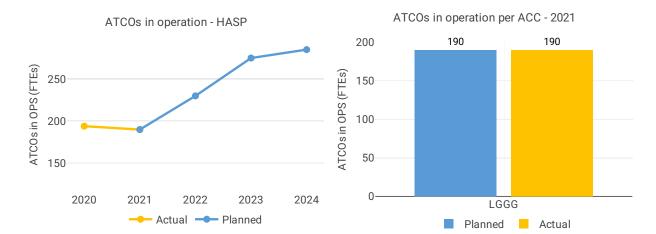
In 2021 monitoring was implemented by HANSA.

Capacity planning

PP Capacity target (0.32) was not consistent with the national reference value (0.10) and the actual value was even greater (0.43)

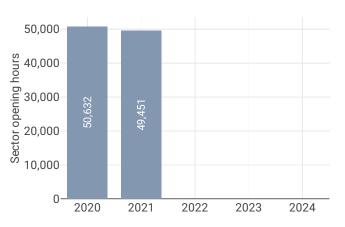
Application of Corrective Measures for Capacity (if applicable)

Recommendations made to the ANSP to improve the situation include: Implementation of capacity enhancement measures such as new ATM system, Enhanced Mode S Radar network, new voice communication system, airspace reorganisation, recruitment of ACC ATCOs, ATFM procedures. There is doubt whether the planned increase of ATCOs will be finally feasible.



4.2.2 Other indicators

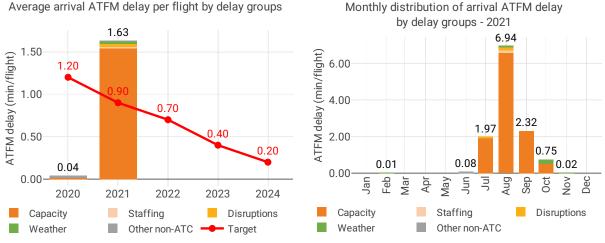




Focus on ATCOs in operations

4.3 Terminal performance

Arrival ATFM delay (KPI#2) 4.3.1



Average arrival ATFM delay per flight by delay groups

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, with more than 60% of the reported delay not allocated to any cause.

Traffic at Athens in 2020 decreased is still 31% respect to 2019, even if the recovery at Athens has been significantly better than at other European airports.

Average arrival ATFM delays in 2021 was 1.63 min/arr, compared to 0.04 min/arr in 2020.

ATFM slot adherence has deteriorated (2021: 93.9%; 2020: 94.5%).

Average arrival ATFM delays at Athens (LGAV: 2019: 3.57 min/arr.; 2020: 0.04 min/arr.; 2021: 1.63 min/arr.) were the highest observed in the SES area in 2021. 95% of these delays were attributed to ATC capacity and they concentrated in the Summer. According to the Greek monitoring report: The performance was negatively affected by staff shortages caused by the amendment of HASP's recruitment plans due to the covid -19 crisis. It was also caused by some airport infrastructure issues.

The NSA identifies staff shortage and operational procedures as underlying reasons for the performance target not being met.

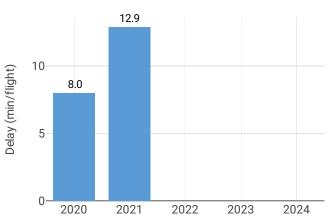
Recommendations to the ANSP include: Staff recruitment, CDM, A-SMGCS, PBN procedures, redesign of Athens TMA and new ATM surveillance system.

The NSA reports however that the measures that are foreseen do not guarantee a short term improvement.

The provisional national target on arrival ATFM delay in 2021 was not met, with actual arrival ATFM delays at 1.63 min/arr. in average, and the national target set at 0.90 min/arr.

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.

