



Performance Review Body Monitoring Report

Cyprus - 2021

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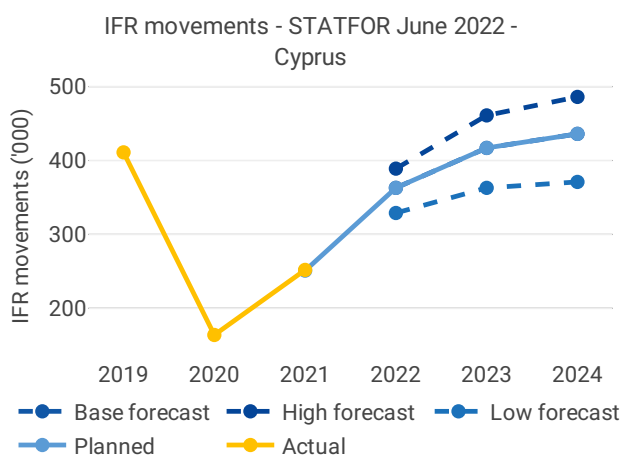
1 OVERVIEW

1.1 Contextual information

National performance plan adopted following Commission Decision (EU) 2022/2422 of 5 December 2022

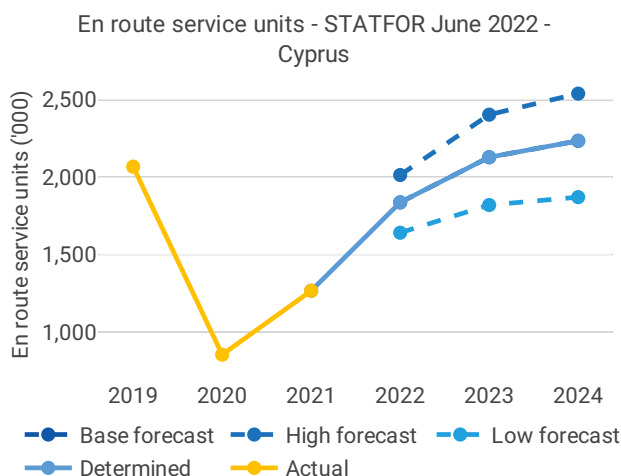
List of ACCs 1 Nicosia ACC	Exchange rate (1 EUR=) 2017: 1 EUR 2021: 1 EUR	Main ANSP • DCAC Cyprus
No of airports in the scope of the performance plan: • ≥80'K 0 • <80'K 0	Share of Union-wide: • traffic (TSUs) 2021 1.9% • en route costs 2021 0.9% Share en route / terminal costs 2021 100% / 0% En route charging zone(s) Cyprus Terminal charging zone(s) —	Other ANSPs — MET Providers • Department of Meteorology of the Ministry of Agriculture and Natural Resources

1.2 Traffic (En route traffic zone)



- Cyprus recorded 252K actual IFR movements in 2021, +54% compared to 2020 (164K).

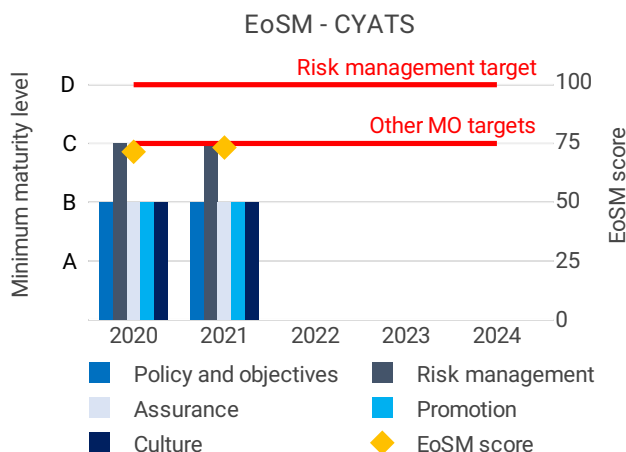
- Actual 2021 IFR movements represent 61% of the actual 2019 level (411K).



- Cyprus recorded 1,266K actual en route service units in 2021, +49% compared to 2020 (853K).

- Actual 2021 service units represent 61% of the actual 2019 level (2,068K).

1.3 Safety (Main ANSP)

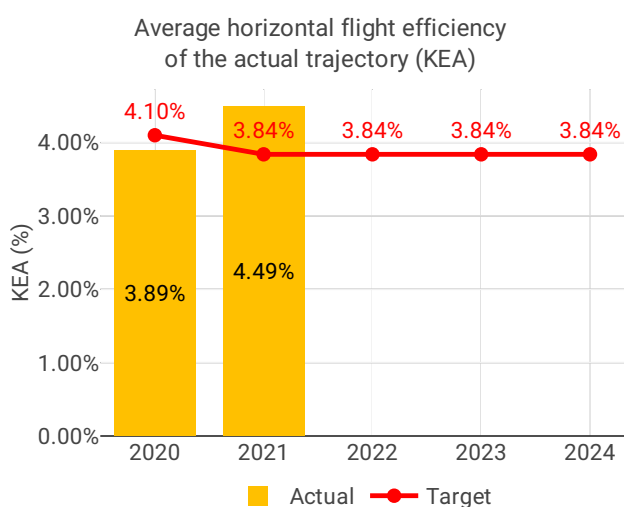


- DCAC Cyprus is required to improve its safety performance in all five management objectives. DCAC Cyprus has initiated some improvements in its safety management function, however the actions were suspended due to the pandemic and only restarted recently. DCAC Cyprus is lagging the expected performance as per the performance plan and requires significant improvements in its safety management to achieve the RP3 targets. The Member State adopted the National Safety Plan for 2022 to significantly improve safety oversight of DCAC Cyprus based on specific indicators.

- Cyprus recorded higher occurrence rates for both separation minima infringements and runway incursions relative to 2020. The NSA has implemented the 'NSA procedure for the monitoring of ANS Performance' that examines safety performance with respect to occurrences twice per year.

- DCAC Cyprus should improve its safety management by implementing automated safety data recording systems.

1.4 Environment (Member State)



- Cyprus achieved a KEA performance of 4.49% compared to its target of 3.84% and did not contribute positively towards achieving the Union-wide target.

- KEA performance is the worst since 2017 despite lower traffic levels.

- The NSA states that new direct routes have been implemented and these are expected to improve performance to the levels targeted in the performance plan, should airspace users choose to use them.

