

# Air navigation services and infrastructure used for both civil and military airspace us- ers under the performance and charging scheme of the Single European Sky

## Annex

October 2023

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## 1 ACRONYMS

The acronyms used in the report are detailed in this section.

ACC	Area Control Centre
AF	ATM Functionality
A-FUA	Advanced Flexible Use of Airspace
AIM	Aeronautical Information Management
AIS	Aeronautical Information Services
AMC	Airspace Management Cell
ANS	Air Navigation Services
ANSP	Air Navigation Service Provider
ARES	Airspace Reservation
ASM	Airspace Management
ATC	Air Traffic Control
ATCC	Air Traffic Control Centre
ATCO	Air Traffic Control Officer
ATFCM	Air Traffic Flow and Capacity Management
ATFM	Air Traffic Flow Management
ATM	Air Traffic Management
ATS	Air Traffic Services
ATSP	Air Traffic Service Provider
AUP	Airspace Use Plan
CAA	Civil Aviation Authority
CDM	Collaborative Decision Making
CIMACT	Civil-Military Aviation Coordination Tool
CNS	Communication, Navigation, Surveillance
CP1	Common Project One
CRCO	Central Route Charges Office
CTA	control area
CTR	Control zone
CURA	Civil Use of Released Airspace
CWP	Controller Working Position
DCB	Demand-Capacity Balancing
EASA	European Union Aviation Safety Agency
EATMN	European Air Traffic Management Network
EC	European Commission

ECAC	European Civil Aviation Conference
EDA	European Defence Agency
EU	European Union
EUROAT	EUROCONTROL Publication for harmonised Rules for OAT under IFR inside controlled Airspace of the ECAC Area
FIR	Flight Information Region
FPD	Flight Procedure Design
FPL	Flight Plan
FUA	Flexible Use of Airspace
GAT	General Air Traffic
ICAO	International Civil Aviation Organisation
IFP	Instrument Flight Procedure
IFPS	Flight Plan processing system
IFR	Instrument Flying Rules
LARA	Local and sub-regional airspace management support system
MCC	Military Control Centre
MET	Meteorology
MUAC	Maastricht Upper Area Control
NATO	North Atlantic Treaty Organisation
NM	Network Manager
NMIR	NM Interactive Reporting
NSA	National Supervisory Authority
OAT	Operational Air Traffic
PCP	Pilot Common Project
PRB	Performance Review Body
PRISMIL	Pan-European Repository of Information Supporting Civil-Military Performance Monitoring
SAR	Search And Rescue
SES	Single European Sky
SESAR	Single European Sky ATM Research
UIR	Upper Flight Information Region
UUP	Updated Airspace Use Plan

## 2 PRB QUESTIONNAIRE TO THE NATIONAL SUPERVISORY AUTHORITIES

### Air navigation services and infrastructure used for both civil and military airspace users Questionnaire to the National Supervisory Authorities

Member State(s):	
Name of Responding NSA:	
Contact person:	
E-mail address:	
Date of submission:	
Name of civil ANSP <sup>1</sup> :	
Name of military ANSP(s):	

#### I. ORGANISATION FOR THE PROVISION OF ANS BETWEEN CIVIL AND MILITARY

- Please describe the existing organisation for the provision of en route ANS (services and infrastructure) in place between the civil ANSP<sup>2</sup> and the military in your State.

Existing organisation for the provision of en route ANS between civil and military	
Please select from the list below the sentence which best reflects the existing organisation in your State:	
<input type="checkbox"/>	En route ANS to both GAT and OAT are provided primarily by a fully integrated civil-military ATSP.
<input type="checkbox"/>	En route ANS are provided separately primarily by the civil for flights operating under GAT and primarily by the military for flights operating under OAT from the same ACC.
<input type="checkbox"/>	En route ANS are provided separately primarily by the civil for flights operating under GAT and primarily by the military for flights operating under OAT, each from its own ACC(s)/ATC unit(s).
Additional comments:	

- OPTIONAL - Please indicate the aerodromes/airfields controlled and operated by the military which are also used to a significant extent for civilian GAT IFR flights in your State, if any.

Aerodromes controlled and operated by the military which are also used for GAT IFR flights, if applicable.
Additional comments:

<sup>1</sup> Or the civil-military fully integrated ANSP, if applicable.

<sup>2</sup> Subject to this questionnaire as indicated in the first box.

**II. SHARED USE OF AIR NAVIGATION SERVICES AND INFRASTRUCTURE BETWEEN CIVIL AND MILITARY<sup>3</sup>**

**II.A. AIR NAVIGATION SERVICES AND INFRASTRUCTURE PROVIDED OR MADE AVAILABLE BY THE CIVIL ANSP<sup>4</sup> TO NON-GAT IFR MILITARY FLIGHTS**

3. Please a) indicate with a “X” which types of services are provided by the civil ANSP to non-GAT IFR military flights, if any, and b) provide a short description/explanation of each type.

Type of services provided by the civil ANSP to non-GAT IFR military flights		
Service type	Used by military	Description of service use by military
ATS		
CNS		
MET		
SAR		
Other ANS		
Additional comments:		

4. Please a) indicate with a “X” which types of equipment are made available by the civil ANSP and used for services to non-GAT IFR military flights, if any, and b) provide a short description/explanation for each type.

Type of equipment made available by the civil ANSP and used for services to non-GAT IFR military flights		
Equipment type	Used by military	Description of equipment use by military
Building(s)		
ATC system		
Radars		
VOR/DMEs		
DMEs		
Other equipment		
Additional comments		

5. Please provide (an estimate of) the number of non-GAT IFR en route military flights availing of services/infrastructure provided by the civil ANSP for years 2019 to 2021.

Number of non-GAT IFR en route military flights availing of services/infrastructure provided by the civil ANSP for years 2019 to 2021.	
2019A	
2020A	
2021A	

<sup>3</sup> ANS infrastructure and services used for both GAT IFR flights covered by the SES and military flights outside the scope of the SES.

<sup>4</sup> Or the integrated civil-military ANSP.

6. Please indicate a) how the amounts relating to the costs for ANS provided by the civil ANSP to non-GAT IFR military flights for years 2019 to 2021 have been financed and b) how the NSA ensures that these amounts are excluded from the cost bases charged to airspace users<sup>5</sup> (for determined and actual costs).

Financing of costs for ANS provided or made available by the civil ANSP to non-GAT IFR military flights in 2019-2021
Verification by the NSA to ensure that the costs for ANS provided by the civil ANSP to non-GAT IFR military flights are excluded from the determined and actual costs for the en route and terminal charging zone covered by the SES performance and charging Regulation.

**II. B. AIR NAVIGATION SERVICES AND INFRASTRUCTURE PROVIDED OR MADE AVAILABLE BY THE MILITARY TO GAT IFR FLIGHTS**

7. Please a) indicate with a “X” which types of services are provided by the military to GAT IFR flights in the en route airspace concerned<sup>6</sup>, if any, and b) provide a short description/explanation of each type.

Type of services provided by the military to GAT IFR flights in the en route airspace concerned		
Service type	Used by GAT IFR	Description of service use by GAT IFR
ATS		
CNS		
MET		
SAR		
Other ANS		
Additional comments:		

8. Please a) indicate with a “X” which types of equipment are made available by the military and used for GAT IFR flights in the en route airspace concerned, if any and b) provide short description/explanation for each type.