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



All causes pre-departure delay

			Airport level				
	Avg arrival ATF	M delay (KPI#2)	Slot adherence (PI#1)			
2020	2021	2022	2023	2020	2021	2022	2023
0.04	1.63	NA	NA	94.5%	93.9%	NA%	NA%
	ATC pre departu	ure delay (PI#2)		All causes pre departure delay (PI#3)			
2020	2021	2022	2023	2020	2021	2022	2023
0.03	0.15	NA	NA	8.0	12.9	NA	NA
	0.04	2020 2021 0.04 1.63 ATC pre departu 2020 2021	Avg arrival ATFM delay (KPI#2 2020 2021 2022 0.04 1.63 NA ATC pre departure delay (PI#2) 2020 2021 2022	Avg arrival ATFM delay (KPI#2) 2020 2021 2022 2023 0.04 1.63 NA NA ATC pre departure delay (PI#2) 2020 2021 2022 2023	Avg arrival ATFM delay (KPI#2) 2020 2021 2022 2023 2020 0.04 1.63 NA NA 94.5% ATC pre departure delay (PI#2) A 2020 2021 2022 2023 2020	Avg arrival ATFM delay (KPI#2) Slot adhe 2020 2021 2022 2023 2020 2021 0.04 1.63 NA NA 94.5% 93.9% ATC pre departure delay (PI#2) 2020 2021 2022 2023 2020 2021	Avg arrival ATFM delay (KPI#2) Slot adherence (PI#1) 2020 2021 2022 2023 2020 2021 2022 0.04 1.63 NA NA 94.5% 93.9% NA% ATC pre departure delay (PI#2) All causes pre departure delay (PI#2) 2020 2021 2022 2023

Focus on performance indicators at airport level

ATFM slot adherence

With the drastic drop in traffic, regulated departures from Athens virtually disappeared until July 2021. Athens's ATFM slot compliance was 93.9%, slightly worse than in 2020 (94.5%). With regard to the 6.1% of flights that did not adhere, 3% was early and 3.1% was late.

Greek NSA reports: The CTOT Adherence of LGAV airport in 2021 was > 80%. This value is within the limits of EC 255/10 and is slightly less than the one of 2020. This is due to some airport infrastructure issues.

ATC pre-departure delay

The quality of the airport data reported by Athens airport is too low, preventing 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 EUROCON-TROL.

The share of unidentified delay reported by Athens has been above 40% since April 2020, preventing the calculation of this indicator. Even with the traffic recovery the reporting has not improved, although Athens had proper reporting before the pandemic.

The Greek NSA reported last year that this issue was under consultation with the Provider and that further information would be provided in due time, after the collection and evaluation of all relevant data. However the Greek monitoring report of this year does not provide any information nor comment about this.

All causes pre-departure delay

The total (all causes) delay in the actual off block time at Athens increased in 2021 (LGAV: 2020: 8 min/dep.; 2021: 12.90 min/dep.). The highest delays per flight were observed in July and August, averaging more than 20 min/dep.

5 COST-EFFIENCY - GREECE

5.1 PRB monitoring

• The en route 2020/2021 actual unit cost of Greece was 37.28 €2017, -8.4% lower than the determined unit cost (40.71 €2017). The terminal actual unit cost was 202.78 €2017, -13% lower than the determined unit cost (233.62 €2017).

• The en route 2021 actual service units (4,048K) were +1.9% higher than determined (3,973K).

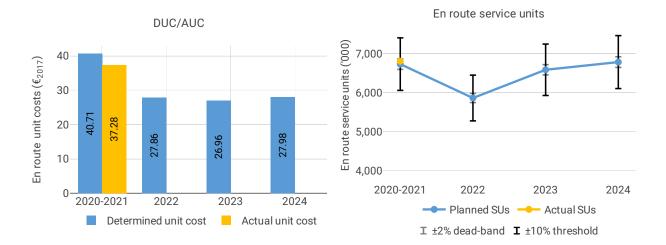
• In 2021, actual total costs were -20 M€2017 lower (-13%) than determined. The reduction was mainly due to lower staff costs (-16 M€2017, or -14%), caused by changes of the recruitment plan due to the pandemic. Other operating costs were also significantly lower (-3.8 M€2017, or -11%), no explanation was provided by the NSA.

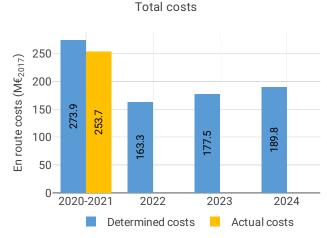
• HASP spent 1.6 M€2017 in 2021 related to costs of investments, in line with determined.