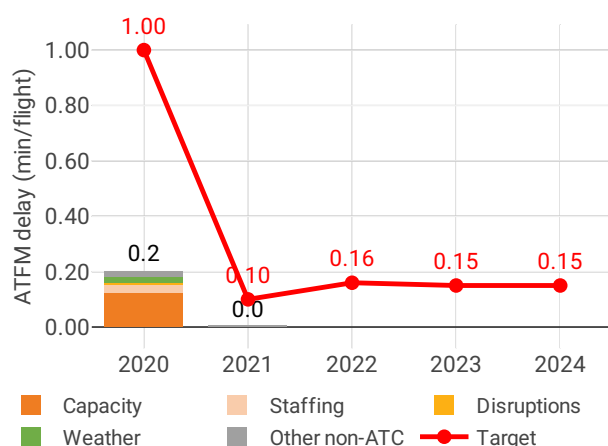
- In 2021, the SCR indicator deteriorated to the level observed in 2019, meaning airspace users were unable to plan more shorter routes.

- KEP performance also worsened, likely as a result of the deterioration of the SCR.

- Cyprus has no airports that are regulated under the RP3 performance and charging scheme.

1.5 Capacity (Member State)

Average en route ATFM delay per flight by delay groups



- Cyprus registered near zero minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.10.

- Delays should be considered in the context of lower traffic: in Cyprus, IFR movements in 2021 were 39% lower than in 2019.

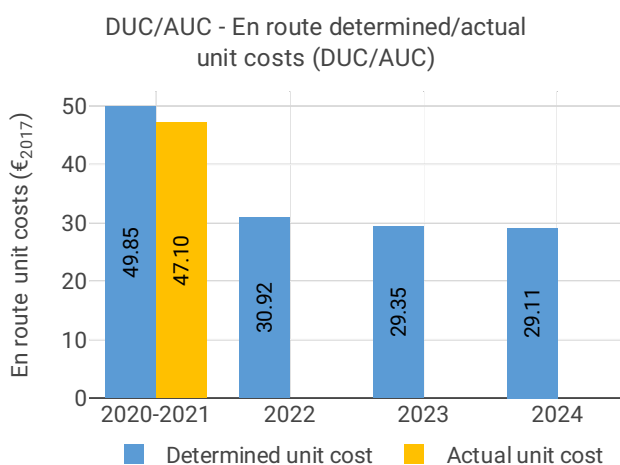
- Traffic is expected to grow with 2019 levels likely being reached in 2023 (in base and high growth scenarios). An increase in the number of ATCOs in OPS is planned during RP3. However, monitoring of the capacity and delay evolution is required to avoid the delay situation experienced in 2019.

- The share of delayed flights with delays longer than 15 minutes in Cyprus decreased by 3.62 p.p. compared to 2020 and was lower than 2019 values.

- The yearly total of sector opening hours in Nicosia ACC was 17,210, showing a 6.0% decrease compared to 2020. Sector opening hours are 41.4% below 2019 levels.

- Nicosia ACC registered 14.65 IFR movements per one sector opening hour in 2021, being 5.5% above 2019 levels.

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



- The en route 2020/2021 actual unit cost of Cyprus was 47.10 €2017, -5.5% lower than the determined unit cost (49.85 €2017). Cyprus does not have a terminal charging zone.

- The en route 2021 actual service units (1,266K) were +3.0% higher than determined (1,230K).

- In 2021, actual total costs were -3.1 M€2017 lower (-5.7%) than determined. The main reduction was on staff costs (-1.1 M€2017, or -5.1%), mainly due to the postponement of hiring and early retirement in MET entity. Other operating costs decreased by -1.8 M€2017 (-6.5%), mainly

due to a decrease in travels and Eurocontrol costs.

- DCAC Cyprus spent 2.3 M€2017 in 2021 related to costs of investments, -6.8% lower than determined (2.4 M€2017) mainly due to delays of projects caused by the pandemic.

- The en route actual unit cost incurred by users in 2020/2021 was 48.81€.

2 SAFETY - CYPRUS

2.1 PRB monitoring

- DCAC Cyprus is required to improve its safety performance in all five management objectives. DCAC Cyprus has initiated some improvements in its safety management function, however the actions were suspended due to the pandemic and only restarted recently. DCAC Cyprus is lagging the expected performance as per the performance plan and requires significant improvements in its safety management

to achieve the RP3 targets. The Member State adopted the National Safety Plan for 2022 to significantly improve safety oversight of DCAC Cyprus based on specific indicators.

- Cyprus recorded higher occurrence rates for both separation minima infringements and runway incursions relative to 2020. The NSA has implemented the 'NSA procedure for the monitoring of ANS Performance' that examines safety performance with respect to occurrences twice per year.
- DCAC Cyprus should improve its safety management by implementing automated safety data recording systems.

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



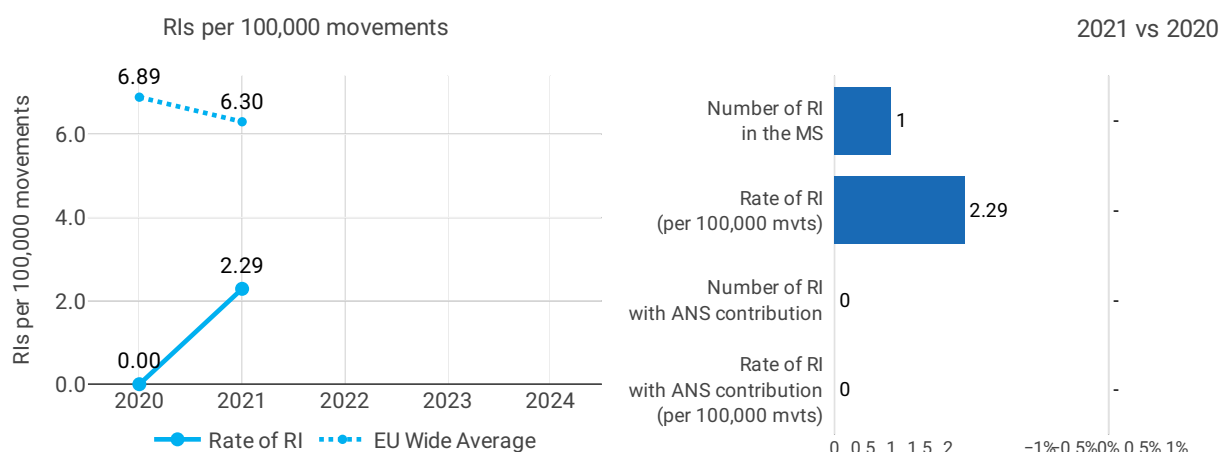
Focus on EoSM

All EoSM components are still below 2024 EoSM target levels. Small progress is observed from the results of 2020. Improvements in safety management are still expected in all components during RP3 to achieve 2024 targets.