Description of equipment owned by the military and used for GAT IFR flights		
Equipment type	Used by GAT IFR	Description of equipment use by GAT IFR
Building(s)		
ATC system		
Radars		
VOR/DMEs		
DMEs		
Other equipment		
Additional comments		

<sup>5</sup> In the scope of the performance and charging Regulation (EU) 2019/317.

<sup>6</sup> The airspace controlled by the civil ANSP subject to this questionnaire.

9. OPTIONAL - Please a) indicate which types of services and infrastructure are provided or made available to civilian GAT IFR flights at the military aerodromes/airfields listed in question 2 above and b) provide a short description/explanation.

Types of services and infrastructure provided or made available to civilian GAT IFR flights in the aerodromes/airfields controlled and operated by the military as listed in question 2 above.	
Additional comments:	

10. If applicable, please provide a) the **determined costs** for ANS provided by the military to GAT IFR flights which are included in the **en route cost base** for years 2019 to 2021, and b) describe the methodology used for calculating these costs.

Determined costs for ANS provided by the military to GAT IFR flights in 2019-2021 included in the en route cost base.	
2019D	
2020D	
2021D	
Methodology used for calculating the determined costs for ANS provided by the military to GAT IFR flights in 2019-2021 which are included in the en route cost base (if applicable).	
Additional comments:	

11. If applicable, please provide a) the **actual costs** for ANS provided by the military to GAT IFR flights that are included in the **en route cost base** for years 2019 to 2021, and b) describe the methodology used for calculating these costs.

Actual costs for ANS provided by the military to GAT IFR flights in 2019-2021 included in the en route cost base.	
2019A	
2020A	
2021A	
Methodology for calculating the actual costs for en route ANS provided by the military to GAT IFR flights in 2019-2021 which are included in the en route cost base (if applicable).	
Additional comments:	

### III. IMPLEMENTATION AND OPERATION OF FUA

12. Please provide a) an estimate of the actual costs in '000 national currency and nominal terms incurred by the civil and military implementation and operation of FUA and b) specify what these costs include, and c) how they are financed.

En route actual costs in respect of FUA ('000 nat. curr.)	
ANS provided in year:	Actual costs
2019A	
2020A	
2021A	
Description of the en route costs incurred in respect of FUA in 2019-2021	
Financing of en route costs incurred in respect of FUA in 2019-2021	

### IV. EXEMPTION OF MILITARY FLIGHTS FROM THE PAYMENT OF EN ROUTE CHARGES

13. Please describe the policy of exemption of military flights<sup>7</sup> from en route charges in your State.

Policy of exemption of military flights from en route charges

14. Please provide the amounts relating to the costs for the services provided to military flights exempted from en route air navigation charges<sup>8</sup>, in respect of years 2019 to 2021 (in '000 national currency and nominal terms), separately for determined and actuals.

Costs for exempted military flights ('000 nat. curr.)		
ANS provided in year:	Determined costs	Actual costs
2019		
2020		
2021		

15. Please indicate how these amounts have been financed<sup>9</sup> for years 2019 to 2021.

Financing of en route costs for exempted military flights in 2019-2021	
ANS provided in year:	Amounts financed in respect of exempted military flights
2019	
2020	
2021	

<sup>7</sup> Performance and charging Regulation (EU) 2019/317 Article 31 (4).

<sup>8</sup> Performance and charging Regulation (EU) 2019/317 Article 22 (6) (b) and 23.

<sup>9</sup> Performance and charging Regulation (EU) 2019/317 Article 31 (6).

### 3 REPLIES RECEIVED TO PRB QUESTIONNAIRE BY THE NATIONAL SUPERVISORY AUTHORITIES

Member State	Name of Responding NSA	Date of submission	Name of civil ANSP	Name of military ANSP(s)
Austria	Austrian NSA	28-04-2023	Austro Control	Directorate 2 (Federal Ministry of Defence)
Belgium	Belgian NSA	09-06-2023	skeyes/ MUAC Belgium	Belgian Airforce
Bulgaria	Bulgaria NSA	20-04-2023	BULATSA	BULGARIAN AIR FORCE - BUAF
Croatia	Croatia NSA	21-04-2023	Croatia Control	
Cyprus	Cyprus NSA	04-05-2023	DCAC Cyprus	N/A
Czech Republic	CAA Czech Republic	05-05-2023	ANS CR	Air Force Czech Republic
Denmark	Not received	Not received	Not received	Not received
Estonia	Not received	Not received	Not received	Not received
Finland	Finland NSA	31-03-2023	Fintraffic ANS	-
France	France NSA	24-04-2023	DSNA	
Germany	BAF (German NSA)	25-04-2023	DFS Deutsche Flugsicherung GmbH	Zentrum Luftoperationen (ZLO)
Greece	Greece NSA (HCAA)	24-04-2023	HASP	Hellenic Air Force (HAF).
Hungary	Hungarian NSA	04-04-2023	HungaroControl	
Ireland	Irish NSA	19-07-2023	IAA	Irish Air Corps
Italy	Italian NSA	24-04-2023	ENAV	ITAF (Italian Air Force)
Latvia	Latvian NSA	17-04-2023	LGS	Military CRC (Control Report Service)
Lithuania	Lithuania NSA	26-04-2023	Oro Navigacija AB	LITHUANIAN AIR FORCE
Malta	Malta NSA	25-04-2023	MATS	N/A
MUAC	Netherlands NSA	25-04-2023	MUAC	De Minister van Defensie
Netherlands	Netherlands NSA	25-04-2023	LVNL	De Minister van Defensie
Norway	Norwegian NSA	21-04-2023	Avinor Flysikring AS (ANS)	
Poland	Polish NSA	24-04-2023	Polish Air Navigation Services Agency (PANSA)	Military Air Traffic Service Office (MATSO)
Portugal	Not received	Not received	Not received	Not received
Romania	Romania NSA	20-04-23	ROMATSA	N/A for GAT
Slovakia	Slovakia NSA	26-04-2023	LPS	N/A

Slovenia	Slovenia NSA	10-04-2023	Slovenia Control	n/a
Spain	Spanish Civil NSA – AESA (State Safety and Security Aviation Agency)	11-04-2023	ENAIRES - AEMET	ANSP EA
	Spanish Military NSA – Spanish Air and Space Force			
	Spanish Meteorological NSA - MITERD			
Sweden	Sweden NSA	21-04-2023	LFV	LFV
Switzerland	Switzerland NSA	24-05-2023	Skyguide	