• The en route actual unit cost incurred by users in 2020/2021 was 40.72€, while the terminal actual unit cost incurred by users was 216.32€.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)



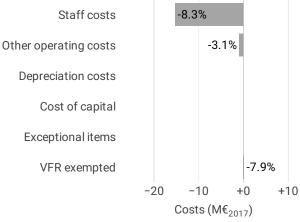


Total costs per entity group - 2020-2021

Actua	Actual and determined data					
Total costs - nominal (M€)	2020-2021	2022	2023	2024		
Actual costs	257	NA	NA	NA		
Determined costs	277	172	189	204		
Difference costs	-20	NA	NA	NA		
Inflation assumptions	2020-2021	2022	2023	2024		
Determined inflation rate	NA	4.5%	1.3%	1.6%		
Determined inflation index	NA	106.5	107.9	109.7		
Actual inflation rate	NA	NA	NA	NA		
Actual inflation index	NA	NA	NA	NA		
Difference inflation index (p.p.)	NA	NA	NA	NA		

216.6 200 150 150 100 50 Main ATSP Other ATSP METSP NSA (including EUROCONTROL) Determined costs Actual costs

Costs by nature - HASP 2020-2021



Focus on unit cost

AUC vs. DUC

The AUC for the combined year 2020-2021 corresponds to $37.28 \\\in 2017$ and was lower by -8.4% (or - $3.43 \\\in 2017$) from DUC (40.71 $\\\in 2017$). This results from the combination of slightly higher than planned TSUs (+1.1%) and lower than planned en route costs in real terms (by -7.4%, or -20.3 M $\\\in 2017$).

En route service units

The difference between actual and planned TSUs (+1.1%) falls within the $\pm 2\%$ dead band. Hence the resulting gain is kepty by the ANSPs.

En route costs by entity

Actual real en route costs for 2020-2021 are -7.4% (-20.3 M€2017) lower than planned. This result is driven by the main ANSP (HCAA, now HASP) with the costs lower by -7.4% (-16.1 M€2017), NSA/EUROCONTROL with costs lower by -7.7% (-3.1 M€2017) and the METSP with a costs decrease of -6.2% (-1.1 M€2017).

En route costs for the main ANSP at charging zone level

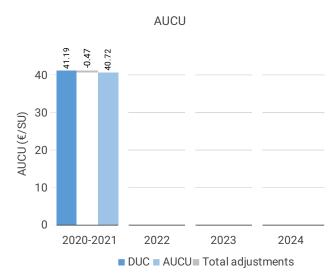
Overall, the en route costs in real terms for HCAA (now HASP) in 2020-2021 were lower by -7.4% (-16.1 M€2017) comparing with the determined costs from the performance plan. This is mainly the result of: - lower staff costs (-8.3% or -15.2 M€2017) reflecting the amendments to the recruitment plan implemented during COVID-19 crisis;

- lower other operating costs (-3.1% or -0.9 M€2017) due to costs savings in 2021; and

- lower deduction of the costs of exempted VFR flights (-7.9%)

No difference is observed for the cost of capital and depreciation for HCAA (HASP) in combined year 2020-2021.

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



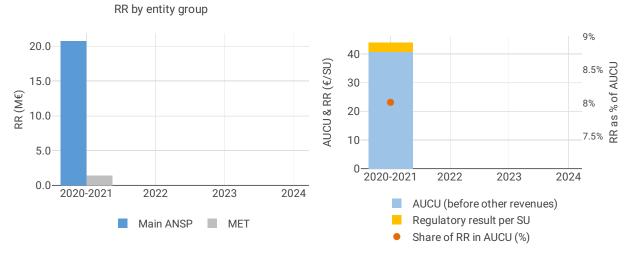
AUCU components (€/SU) – 2020-	-2021
Components of the AUCU in 2020-2021	€/SU
DUC	41.19
Inflation adjustment	0.09
Cost exempt from cost-sharing	-0.46
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.09
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	0.00
Total adjustments	-0.47
AUCU	40.72
AUCU vs. DUC	-1.1%