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

2.3 Safety occurrences

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



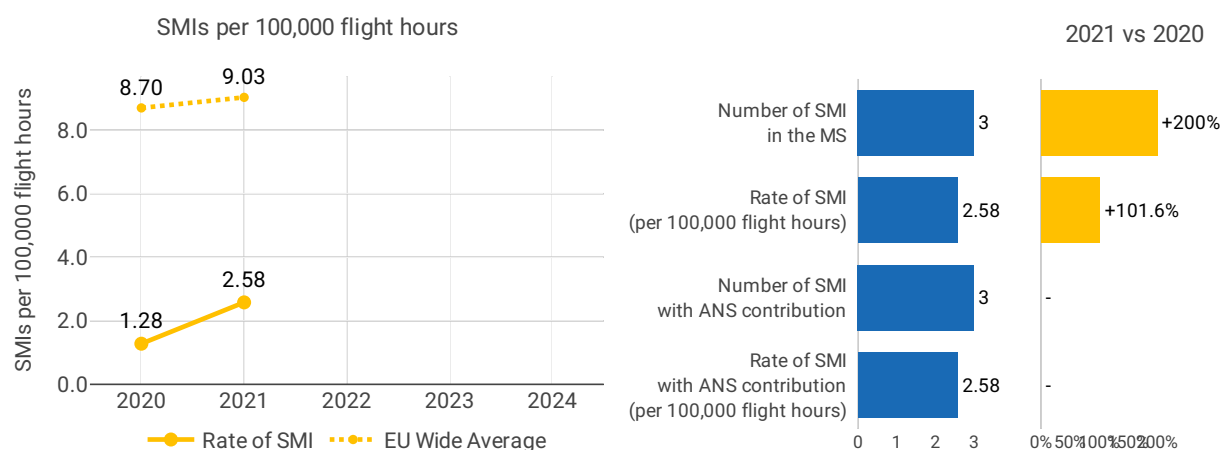
Rate of RIs per 100,000 airport movements - Cyprus

#	Airport name	APT movements	Number of RI	Rate RI per 100,000
1	Larnaca	NA	NA	NA
2	Papho	NA	NA	NA

Focus on runway incursions

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – 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	CYATS	78,614	116,453	NA	NA	NA	0	3	NA	NA	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	CYATS	0.0	2.6	NA	NA	NA	NA	0%	NA	NA	NA

Focus on separation minima

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

2.3.3 Quality of occurrences reporting

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

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

2021	
For RIs	For SMIs
X	X

Detailed information on Safety performance monitoring for the year 2021 are included in Performance Review Body Monitoring Report 2021, Annex III – Safety report