#### 4 ACTUAL EN ROUTE SERVICE UNITS FOR EXEMPTED GAT IFR FLIGHTS (TOTAL, EXEMPTED, AND MILITARY EXEMPTED)

En route charging Zones	2018		2019		2020		2021		2022	
	Total SU	SU military ex-empted	Total SU	SU military ex-empted	Total SU	SU military ex-empted	Total SU	SU military ex-empted	Total SU	SU military ex-empted
Austria	3,198	8	3,340	7	1,509	6	1,799	7	3,248	7
Belgium-Luxembourg	2,644	12	2,621	12	1,081	11	1,167	11	2,096	12
Bulgaria	3,938	30	4,032	30	1,767	32	2,270	35	3,871	28
Croatia	1,994	2	2,194	3	929	3	1,519	4	2,229	4
Cyprus	1,897	22	2,068	22	852	25	1,266	25	1,788	21
Czech Republic	3,041	34	2,937	35	1,139	37	1,280	37	1,814	36
Denmark	1,709	9	1,781	8	717	9	785	9	1,282	14
Estonia	920	1	901	1	419	1	467	1	429	2
Finland	940	1	1,011	1	462	1	495	1	598	1
France	21,450	141	21,786	137	8,546	131	11,181	137	18,898	125
Germany (1)	14,932	36	15,132	32	6,793	32	7,679	33	12,519	46
Greece	5,600	84	6,006	79	2,755	79	4,048	72	6,416	63
Hungary	3,236	26	3,162	26	1,423	27	1,727	29	3,184	29
Ireland	4,550	38	4,642	39	1,986	33	2,419	33	4,233	38
Italy	9,434	127	10,047	123	3,990	115	5,783	123	9,562	122
Latvia	938	6	958	6	439	5	542	5	466	8
Lithuania	603	3	619	3	333	4	443	4	376	5
Malta	935	33	1,020	29	396	31	504	32	667	27
Netherlands	3,392	29	3,382	30	1,480	30	1,565	29	2,586	38
Norway	2,522	17	2,437	16	1,230	13	1,445	14	2,071	20
Poland	4,666	28	4,972	28	2,146	27	2,586	27	3,129	65
Portugal	3,856	25	4,061	27	1,556	26	1,988	30	3,695	25
Romania	5,101	37	5,118	39	2,246	40	2,870	44	4,770	42
Slovakia	1,296	11	1,292	12	475	12	612	12	973	12
Slovenia	572	1	628	1	264	1	370	1	595	3
Spain Canarias	1,788	11	1,952	12	803	9	1,008	8	1,790	9
Spain Continental	11,059	67	11,490	70	4,437	57	6,383	64	11,079	62
Sweden	3,813	13	3,821	10	1,677	7	1,795	10	2,472	16
Switzerland	1,741	1	1,769	1	651	1	897	2	1,545	1
<b>Union-wide</b>	<b>121,765</b>	<b>854</b>	<b>125,177</b>	<b>837</b>	<b>52,500</b>	<b>802</b>	<b>66,893</b>	<b>839</b>	<b>108,380</b>	<b>882</b>

(1) Excluding service units for flight segments performed as Operational Air Traffic.

Source: Central Route Charges Office, Report on the Operation of the Route Charges System in 2018-2022.

Charging Zone	2018	2019	2020	2021	2022
	SU military exempted / total SU				
Austria	0.3%	0.2%	0.4%	0.4%	0.2%
Belgium-Lux-	0.4%	0.4%	1.0%	1.0%	0.6%
Bulgaria	0.8%	0.7%	1.8%	1.5%	0.7%
Croatia	0.1%	0.1%	0.3%	0.3%	0.2%
Cyprus	1.2%	1.0%	2.9%	2.0%	1.2%
Czech Republic	1.1%	1.2%	3.2%	2.9%	2.0%
Denmark	0.5%	0.4%	1.2%	1.1%	1.1%
Estonia	0.1%	0.1%	0.2%	0.2%	0.4%
Finland	0.1%	0.1%	0.1%	0.2%	0.2%
France	0.7%	0.6%	1.5%	1.2%	0.7%
Germany (1)	0.2%	0.2%	0.5%	0.4%	0.4%
Greece	1.5%	1.3%	2.9%	1.8%	1.0%
Hungary	0.8%	0.8%	1.9%	1.7%	0.9%
Ireland	0.8%	0.8%	1.7%	1.4%	0.9%
Italy	1.3%	1.2%	2.9%	2.1%	1.3%
Latvia	0.6%	0.6%	1.1%	1.0%	1.6%
Lithuania	0.6%	0.5%	1.2%	1.0%	1.4%
Malta	3.5%	2.9%	7.8%	6.3%	4.1%
Netherlands	0.9%	0.9%	2.0%	1.9%	1.5%
Norway	0.7%	0.6%	1.1%	1.0%	1.0%
Poland	0.6%	0.6%	1.3%	1.0%	2.1%
Portugal	0.7%	0.7%	1.6%	1.5%	0.7%
Romania	0.7%	0.8%	1.8%	1.5%	0.9%
Slovakia	0.8%	0.9%	2.5%	2.0%	1.2%
Slovenia	0.2%	0.2%	0.2%	0.3%	0.5%
Spain Canarias	0.6%	0.6%	1.1%	0.8%	0.5%
Spain Conti-	0.6%	0.6%	1.3%	1.0%	0.6%
Sweden	0.3%	0.3%	0.4%	0.5%	0.6%
Switzerland	0.1%	0.1%	0.1%	0.2%	0.1%
<b>Union-wide</b>	<b>0.7%</b>	<b>0.7%</b>	<b>1.5%</b>	<b>1.3%</b>	<b>0.8%</b>

(1) Excluding service units for flight segments performed as Operational Air Traffic.

Source: Central Route Charges Office, Report on the Operation of the Route Charges System in 2018-2022.

## 5 PRB ANALYSIS OF THE NSA REPLIES

### 5.1 Organisation for the provision of ANS between civil and military

- 1 The ANSPs that the PRB allocated or re-allocated for the purpose of the report and the rationale for the allocation are described below for each of the models (see section 3 of the report).

#### *Integrated civil-military ANSPs*

- 2 **DCA Cyprus:** The Cypriot NSA did not select any of the models and indicated that “there are no military entity(ies) providing services to GAT in the airspace covered by the civil ANSP.” The PRB understands from the LSSIP that “the Cypriot National Guard does not have any ATM service provision role. Any services to OAT are provided by DCAC-ANSP or, in the case of MET the by the Cyprus Meteorological Service”.<sup>10</sup> The PRB therefore assigned DCA Cyprus to the “integrated civil-military ANSPs” model for the purpose of the report.
- 3 **MATS:** The Maltese NSA did not select any of the models as it indicated that none of the “applies to Malta as the ATSP is a civilian company which handles both civilian and military AT”. The PRB therefore assigned MATS to the “integrated civil-military ANSPs” model for the purpose of the report.
- 4 **MUAC:** The Dutch NSA indicated that “MUAC has differing arrangements per State. In the Netherlands: (Airspace Management Cell (AMC) and civil/military integration for ATS; In Germany: civil/military integrated for ATS; in Belgium: MUAC controls military flights en-route when flying as GAT, BelDef controls OAT. All services above FL245”. For the report, the PRB presents MUAC in the “integrated civil-military ANSPs” model, although not applicable to Belgium’s and Luxembourg’s situations.

#### *Co-located civil and military ANSPs*

- 5 **Austro Control:** The Austrian NSA presented Austro Control in the “separated civil and military ANSPs” model. However, the NSA also indicates that “some of Austro Control’s facilities, data and rooms are used for the provision of military air navigation services”. The PRB therefore

reassigned Austro Control to the “co-located civil and military ANSPs” model for the purpose of the report.