0 -500 -1,000 -1,500 -2,500 -3,000 -3,000 -3,128.3 2020-2021 2022 2023 2024

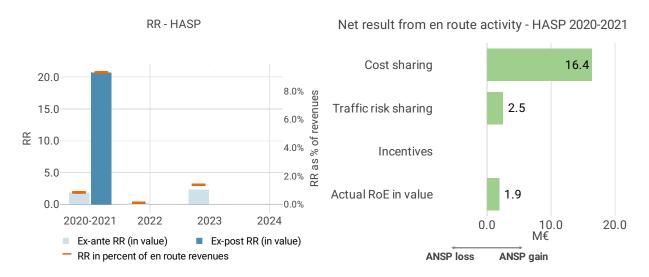
Cost exempt from cost sharing

Cost exempt from cost sharing by item - 2020-2021	€′000	€/SU
New and existing investments	-22.5	0.00
Competent authorities and qualified	-2,552.6	-0.38
entities costs		
Eurocontrol costs	-553.2	-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	-3,128.4	-0.46

5.2.3 Regulatory result (RR)



Share of RR in AUCU



Focus on regulatory result

HCAA (now HASP) net gain on activity in the en route charging zone in the combined year 2020-2021

HCAA's net gain amounts to +18.9 M€ mainly due to gains of +16.4 M€ from the cost sharing mechanism, and gains of +2.5 M€ from the traffic risk sharing mechanism.

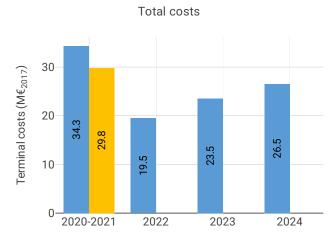
HCAA (now HASP) overall regulatory results (RR) for the en route activity

Ex-post, the overall RR taking into account the net gain from the en route activity mentioned above (+18.9 M€) and the actual RoE (+1.9 M€) amounts to +20.7 M€ (9.3% of the en route revenues).

5.3 Terminal charging zone

Terminal service units DUC/AUC 160 Terminal service units ('000) Terminal unit costs (€2017) 140 200 120 150 233.62 202.78 198.95 182.18 100 100 155.70 50 80 2020-2021 2022 2023 2024 ---- Planned SUs ---- Actual SUs 0. 2020-2021 2022 2023 2024 I ±2% dead-band I ±10% threshold

5.3.1 Unit cost (KPI#1)

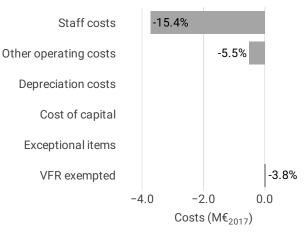


Actua	Actual and determined data					
Total costs - nominal (M€)	2020-2021	2022	2023	2024		
Actual costs	30	NA	NA	NA		
Determined costs	35	21	25	29		
Difference costs	-4	NA	NA	NA		
Inflation assumptions	2020-2021	2022	2023	2024		
Determined inflation rate	NA	4.5%	1.3%	1.6%		
Determined inflation index	NA	106.5	107.9	109.7		
Actual inflation rate	NA	NA	NA	NA		
Actual inflation index	NA	NA	NA	NA		
Difference inflation index (p.p.)	NA	NA	NA	NA		

33.4 30 29.1 20 10 0.8 0.5 0.1 0.2 Main ATSP Other ATSP METSP NSA (including EUROCONTROL)

Total costs per entity group - 2020-2021

Costs by nature - HASP 2020-2021



Focus on unit cost

AUC vs. DUC

The AUC for the combined year 2020-2021 corresponds to 202.78 €2017 and was lower by -13.2%, or -30.84€2017 from DUC (233.62€2017). This results mainly form the lower by -13.1% (-4.5 M€2017) terminal costs with the traffic was at the same level as planned (+0.1%).

Terminal service units

The actual TNSUs reached the planned level (+0.1%). what falls within the $\pm 2\%$ dead band. Hence the resulting gain is kept by the ANSPs.