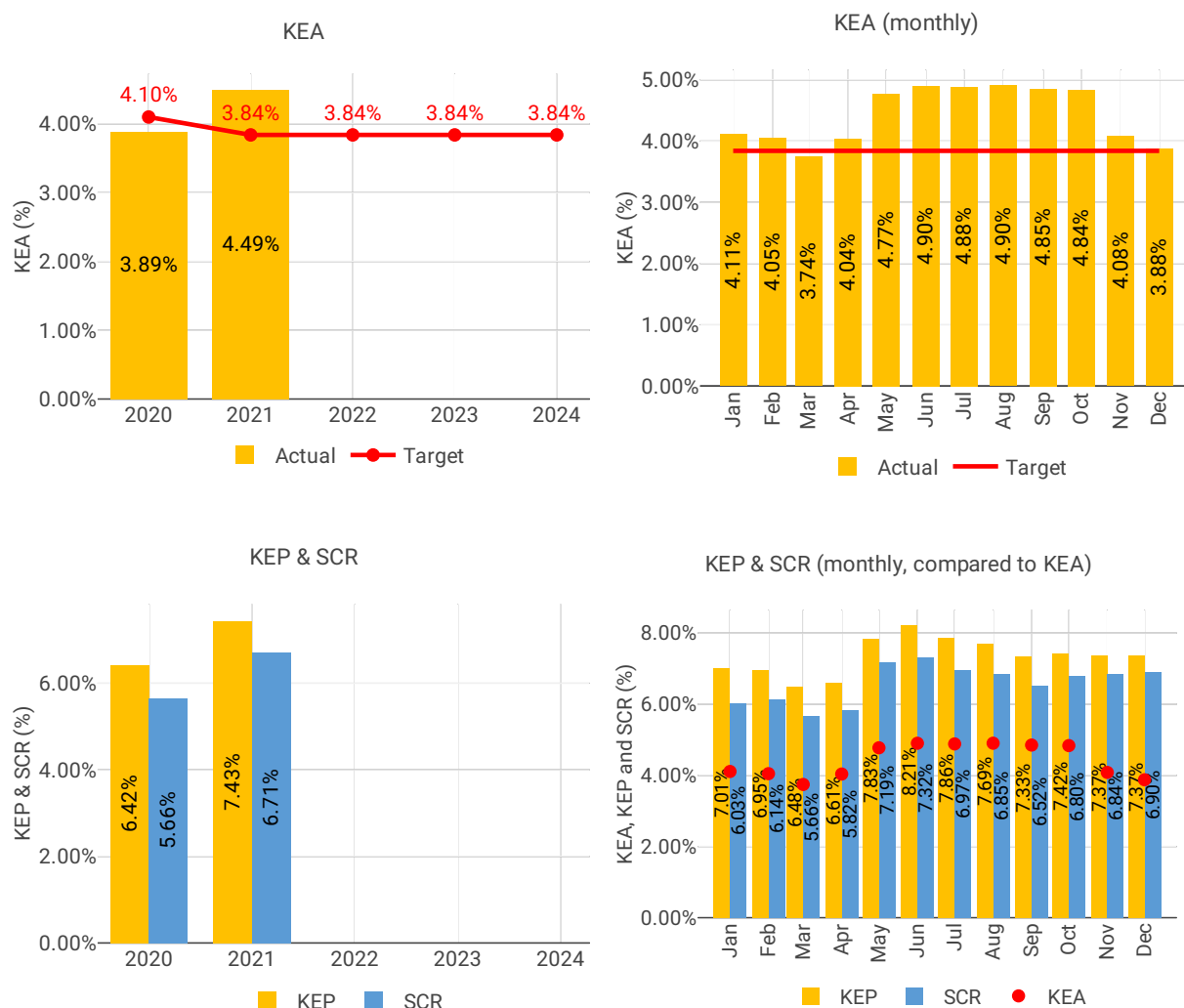
3 ENVIRONMENT - CYPRUS

3.1 PRB monitoring

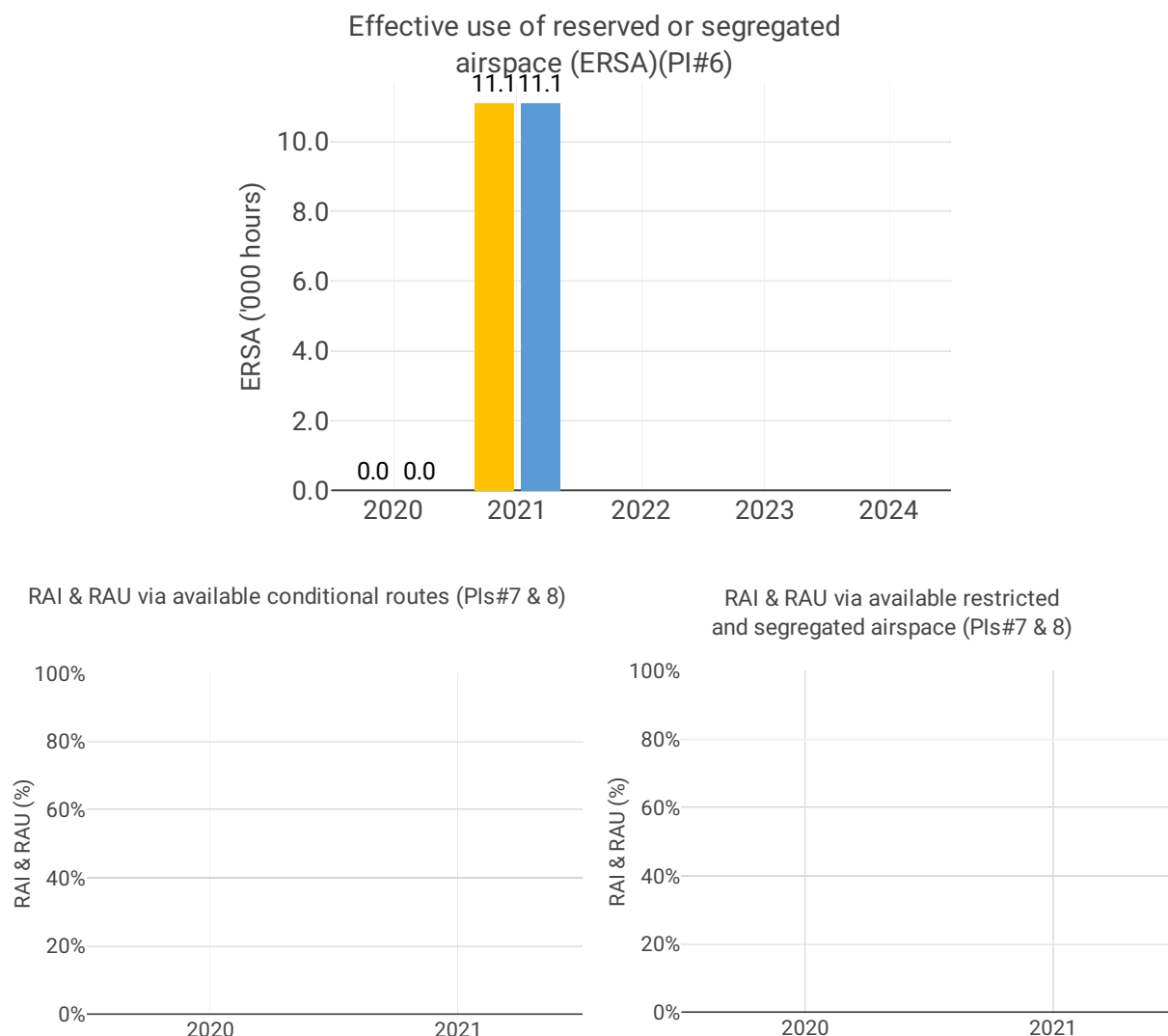
- Cyprus achieved a KEA performance of 4.49% compared to its target of 3.84% and did not contribute positively towards achieving the Union-wide target.
- KEA performance is the worst since 2017 despite lower traffic levels.
- The NSA states that new direct routes have been implemented and these are expected to improve performance to the levels targeted in the performance plan, should airspace users choose to use them.
- In 2021, the SCR indicator deteriorated to the level observed in 2019, meaning airspace users were unable to plan more shorter routes.
- KEP performance also worsened, likely as a result of the deterioration of the SCR.
- Cyprus has no airports that are regulated under the RP3 performance and charging scheme.

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 Civil-Military dimension



Focus on Civil-Military dimension

Update on Military dimension of the plan

The air navigation services in Nicosia FIR are provided with reference to the arrangements which have been established through the implementation of regulation (EC) 2150/2005 “laying down common rules for the flexible use of airspace”. (see section 5, Application of FUA).

The implementation of the said Regulation has been achieved through the adoption of the “National Plan for the Implementation of FUA”, signed on the 2nd of July 2009. The implementation of the National FUA plan ensures to the maximum possible extent, the most efficient use of airspace, both by civil and military users.

The activities of the National Military Authorities are predominately executed over the National airspace. The cooperation between the national Civil and Military Authorities is excellent and the effect on civil aviation is minimal.

Over the high seas however, which constitute the majority of the Nicosia FIR, a number of foreign Military authorities, most commonly the Russian Navy, USA Navy, French Navy, Israeli Air Force, British Air Force and Turkish military forces, regularly performed operational flights and exercises throughout 2021. Additionally, air carrier operations in Nicosia FIR combined with the different military authorities made it necessary to implement and upgrade the coordination among the willing authorities.

The activities of the British and Israeli forces were coordinated fairly well with the national authorities (AMC) keeping the adverse effect on ATS to minimal effect.

The most significant impact on ATS is caused by the refusal of the Turkish authorities to coordinate or cooperate with Cyprus on the conduct of any military activities in Nicosia FIR. Turkish activity NOTAMS

are issued by non-authorised entities relevant to these activities thus imposing a significant level of uncertainty on ATM management in Nicosia FIR adversely affecting capacity. A regular phenomenon is the penetration of Nicosia FIR or Cyprus National airspace in violation to ICAO procedures thus increasing the workload on ATC staff and hence having a detrimental effect on airspace capacity.

The political unrest in the South East Mediterranean region gave rise to the number of USA and Russian operational flights (OAT). These flights were rarely coordinated with the ATS authorities thus causing additional workload to ACC staff. Nevertheless, the situation in 2021 was better than previous years, as a consequence of the COVID-19 pandemic, better coordination with British and Israeli military authorities, enhanced cooperation among AMC/ATC units and aircraft carriers operating in the area and fewer operations of aircraft carriers south of Cyprus.

Military - related measures implemented or planned to improve capacity

At the moment, no measures are foreseen until the pandemic situation is more stable and the air traffic demand becomes more predictable.

Initiatives implemented or planned to improve PI#6

The NSA verifies through audits and inspections that the entity responsible for the tactical management of the airspace (AMC), monitors the planned Vs the actual times of airspace reservations so as to promote the most effective use of reserved or segregated airspace. In the context of its oversight inspections it has raised findings in order to drive positive change and to optimise the application of FUA and, as a result, improvements have been noted. For example, real time activation / de-activation of reserved areas is now implemented through the establishment of real time communications between the ATC Units and Military authorities.

Initiatives implemented or planned to improve PI#7

PRISMIL CURA is planned to be deployed during 2022. The data above is expected to be available after its implementation.