- 6 **ENAV:** The Italian NSA presented ENAV in the “separated civil and military ANSPs” model. However, the PRB understands from the LSSIP that: “Air traffic services to OAT are provided by ITAF with the 4 SCCAM (Coordination and Control Service for the Air Force) co-located within ENAV’s ACCs and the other Military ATC Units for TWR and APP Services. The SCCAM location inside the ENAV’s ACC ensures close cooperation between civil and military Air Traffic Controllers with the provision of services (GAT by ENAV, OAT by ITAF) regulated by local Letters of Agreement in accordance with Italian legislation. The co-location of civil and military controllers in the same operational room allows them to use the same fully integrated equipment”.<sup>11</sup> The PRB therefore reassigned ENAV to the “co-located civil and military ANSPs” model for the purpose of the report.
- 7 **IAA:** The Irish NSA reported the Irish ANSP in the “separated civil and military ANSPs” model. However, the PRB understands from the additional comments provided in questions 1, 3, and 4 that the military have access to the Dublin ACC sector and use a COOPANS sector of the ATC system in Dublin ACC. In addition, the PRB understands from the LSSIP that “military ATC units share the same facilities and systems as the civil units, but they only manage the traffic within the military areas. Any military airplane transiting civil airspace will be controlled by a civil ATC unit”.<sup>12</sup> Based on this, the PRB reassigned IAA to the “co-located civil and military ANSPs” model for the purpose of the report.

#### *Separated civil and military ANSPs*

- 8 **ORO Navigacija:** The Lithuanian NSA did not select any of the models as it indicated that none of the models of question 1 reflects the situation in Lithuania “No military ANS service provider, no military ACC, no licensed ATCOs under Ministry of Defence of Lithuania. OAT flights are operated and coordinated by military ATC units based abroad”.

<sup>10</sup> LSSIP Year 2021 Cyprus, p.25.

<sup>11</sup> LSSIP Year 2021 Italy, p.36.

<sup>12</sup> LSSIP year 2021 Ireland, p.26.

On this basis, the PRB assigned ORO Navigacija to the “separated civil and military ANSPs” model for the purpose of the report.

## 5.2 ANS costs for resources used for both civil and military airspace users

*ANS infrastructure and services provided or made available by the civil ANSPs to non-GAT military flights (NSA replies to questions 3, 4 and 6)*

9 Services and infrastructure provided by integrated civil-military ANSPs **DCA Cyprus**: The NSA confirms that “the civil ANSP does not provide services to non-GAT IFR military flights”. The PRB understands that, although DCA Cyprus is the only ANSP in Cyprus airspace responsible for providing ANS to GAT and OAT, there is *de facto* no ANS to OAT and the controlled IFR military flights are all flying under GAT. Hence no costs are associated to the provision of such services.

10 **Croatia Control**: The Croatian NSA reports that Croatia Control “provides integrated ANS service both to GAT and OAT services”. Croatia Control provides ATS, CNS, MET and AIS/AIM services to military non-GAT flights and “owns the equipment for the purpose of the provision of integrated ATS service”. The Croatian NSA indicates that a “financial agreement between the CCL and the Ministry of Transport stipulates that all exempted IFR flights (incl. military) are reimbursed to the ANSP from State budget”. The PRB understands that this answer to question 6 refers to the financing of ANS provided to exempted GAT military flights (addressed in question 15) and not to the financing of ANS provided to non-GAT military flights. The PRB also understands from the answer provided to question 4, that Croatia considers that the marginal cost for providing ANS to non-GAT military flights is insignificant for the equipment made available to the military as the equipment owned by Croatia Control “for the purpose of the provision of integrated ATS service [...] would have been used irrespectively of military stakeholder”. The PRB therefore infers that that no costs for ANS or equipment used by military non-GAT flights are deducted from the air navigation cost bases covered by the SES.

11 **ANS CR**: The NSA indicates that the following services are provided to the military: ATC services (ACC), CNS (the military uses both civil and military SUR services for identification and correlation of

all flights), SAR (integrated civil-military RCC) and other ANS (Military uses the AIP CR although they have their own military AIP). In respect of infrastructure, the integrated AMC unit is deployed in the civil ATCC building and some of the military ATM/ANS servers are installed in the civil IATCC building to ensure safe and reliable exchange of data and information. The military use the ATC TOPSKY system (only for OAT - Compatible flights). SUR data is shared, as well as VOR/DMEs and DMEs for en route. The Czech NSA clarifies that “ANS for OAT Compatible flights (OAT-C) are provided primarily by civil ATSP. ANS for OAT Special flights (OAT-S) are provided by military units.” The Czech NSA reports that “the costs related to these flights are financed through state budget (Agreement concluded between ANS CR and Ministry of Defence) annually amounted to around 260,000€, i.e. 0.25 % of the total cost base”. However, these amounts were not directly deducted from the cost base until 2022 for the following reasons:

- Only a small portion (10%) of these flights (OAT-C) from military airports to military areas take place in the airspace covered by ANS CR services, while the largest portion (90%) takes place in the area of responsibility of regional airports (below flight level 125 ft) which are exempted from scope of the performance and charging Regulation (EU) 2019/317.
- “The costs are insignificant, equalling to some 0.25 % of en-route cost base, furthermore services provided for these flights are essential for ensuring smooth operations of the commercial traffic.”

12 The NSA indicates that from 2022, due to organisational change, these services are provided by the ACC and that, therefore, the above-mentioned payment from the Ministry of Defence is deducted from the calculation of the unit rate as national public funding. The PRB notes that this is reflected in respect of 2022 in the reporting tables submitted in June 2023 for the en route charging zone.

13 **Fintraffic ANS**: The Finnish NSA reports that Fintraffic ANS partially provides OAT services in TRA areas. These include ATS (TWR, APP, ACC, AMC, and FPC), CNS, MET (based on data purchased from FMI), SAR, and AIS. Infrastructure and equipment made available to non-GAT flights comprise the ATCC Helsinki building, the ATC system,

radars, VOR/DMEs (made available by Finavia and used by Fintraffic ANS for service provision), DMEs and AIS equipment. The Finnish NSA reports that “Fintraffic ANS do not receive any funding for non-GAT IFR military flights from the military”. It also indicates that “it is very rare to provide such service in SES-regulated charging zones and has a marginal effect on the cost base. So far, this specific item has not been on the scope for the cost verifications”. The PRB therefore concludes that no costs for ANS provided to military non-GAT flights are deducted from the air navigation cost bases covered by the SES.

- 14 **DFS:** The German NSA reports that DFS provides ATS and CNS services to non-GAT flights. Infrastructure and equipment made available to the military include office space for military personnel within DFS, ATC system (Phoenix), radars, VOR/DMEs, DMEs and TACAN. “The civil and military radar network are used in a shared manner” (see also para 56). “All services provided by DFS and used by the military are subject to contractual agreements that cover financial agreement”. The German NSA indicates that “cost reimbursement for non-GAT IFR military flights (OAT) is provided by the German Ministry of Defence”. The PRB notes that the treatment of traffic relating to non-GAT flights (OAT flights) is specific for Germany, as service units relating to OAT flights are included in the total service units recorded by the CRCO and by STATFOR, but are excluded for the establishment of the unit rates. In respect of the verification by the NSA, the answer to question 6 specifies that in addition to the “general tasks of supervision of the service provision by DFS and the examination of the presented cost base for the respective performance plan, NSA is also regular member of the committee on civil-military cooperation (AZMZ) and has direct contact to the unit responsible for billing issues at ZLO”.<sup>13</sup>
- 15 **MATS:** The Maltese NSA states that “the Maltese military have no operated non-GAT IFR flights. Further, the ANSP does not have visibility of foreign OAT military within the Malta FIR as these operate on the principle of due regard. The Maltese government does not authorise foreign military aircraft to operate within Maltese sovereign airspace as OAT traffic”. The PRB understands that,

although MATS is the only ANSP in Malta airspace responsible for providing ANS to GAT and OAT, there is de facto no ANS to OAT and the controlled military flights are all flying under GAT.