Terminal costs by entity

Actual real terminal costs for 2020-2021 are -13.1% (-4.5 M \leq 2017) lower than planned. This result is driven by the main ANSP (HCAA, now HASP) with the costs lower by -12.7% (-4.2 M \leq 2017), METSP (HNMS) with a costs decrease of -36.9% (-0.3 M \leq 2017) and NSA with the costs higher by +15.5%.

Terminal costs for the main ANSP at charging zone level

Overall, the terminal costs in real terms for HCAA (now HASP) in 2020-2021 were lower by -12.7% (-4.2 M€2017) comparing to the determined costs from the performance plan. This is mainly the result of: - lower staff costs (-15.4% or -3.7 M€2017) reflects the amendments to the recruitment plan implemented

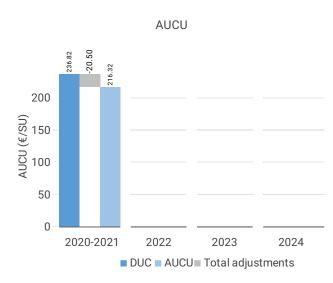
during COVID-19 crisis;

- lower other operating costs (-5.5% or -0.5 M€2017) due to costs savings in 2021; and

- slightly lower deduction of the costs of exempted VFR flights (-3.8%).

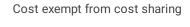
No difference is observed for the cost of capital and depreciation costs for HCAA (HASP) in combined year 2020-2021.

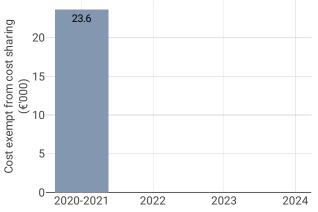
5.3.2 Actual unit cost incurred by the users (AUCU) (PI#1)



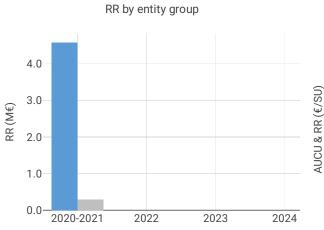
AUCU components (€/SU) – 2020	0-2021
Components of the AUCU in 2020-2021	€/SU
DUC	236.82
Inflation adjustment	0.57
Cost exempt from cost-sharing	0.16
Traffic risk sharing adjustment	0.00
Traffic adj. (costs not TRS)	-0.01
Finantial incentives	0.00
Modulation of charges	0.00
Cross-financing	0.00
Other revenues	0.00
Application of lower unit rate	-21.22
Total adjustments	-20.50
AUCU	216.32
AUCU vs. DUC	-8.7%

Cost exempt from cost sharing by item - 2020-2021	€'000	€/SU
New and existing investments	0.0	0.00
Competent authorities and qualified	23.6	0.16
entities costs		
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	23.6	0.16

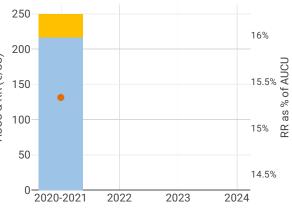


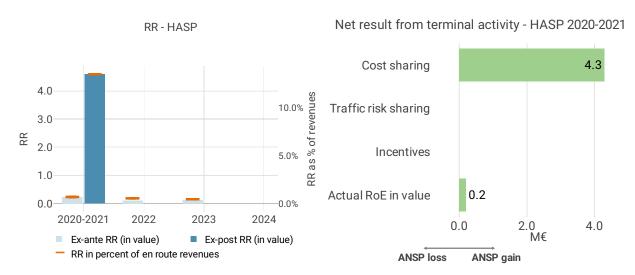






Share of RR in AUCU





Focus on regulatory result

HCAA (now HASP) net gain on activity in the terminal charging zone in the combined year 2020-2021

HCAA's net gain amounts to +4.4 M€ mainly due to gains of +4.3 M€ from the cost sharing mechanism, and gains of +0.04 M€ from the traffic risk sharing mechanism.

HCAA (now 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 (+4.4 M) and the actual RoE (+0.2 M) amount to +4.6 M (13.5% of the terminal revenues).