Initiatives implemented or planned to improve PI#8

PRISMIL CURA is planned to be deployed during 2022. The data above is expected to be available after its implementation.

4 CAPACITY - CYPRUS

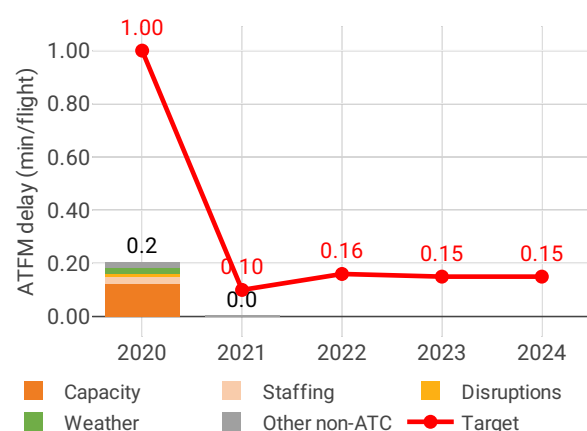
4.1 PRB monitoring

- Cyprus registered near zero minutes of average en route ATFM delay per flight during 2021, thus meeting the local breakdown value of 0.10.
- Delays should be considered in the context of lower traffic: in Cyprus, IFR movements in 2021 were 39% lower than in 2019.
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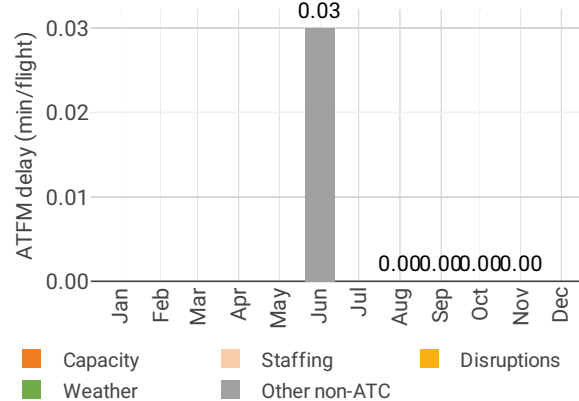
4.2 En route performance

4.2.1 En route ATFM delay (KPI#1)

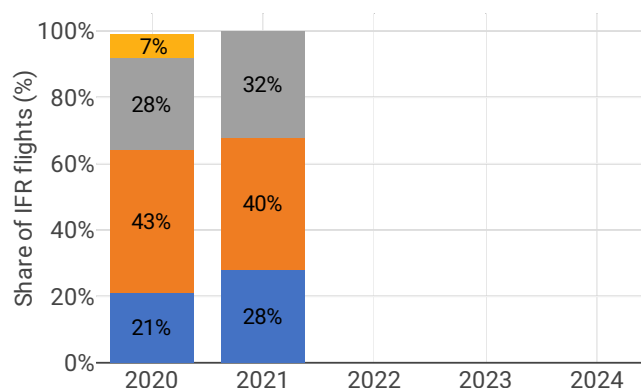
Average en route ATFM delay per flight by delay groups



Monthly distribution of en route ATFM delay by delay groups - 2021



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



Focus on en route ATFM delay

Summary of capacity performance

Cyprus experienced an increase in traffic from 164k flights in 2020 to 252k flights in 2021, with practically zero ATFM delay. However, traffic levels were still substantially below the 411k flights in 2019.

NSA's assessment of capacity performance

A historical drop of air traffic demand has been recorded due to the COVID-19 virus outbreak and the severe air travel restrictions imposed by the State in an effort to contain the pandemic (mid-March 2020). As a result, the average en-route delay per flight in 2021 was zero (0.0min), even though the air traffic demand increased significantly compared to the previous year (2020).

Monitoring process for capacity performance

The NSA has in place the "NSA procedure for the monitoring of ANS Performance". According to this procedure, the NSA monitors at quarterly intervals the average minutes of enroute ATFM (Air Traffic Flow Management) delay per flight. Based on this, the NSA analyzes the trends and takes the necessary measures, if needed.

Capacity planning

Capacity planning is done with the Network Manager and is consistent with the required performance.

Application of Corrective Measures for Capacity (if applicable)

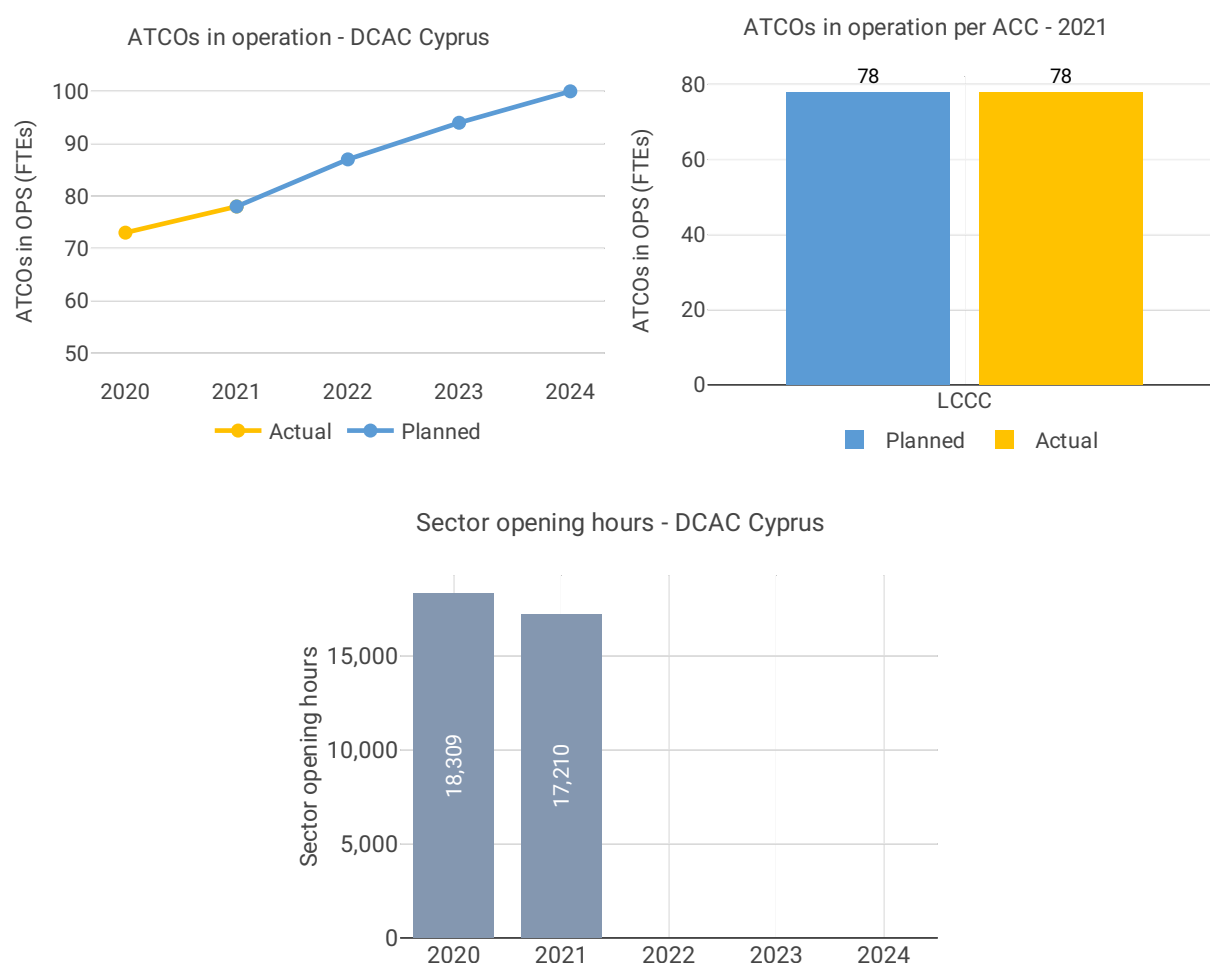
The monitoring report contains the following information about the new air traffic control centre:

The transfer to the new ACC which is planned in late 2022 to mid 2023 is expected to be the source of air traffic delays, which however will be of temporary nature. As the transfer will be done during a low traffic period the effect on the European Network is not expected to be significant. Efforts will be made so that any operation related to the transfer i.e. shadowing operations will be kept to the absolute minimum level so not to absorb HR from the actual ops at the new ACC.

The ATSp has recently implemented a new ATC sector at Larnaca Airport (an extension of the ACC main ATM system) with the prospect of providing Approach Control Service with surveillance (APS) by the end of RP3. This new ATC sector will absorb some human resources from the “core” en-route services, which will average between 5-8 FTE towards the end of RP3. To mitigate this, the ATSp has recently (in December 2021) agreed with the Unions some new working arrangements which will allow current ATC Tower ATCOs to continue their career by staying at Larnaca Airport and operating this new service. An effort to modify the ATCO employment contract (the, so called, “scheme of services”) is ongoing. The aim of the modification will be to significantly reduce the period between recruitment and assuming operational duties. In any case, the recruitment plan for new ATCOs will continue to be implemented so that the en-route service will continue to be provided without significant capacity constraints.

In conclusion, some air traffic delays may be attributed to these restructuring developments and the operation of the new ATC sector. The precise impact cannot be estimated at the moment since the service will begin in mid-2023 and will be provided in a limited manner. Nevertheless, the NM has confirmed that this new service will have significant net capacity benefits in the longer term.

4.2.2 Other indicators



Focus on ATCOs in operations

One ATCO was transferred to Brussels, to the Permanent Representation of Cyprus to the EU.