- 16 **MUAC:** The Dutch NSA explains that “MUAC has differing arrangements per State”.<sup>14</sup> “Since 2017, MUAC has controlled military air traffic in the upper airspace of Germany and the Netherlands.”<sup>15</sup> In the Netherlands and Germany, MUAC provides ATS to non-GAT flights above FL245 and makes available building space and the ATC system to the military. In Belgium and Luxembourg, MUAC controls military flights en-route when flying as GAT, while the Belgian Defence controls OAT.
- 17 The Dutch NSA reports that the amounts relating to ANS provided to non-GAT flights are covered through “financial contributions from respective military counter parties”. The amounts include:
- A contribution for OAT from the German MoD (2019: not available; 2020: 9,481,880€; 2021: 9,650,238€);
  - A contribution from the Belgian Defence for the SAS 2 system (2019: 939,324€; 2020: 740,000€ 2021: 957,840€); and
  - A contribution from the Netherlands MoD for OAT & AMC service provision (2019: 3,072,955€; 2020: 2,984,163€, 2021: 2,908,608€).
- 18 In respect of the verification by the NSA, the Dutch NSA reports that it “is part of the MUAC Finance Performance Committee which receives and controls all MUAC financial and performance reports”.
- 19 **Avinor:** The Norwegian NSA reports that “Avinor ANS provides en route and approach services for all military activity”. This includes ATS (ATC, FIS), CNS, MET, and SAR services. Infrastructure and equipment made available to the military include the ACC building, the ATC system (NATCON), CNS equipment, and FPL services. The NSA reports that the ANS costs to the military, including the costs “incurred by separation of civilian/ military traffic as a consequence of military activity in its own allocated areas, cf. the FUA regulations, are in previous RPs (up to 2019) covered by Avinor AS through commercial income based on invoices

<sup>13</sup> Zentrum Luftoperationen (ZLO), military ANSP in Germany.

<sup>14</sup> The Dutch NSA is the NSA for MUAC.

<sup>15</sup> <https://www.eurocontrol.int/info/about-our-maastricht-upper-area-control-centre>.

- from Avinor Flysikring AS (ANSP) according to the national regulations. In 2020-2021 these costs were financed by both military and civil airspace users through the en-route cost base (approx. 32.5 MNOK)". In respect of the verification by the NSA, the Norwegian NSA indicates that "ANS-costs regarding military flights are included in the cost base. Chargeable military flights (exempted military flights from Eurocontrol), national A-B military IFR-flights are invoiced directly from Avinor Flysikring AS (ANS) to the military".
- 20 The PRB understands that the above-mentioned costs of 32.5MNOK (around 3.3M€) per year are not only relating to FUA implementation and operations (question 12) but also include ANS provided by Avinor to military non-GAT flights. The PRB also understands that the amounts invoiced by Avinor to the military relate to the costs of ANS provided to exempted military GAT flights and not to OAT military flights.
- 21 If this confirmed, the inclusion of costs relating to ANS to OAT flights in the cost base would not be compliant with the SES regulations.
- 22 **Slovenia Control:** The Slovenian NSA reports that "Slovenia Control is the only ANSP in the Republic of Slovenia. It is not considered as a civil-military provider, but strictly civil." The ANS and infrastructure reported to be provided to the military are marked as being provided "in the same scope as to GAT". The NSA further clarifies that "OAT is not implemented".
- 23 The Slovenian NSA marked question 6 on financing as not applicable. The PRB understands that, although Slovenia Control is the only ANSP in Slovenian airspace responsible for providing ANS to GAT and OAT, there is *de facto* no ANS to OAT and the controlled IFR military flights are all flying under GAT. Hence no costs are associated to the provision of such services.
- 24 **LFV:** The Swedish NSA reports that "LFV is a combined civil and military ANSP and is completely integrated with the military". ANS provided to non-GAT flights include ATS (LFV handle all military flights outside of military exercise sectors, CNS (Military uses all S services. Part of C and assumingly they use N infrastructure available for all flying), MET (LFV provide part of MET services to military even if they also have their own MET parts) and AIM. The equipment made available to the military comprise buildings, ATC system (all controlled from ACC in the ATM system), radars (used by LFV and also by military for their own purposes), VOR/DMEs, and DMEs.
- 25 The Swedish NSA indicates that LFV have agreements with military for various services that LFV provide for the military. One for local ATS, one for en route and several for specific services such as AIM. All of these are calculated based on various factors agreed between LFV and military. For SAR, "the financial allocation model of SAR separates GAT and non-GAT IFR military flights. Military is financing its own share". In respect of NSA verification, the NSA confirms that "the military pay the full cost for their services. These costs are removed from the en route cost base". The PRB notes from LFV annual report that, in 2021, LFV ANS were mainly financed by en route charges (76%), compensation from the Swedish Armed Forces (12%) and compensation for operations at civil airports (11%).<sup>16</sup>
- 26 **Skyguide:** The Swiss NSA reports that "Skyguide provides Air Navigation Services for both civil and military flights." ANS provided to military flights include ATS, CNS and MET. The Swiss NSA provided details of these services in an appendix to the questionnaire. Equipment made available by Skyguide to the military include the ATC system and radars.
- 27 The Swiss NSA indicates that "the services and infrastructures are split between civil and military flights. However, some services are provided for civil and military flights, the costs related to these services are split to some extent and where possible according to allocation keys between civil and military". In respect of the NSA verification, the Swiss NSA confirms that "costs for ANS provided by the civil ANSP to non-GAT IFR military flights are excluded from the determined and actual costs for the en route and terminal charging zone covered by the SES performance and charging Regulation".
- Services and infrastructure provided by civil ANSPs collocated with the military**
- 28 **Austro Control:** The Austrian NSA explains that "the services for en route ANS are provided completely independently by Austro Control with its

<sup>16</sup> LFV Annual Report 2021, p.18.

own staff for civil air traffic control in the ACC and military air traffic control is provided by the Ministry of Defence with its own staff in the MCC.<sup>17</sup> Some of Austro Control's facilities, data and rooms are used for the provision of military air navigation services". This includes the Topsy ATM system used by the military and the provision of civil radar data, flight plan data, communication services and weather services. The Austrian NSA reports that "The costs of equipment and data made available by Austro Control to the military are regulated in a detailed framework agreement. The settlement result is paid by the Ministry of Defence to Austro Control." "The amount for the provision of facilities and services amounted to approximately €11 million<sup>18</sup> net in recent years". In respect of the NSA verification, "the annual accounting of services to the military is presented to the NSA as part of the review of the SES certificate. The audit of the settlement of the framework agreement with the military, as well as the results of en route costs and TNC costs, is also carried out by auditors as part of the audit of the annual financial statements. This ensures that the allocation of costs for both civil and military air navigation services is carried out properly". The PRB notes that the above-mentioned amounts are recorded in the annual accounts of Austro Control as "charges for services rendered to MoD", which are reimbursed to Austro Control.