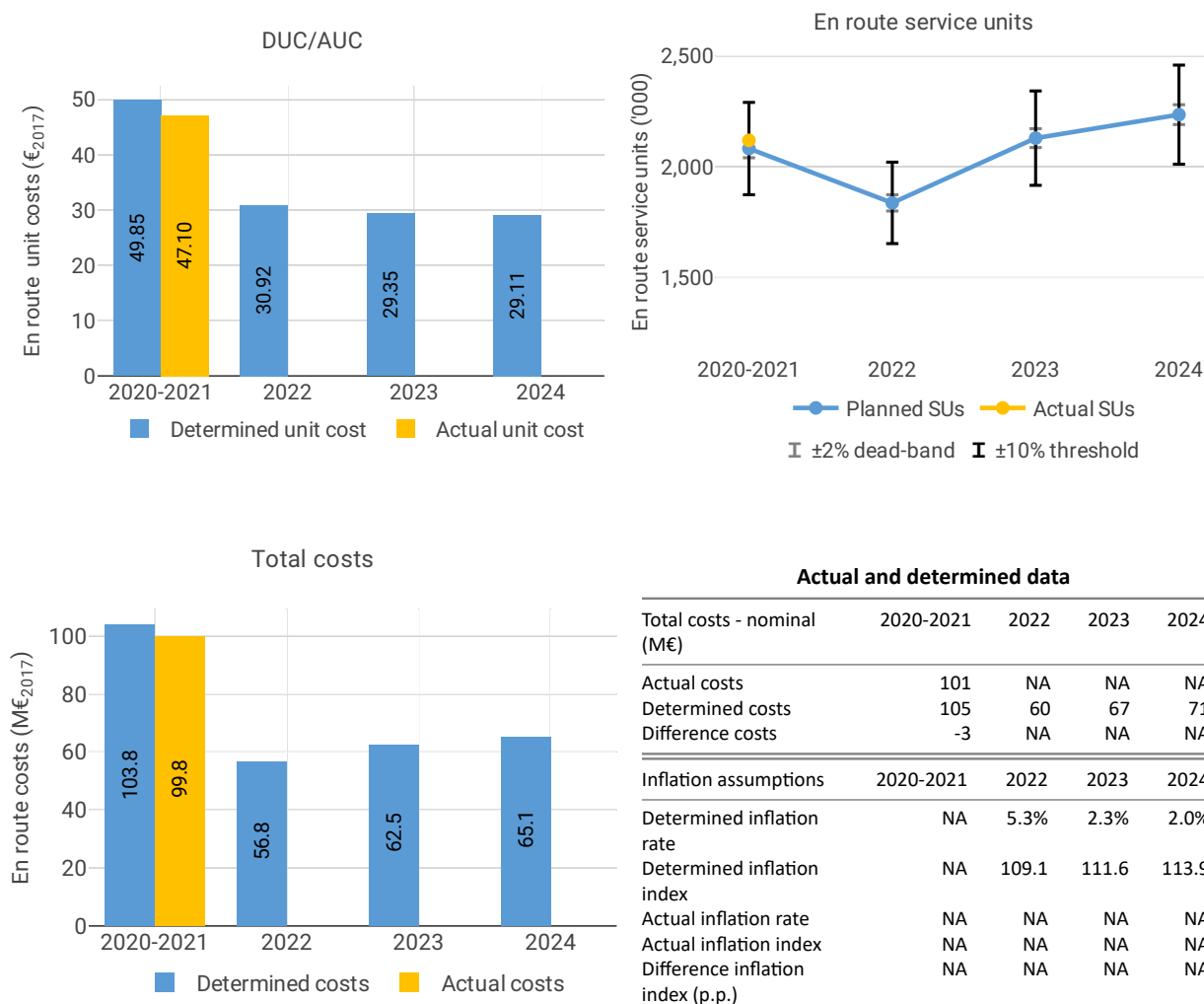
5 COST-EFFICIENCY - CYPRUS

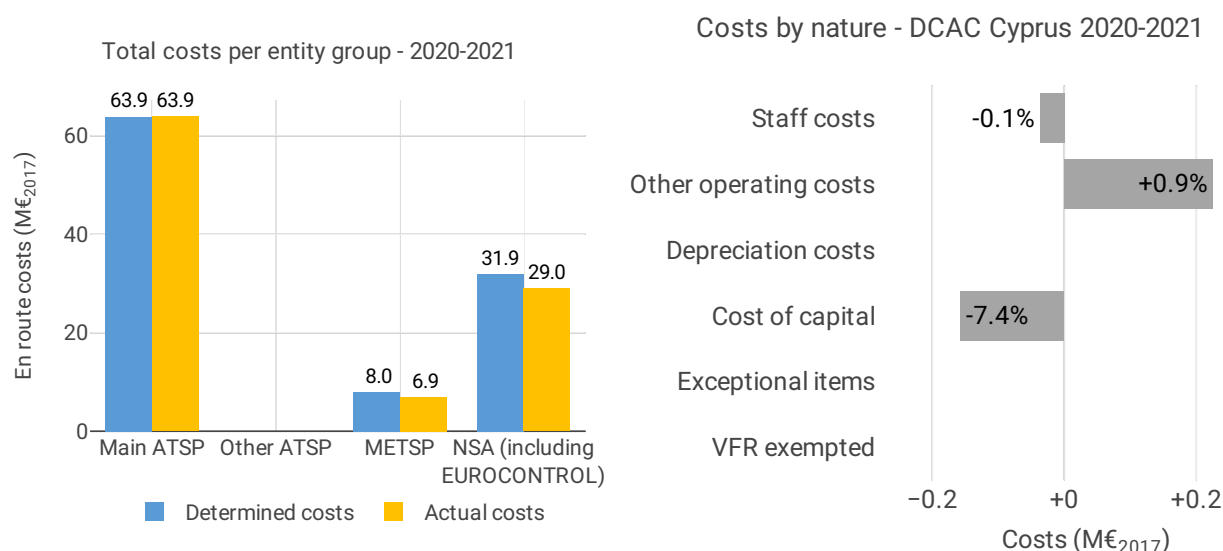
5.1 PRB monitoring

- The en route 2020/2021 actual unit cost of Cyprus was 47.10 €2017, -5.5% lower than the determined unit cost (49.85 €2017). Cyprus does not have a terminal charging zone.
- The en route 2021 actual service units (1,266K) were +3.0% higher than determined (1,230K).
- In 2021, actual total costs were -3.1 M€2017 lower (-5.7%) than determined. The main reduction was on staff costs (-1.1 M€2017, or -5.1%), mainly due to the postponement of hiring and early retirement in MET entity. Other operating costs decreased by -1.8 M€2017 (-6.5%), mainly due to a decrease in travels and Eurocontrol costs.
- DCAC Cyprus spent 2.3 M€2017 in 2021 related to costs of investments, -6.8% lower than determined (2.4 M€2017) mainly due to delays of projects caused by the pandemic.
- The en route actual unit cost incurred by users in 2020/2021 was 48.81€.

5.2 En route charging zone

5.2.1 Unit cost (KPI#1)





Focus on unit cost

AUC vs. DUC

In the combined year 2020-2021, the AUC was lower than the planned DUC (-5.5%, or -2.76€2017). This results from the combination of higher than planned TSUs (+1.7%) and lower than planned en route costs in real terms (-3.9%, or -4.0 M€2017).

En route service units

The difference between actual and planned TSUs (+1.7%) falls within of the $\pm 2\%$ dead band. Hence, the resulting gain of 1.1 M€ is entirely retained by the ANSP (see items 10 to 14).

En route costs by entity

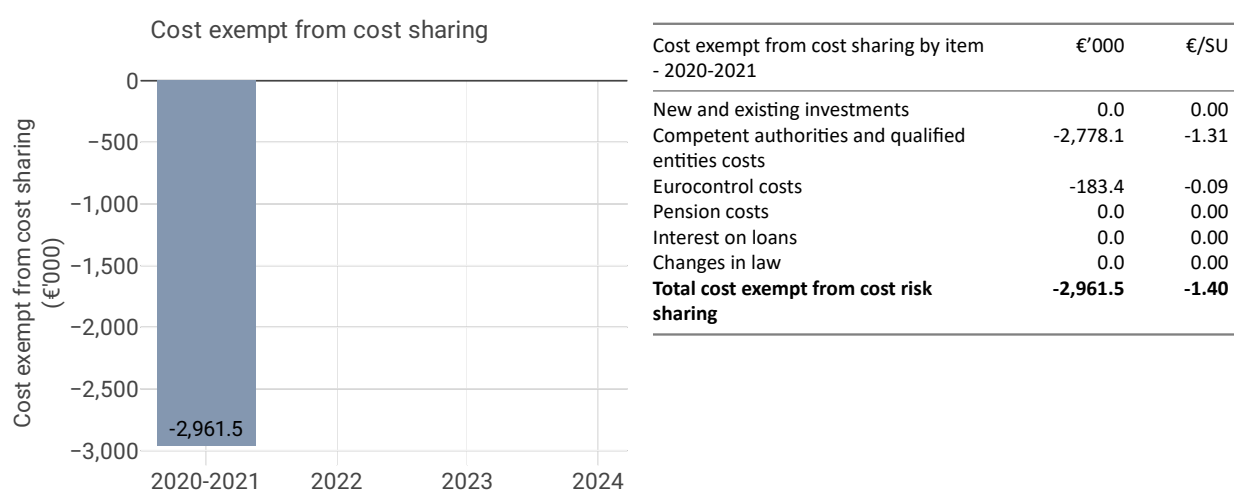
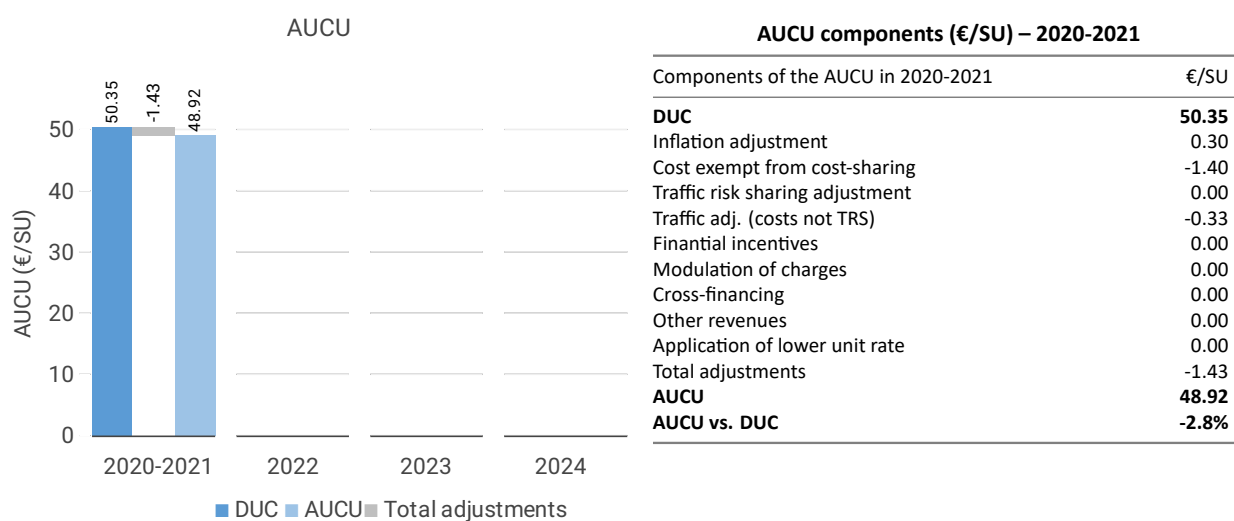
Actual real en route costs for 2020-2021 are -3.9% (-4.0 M€2017) lower than planned. This reflects the fact that while the costs for main ANSP – DCAC Cyprus remained mostly in line with the plan (+0.05%), the costs were much lower than planned for the MET service provider (-13.6%, or -1.1 M€2017) and the NSA/EUROCONTROL (-9.3%, or -3.0 M€2017).