29 **Skeyes:** The Belgian NSA specifies that "skeyes is responsible for the provision of air traffic services within the Brussels FIR/UIR up to and including FL245, with the exception of the airspace within which air traffic services are provided by ANA. Belgian Defence is responsible for the provision of air traffic services to OAT within the Brussels FIR/UIR. In 2015, the Minister of Defence, the Minister of Transport and skeyes signed a framework agreement to provide a joint aeronautical information service to civil and military flights (AIP, NOTAM, ARO...). In 2018, the Minister of Defence and the Minister of Transport signed a framework agreement to achieve synergies in the domain of air navigation services and the integration of civil and military air traffic control services by 2030. A first important step towards integration was achieved

in December 2019 with the co-location of the civil and military air traffic control centres in skeyes' premises".

- 30 The NSA indicates that the Belgian Defence makes use of the facilities of skeyes (part of the ACC, offices, technical room, Datacom network, security control on racks ...). Skeyes also provides radar data to the Belgian Defence "in return for an annual fee". The NSA specifies that skeyes and the Belgian Defence are planning to have a joint surveillance chain in the future, for which the cost will be "shared according to distribution keys established on the basis of the needs of the parties (1/3 Defence, 2/3 skeyes for cooperative surveillance, 1/2 Defence, 1/2 skeyes for non-cooperative surveillance)".
- 31 The NSA reports that the forecast revenues for services and equipment delivered by skeyes to the military are deducted from the cost base. After the closing of the financial accounts, the actual costs and revenues "are defined and balanced in an annual settlement between both parties". This mechanism does not apply to the joint provision of AIS, "for which the cost sharing between Defence and skeyes is specified in the Technical Agreements as part of the AIS framework agreement. Costs are rebilled to the Belgian Defence and have no impact on skeyes' en route cost base".
- 32 **DSNA:** The French NSA explains that CMCC<sup>19</sup> units located in the five civil ACCs and the CCMAR<sup>20</sup> Atlantique unit located in Brest ACC are providing services to non-GAT flights using DSNA infrastructure and equipment (CWP in the Ops room fed by civil data, radio back-up service). In respect of financing, France's NSA indicates that "dedicated costs e.g. CWP or back-up radio" are paid by the military. "Other related costs are marginal e.g. data already collected / computed for GAT made available to the military and space occupied in ATS units very limited".
- 33 The French NSA marked as "NA" the question relating to the verification that costs for ANS provided by the civil ANSP to non-GAT IFR military flights are excluded from the en route and terminal cost bases due to the fact that it considers that

<sup>17</sup> Military Control Centre.

<sup>18</sup> Annually.

<sup>19</sup> Space and Air Force Control & Coordination Military Center.

<sup>20</sup> Navy Control & Coordination Military Center.

these costs are marginal while the efforts required for a detailed verification would be too complex and provide little added value.

- 34 **ENAV:** The Italian NSA has not reported any service or equipment from ENAV to military non-GAT flights. The Italian NSA clarified that “ENAV does not make available any ANS or equipment to the military. ATS units in the airport or approach centers are managed by ENAV or ITAF. By law, at “area control” unit ENAV and ITAF share the same operational room and use the same software and hardware to better guarantee coordination, but any organization buy all the equipment and provide longlife logistic support by their own budget”.
- 35 **IAA:** The Irish NSA indicates that the Irish Air Corps can avail of radar controller positions within the Dublin ACC to facilitate tactical civil-military coordination. In terms of services, the NSA reports under ANS that FIS and ATC services are provided to non-GAT IFR military flights outside of designated areas in certain circumstances. The NSA also reports CNS (civilian Radar, communications infrastructure, and navigational aids), MET (forecast and actual reports), SAR and other ANS provided to non-GAT IFR flights (FPD, ASM). In terms of equipment, the NSA indicates that the military have access to the Dublin ACC and have use of a COOPANS sector there. The military have access to surveillance data and use some VOR/DMEs and DMEs. The Irish NSA marked question 6 as not applicable and clarified that “cooperative non- GAT Military flights are restricted to designated military areas where Military ANS provides the service”. The PRB understands that no or only a very limited number of military non-GAT flights are serviced by IAA and hence no costs are associated to the provision of such services.
- 36 **LVNL:** The Dutch NSA reports that the military ACC is co-located with LVNL at Schiphol. LVNL provides ATS to non-GAT flights when these are crossing civil controlled airspace, in TMA and CTR below FL245. The military use LVNL infrastructure due to co-location, while ATS is provided by Military ATCOs. In respect of financing, the NSA indicates that “all costs for military flights are paid by the state”. In respect of the NSA verification, it specifies “reporting via CRCO, ANSP annual report including assessment by external accountant”. The PRB understands that this answer to question 6 refers to the financing of ANS provided to exempted GAT military flights (addressed in

question 15) and not to the financing of ANS provided to non-GAT military flights. The PRB understands nevertheless from the answer provided to question 4, that the military pays for use of civil system through a contract with LVNL.

- 37 **ROMATSA:** The Romanian NSA reports that GAT-OAT coordination military units are co-located with ROMATSA at three ROMATSA ATC facilities and use the civil ATC system. CNS equipment is made available for the military at the commonly used aerodromes (VOR/DMEs, DMEs, ILS). Civil-military radar information is exchanged based on a bilateral agreement. The Romanian NSA explains that “there are no direct costs for ANS provided by civil ANSP to non-GAT IFR military flights as there is only a common use of infrastructure, which applies in reciprocity with military infrastructure used also for civil ANS” (see also para 67). The NSA indicates that the verification to ensure that the costs for ANS provided by the civil ANSP to non-GAT IFR military flights are excluded from the en route and terminal cost bases covered by the SES performance and charging Regulation, consist of the “NSA’s regular oversight (document reviews/audits/inspections) during the Cost Bases approval process”.
- 38 **LPS:** The Slovak NSA indicates that LPS provides ANS only to GAT in controlled airspace, as “non-GAT IFR military flights are not allowed in Slovak CTA – EUROAT is not applicable”. LPS provides CNS (sharing of radar data) to the military and other ANS (AIS, FDP though contracts between the military and the civil provider). For MET services, the PRB understands that the indicated services are provided by the METSP (SHMÚ) and not by LPS. For SAR, the NSA indicated that the civil ANSP is operating the Rescue Coordination Centre (people, equipment), while the military is providing personnel and A/C for SAR activities (see also para 68). In respect of infrastructure and equipment, the NSA indicates that OAT is hosted in the civil ACC building and sharing the civil ATM system. LPS CNS equipment (VOR/DMEs, DMEs) is made available to all users. The Slovak NSA marked question 6 on the financing of ANS to military non-GAT flights as not applicable. The PRB understands that no military non-GAT flights are controlled by LPS and hence no costs are associated to the provision of such services.
- 39 **ENAIRE:** The Spanish NSA indicates that ENAIRE provides CNS services to non-GAT flights and that

infrastructure and equipment is made available to non-GAT traffic (including the ATC system).<sup>21</sup> In respect of the financing, the Spanish NSA indicates in question 6 that “OAT flights are served by the military ANSP and financed by the State. The military ANSP is an independent entity from the civil ANSP”. The PRB understands from the comments provided that the costs for the CNS and equipment reported to be provided/made available by ENAIRE to non-GAT flights in questions 3 and 4 are neither quantified nor deducted from the cost bases for air navigation services under the SES.

#### Services and infrastructure provided by separated civil and military ANSPs

- 40 **BULATSA:** The Bulgarian NSA reports that “there is a civil ANSP (BULATSA) maintaining and operating its own infrastructure and a military provider (BUAF) maintaining and operating its separate own infrastructure. The civil ANSP maintains and operates own infrastructure for ANS provision of GAT traffic, and this infrastructure is available to OAT traffic. The NSA indicates that all the services and equipment provided to the military are “for the purpose of airspace security, civil-military coordination and cooperation, for the benefit of airspace users safety, efficiency and effective use of airspace”. The NSA further clarifies that “ATC Working stations are provided for the sole purpose of situational awareness. When needed (for example due to technical failure) they are to be used by civil ATS unit for the provision of ATS. ATS units situated in BULATSA ops room provide service to all GAT IFR traffic and OAT IFR overflying Sofia FIR. Military unit has been provided with access to BULATSA ops room for the purpose of security of airspace and military-military coordination. Military ATS units provide service in TSAs from their own facilities”. The Bulgarian NSA indicates that “BULATSA does not bear any additional costs related to non-GAT IFR military flights (zero marginal costs), as BULATSA does not spend any additional costs for equipment and services specifically for OAT traffic. All costs are aimed at the provision of ANS of GAT traffic”. This is “verified during annual inspections done by the CAA”.
- 41 **HASP:** The Greek NSA reports that “no services are provided by the civil ANSP to non-GAT IFR military

flights”. “There are no amounts relating to the costs for ANS provided by the civil ANSP to non-GAT IFR military flights for years 2019 to 2021 as these services are provided by HAF”. The PRB understands that no military non-GAT flights are serviced by HASP and hence no costs are associated to the provision of such services.

- 42 **HungaroControl:** The NSA indicates that “the civil ANSP (HungaroControl) operates an integrated civil-military ACC, but OAT flights are controlled by the CRC<sup>22</sup> (Ministry of Defence) from its headquarters in Veszprém”. In terms of services, the NSA reports mutual data exchange of radar under CNS and indicates that this is provided to the military free of charge. In terms of equipment, the NSA indicates that two en route PSR and SSR MODE-S radars and nine DVOR/DME stations are available to non-GAT flights. The Hungarian NSA marked question 6 as not applicable. The PRB understands that no or only a very limited number of military non-GAT flights are serviced by HungaroControl and hence no costs are associated to the provision of such services.
- 43 **LGS:** The Latvian NSA explains that LGS “is providing civil service to GAT. Military CRC (Control Report Service) is controlling all OAT flights”. The NSA marked question 6 on the financing of ANS by the civil ANSP to non-GAT flights as not applicable and indicated that ANS are only provided to GAT. The NSA specifies that the Military “have their own infrastructure which is financed by state budget only”. The PRB understands that no military non-GAT flights are serviced by LGS and hence no costs are associated to the provision of such services.
- 44 **Oro Navigacija:** The Lithuanian NSA reports that “the civil ANSP does not provide ATS/ATM services to non-GAT IFR military flights”. The NSA explains that the services (CNS, SAR) and equipment (VOR/DMEs, DMEs, Radio coverage) marked with a cross in questions 3 and 4 are available to all users and that OAT flights might be using them. For MET services, the NSA clarifies that the “National MET services (LHMT) provide data for Air Force in accordance to their bilateral agreement (costs are not included in the cost base to civil airspace users)”. The NSA marked question 6 on the financing of ANS by the civil ANSP to non-GAT flights as not

<sup>21</sup> The PRB understands that the reported MET services are provided by the METSP (AEMET) and not by ENAIRE.

<sup>22</sup> Control Reporting Centre.

applicable and indicated that there are “no services provided to OAT flights by civil ANSP and no associated additional costs”.

- 45 **PANSA:** The Polish NSA reports that the following ANS are provided by PANSA to non-GAT flights: ATS (access to the ATM system P\_21 used to manage GAT traffic is granted to positions handling OAT traffic to enable smooth and automated exchange of information), CNS (access to certain COM devices), SAR coordination (provided by a joint civil-military Aeronautical Rescue Coordination Centre, ARCC Warszawa, located in PANSA). Infrastructure and equipment made available to the military include the ATC P\_21 System, and other equipment, such as a small number of VHF and UHF frequencies and the Voice Communication System in the CWP. The Polish NSA clarified that “certain elements of infrastructure or systems are made available to positions handling OAT traffic to support the integration and to minimise possible negative impact of military (OAT) traffic on airspace availability for civil airspace users” and, “for some components, the two sides, PANSA and the Military, independently finance the resources provided by each of them and the part related to the resources provided by the Military is not financed under the Performance and Charging Scheme”.
- 46 The Polish NSA refers to the costs relating to the ARCC (SAR coordination) and to FUA, where they indicate that civil and military ANSPs are financing their own resources. These are included in the determined costs only in relation of the elements provided by PANSA. In respect of NSA verification, it indicates that the determined costs for Poland do not include elements considered as not eligible – they include only elements constituting services performed to the benefit of airspace users operating under GAT rules (supporting safety and flight efficiency of such flights).
- 47 The PRB therefore concludes that no costs for ANS provided to military non-GAT flights are deducted from the air navigation cost bases covered by the SES, including for the infrastructure and equipment made available to the military.

*ANS infrastructure and services provided or made available by the military to en route GAT IFR flights (NSA replies to questions 7, 8, 10 and 11)*

- 48 **Austria:** The Austrian NSA indicated the section as “not applicable”. The PRB understands that the

Military do not provide any services or infrastructure to en route GAT flights in Austria.

- 49 **Belgium:** The Belgian NSA indicates that SAR services are provided by the Military, as well as other services, including: ATCO medical screening services (in 2019 and 2023), military Wide Area Network (WAN) to provide network connection to the radio project and to the Wide Area Multilateration (WAM) project, as well as support in the domain of Human factors CISM coaching. In respect of infrastructure made available by the military, the NSA reports that the Belgian Defence provides “buildings, ATC systems (KVM switches) and radars’ to skeyes”, as well as MET equipment (balloons, parachutes, sondes, helium) and weather sensors. In respect of financing, the NSA specifies that SAR costs are not included in the en route cost base, while costs for the MET equipment used by skeyes are included. The NSA further indicates that the use of the WAN “is rebilled to skeyes based on the bandwidth used”.
- 50 **Bulgaria:** The Bulgarian NSA reports that BULATSA employees of the tactical civil-military coordination unit are located in a building owned by the military at zero cost for BULATSA.
- 51 **Croatia:** The Croatian NSA indicates that “Croatia has no military service provider”. Hence no services are reported to be provided by the Military to en route GAT flights.
- 52 **Cyprus:** The Cypriot NSA reports that “there are no services provided by the military to GAT IFR flights in the en route airspace” in Cyprus.
- 53 **Czech Republic:** ATS, CNS and MET services provided around four airports (see section 3.4 and Table 4 of the report). The NSA reports that the number of civilian GAT flights at these military aerodromes is limited. “Commercial airlines flights are at LKPD only, but very rarely”.
- 54 **Finland:** The Finnish NSA indicated the section as “not applicable”. The PRB understands that the Military do not provide any services or infrastructure to en route GAT flights in Finland.
- 55 **France:** The French NSA lists ATS service around four airports (see section 3.4 and Table 4 of the report) and ATC in some limited en route areas. Infrastructure includes buildings and equipment such as, ATC system (same as the one use for non-GAT), VOR/DME Service available to all traffic and ANSPs, DMEs (TACAN functionality). These

services and equipment are partially financed through the en route cost base. The NSA also mentions that SAR operations, infrastructure and manning are delegated and financially supported by the military, even when alerting service are provided by civil ANSPs.