En route costs for the main ANSP at charging zone level

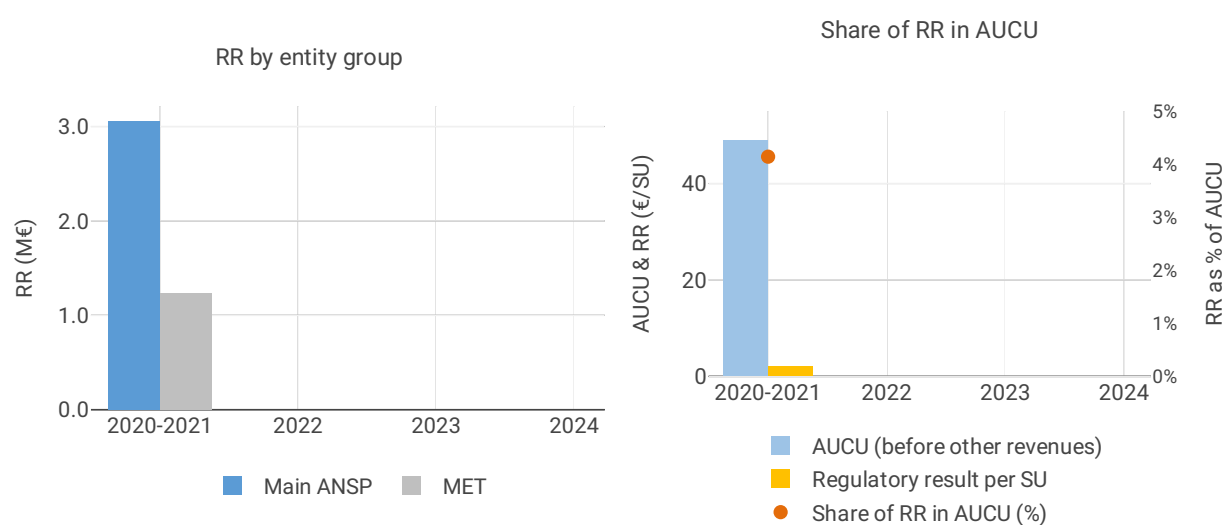
The stable en route costs in real terms for DCAC Cyprus in 2020-2021 reflects a combination of:

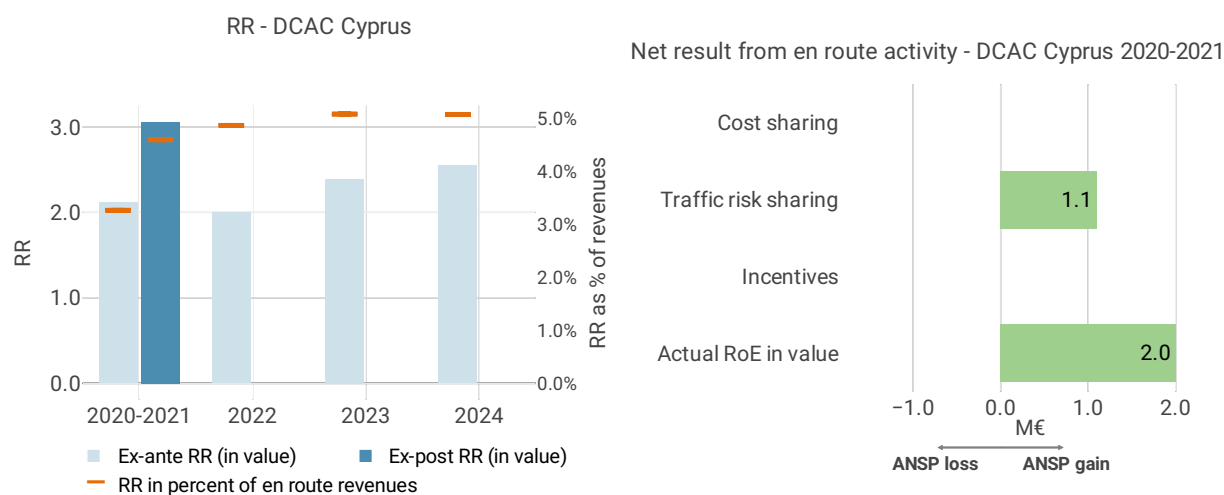
- mostly stable staff costs (-0.1%) in real terms, however, it should be noted that staff costs in nominal terms were slightly above the plan (+0.8%) which is explained by higher overtime costs and changes to the ATCO salary scales;
- slightly higher other operating costs (+0.9%), which are understood to reflect higher subcontracted CNS as well as maintenance costs;
- depreciation costs in line with the plan; and,
- lower cost of capital (-7.4%), reflecting lower than planned actual asset base resulting from delays in the investment programme.

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



5.2.3 Regulatory result (RR)





Focus on regulatory result

DCAC Cyprus net gain on en route activity in the Cypriot charging zone in the combined year 2020-2021

DCAC Cyprus's net gain amounts to +0.9 M€, as a combination of a loss of -0.2 M€ arising from the cost sharing mechanism and a gain of +1.1 M€ arising from the traffic risk sharing mechanism.

DCAC Cyprus 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 (+0.9 M€) and the actual RoE (+2.0 M€) amounts to +2.9 M€ (4.4% of the en route revenues). The resulting ex-post rate of return on equity is 7.0%, which is higher than the 4.8% planned in the PP.