- 56 **Germany:** The German NSA reports CNS services and equipment (DME/TACAN functionality), radars, MET (via data transmission into civil ATS) and SAR (provided and financed by the military in the airspace under German responsibility). The German NSA specifies that the equipment includes “11 NDBs for common use, which are also operated by the German military”.
- 57 **Greece:** The NSA specifies that MET services for civil aviation is provided by the designated MET provider “Hellenic National Meteorological Service” (HNMS/MET), which is under the auspices of the Ministry of Defence and that SAR services within Athinai FIR/Hellas UIR are provided by the Ministry of Defence (HAF) and the Ministry of Citizen Protection (Hellenic Coast Guard), who are responsible for organising the aeronautical and maritime Search and Rescue services in a Joint Rescue Coordination Centre (JRCC) and making the necessary facilities available. Costs relating both to MET and SAR services and equipment provided by the military are included in Greece’s en route cost base, although marked as “not applicable” in the questionnaire (see Table 12 and para 81 of the report).
- 58 **Hungary:** The NSA informed on exchange of radar data provided by three NATO PSR and SSR MODE-S radars free of charge (on a reciprocity basis). SAR services were not reported by the Hungarian NSA in the questionnaire, although costs relating to SAR services provided by the military are included in Hungary’s en route cost base (see Table 12 and para 80 of the report).
- 59 **Ireland:** The Irish NSA informed on the use of military VOR/DME for civil IFPs. In respect of financing, the PRB understands that no costs for services or equipment provided by the military are included in the en route cost base.
- 60 **Italy:** The Italian NSA indicates that all ATS, CNS and MET services are provided to GAT flights

“within the airspace under ITAF<sup>23</sup> responsibility” (Table 1, next page). ITAF also provides AIS for military airports opened to civil air traffic (see section 3.4 and Table 4 of the report). In respect of infrastructure made available by ITAF to GAT flights, mention is made of ATC system, radars and military radio navigational aids (VOR/DMEs, DMEs). ITAF also provides MET forecasts for the whole Italian airspace. Costs for services provided by ITAF are included in Italy’s en route cost base (see Table 12 and para 77 of the report). The Italian NSA informs that SAR services are also provided by the military. However, the SAR costs are financed by State and are not charged to airspace users.

ITAF ATC Unit	Associated airspace	Remarks
Decimomannu	CTR Cagliari	APP service to Cagliari
Istrana	CTR Treviso	APP service to Treviso Sant’Angelo
Pisa	CTR + ATZ Pisa	APP/TWR service
Sigonella	CTR Catania	APP service to Catania and Comiso
Trapani	CTR + ATZ Trapani	APP/TWR service
Grosseto	CTR + ATZ Grosseto	APP service to Grosseto and Siena Ampugnano and TWR service
Amendola	CTR Amendola	APP service to Foggia Gino Lisa
Aviano	CTR Aviano	APP service to Udine Campofornido

Table 1 – ITAF ATC Units handling civil Aviation flights (source: LSSIP 2021 – Italy, Local single sky implementation, p.23).

- 61 **Lithuania:** The NSA reports that “CNS equipment owned by military at Siauliai airport is available to all airspace users and used by Oro Navigacija while providing approach and terminal services in this airport”. The costs of those equipment (including DVOR/DME, and TACAN functionality) are not in cost base and “fully covered by MoD/State”.
- 62 **Malta:** Malta NSA clarifies that “the Maltese military do not have any ANS capabilities”. However, the JRCC (Joint Rescue and Coordination Centre) coordinates SAR activities within the Malta FIR which is coincident to the Malta Search & Rescue

<sup>23</sup> ITAF – The Italian Air Forces. In accordance with the European Community Regulation 550/2004, article 7, paragraph 5, the Italian Air Force is authorised to provide ATS, CNS and MET Services to General Air Traffic (GAT) without certification (source: LSSIP 2021 – Italy, Local single sky implementation, p.35).

- Region (SRR). SAR costs are not part of Malta's en route cost base.
- 63 **MUAC:** The Dutch NSA reports that MUAC utilises radar data from the MUAC States, amongst others from Netherlands Military Mode S radars (see para 64 below).
- 64 **Netherlands:** The Dutch NSA indicates that ATS, CNS and MET services are provided by the military in CTR, TMA and CTA (see section 3.4 and Table 4 of the report). In respect of equipment, five military radars linked to RADNET and six TACAN beacons used as GBAS are owned by the military and used for GAT flights. Costs for military ATS services and use of military infrastructure are not charged to the civil users.
- 65 **Norway:** SAR services are provided by the 330<sup>th</sup> Squadron, which is a helicopter unit of the Royal Norwegian Air Force. SAR costs are not part of Norway's en route cost base.
- 66 **Poland:** The Polish NSA reported that "only SAR coordination, not SAR itself" is provided by the military. "Coordination of SAR in FIR Warszawa is provided by a joint civil-military Aeronautical Rescue Coordination Centre (ARCC Warszawa) located in PANSA, which is a body responsible for planning, coordination of, and supervising search and rescue operations that are carried out by mobile ASAR units within the entire WARSZAWA FIR. ARCC (SAR coordination) is composed of people employed by PANSA and people employed by the Military. The two sides independently finance the resources provided by each of them and the part related to the resources provided by the Military is not financed under the Performance and Charging Scheme".
- 67 **Romania:** The Romanian NSA reports "civil-military radar information exchange based on bi-lateral agreement". The PRB understands from the answer to question 6 of the questionnaire that these services are free of charge (on a reciprocity basis, see also para 37).
- 68 **Slovakia:** The Slovak NSA indicated that the military provides personnel and aircraft for SAR activities. The PRB understands that the SAR costs included in the en route cost base are related to services provided by LPS and not by the military.
- 69 **Slovenia:** The Slovenian NSA indicates that there are no military ANSPs providing services to GAT. However, some civil surveillance equipment is located a plot of land owned by the MoD. No costs relating to services or equipment provided by the military to GAT are included in the en route cost base.
- 70 **Spain:** The Spanish NSA did not provide detailed information on the services and infrastructure provided by the military to GAT but referred to the Spanish RP3 performance plan. The RP3 performance plan for Spain includes the Spanish Air Force (EA<sup>24</sup>) in the list of entities covered by the plan, as ANSP (ANSP EA) and as NSA (NSA EA). Costs for the Spanish Air Force are included in the two en route cost bases for Spain (Spain Continental and Spain Canarias) (see Table 12 and para 78 of the report). In respect of ANSP EA, costs are recorded for ATM, CNS and SAR. NSA EA presents supervision costs. The Spanish NSA clarified that regarding ATM services, "military ANSP provides en route and approach service in Zaragoza TMA, and approach service for traffics in and out LEMI (Murcia Internacional)" and CNS and SAR services "are provided in the entire airspace under the responsibility of Spain (Spain Continental and Spain Canarias)".
- 71 **Sweden:** The Swedish NSA reports that the military provide a communication network used by LFV. They also provide MET services at the two combined civil/military airports used for both OAT and GAT flights (see section 3.4 and Table 4 of the report). As far as equipment is concerned, LFV has equipment installed in many military sites and contingency solutions in military buildings for both GAT/OAT (including for the ATC system). At both military and combined civil/military airports the military provide all equipment besides radar for ATS purposes. The NSA indicates that costs for the use of the military communication network are included in the en route cost base.<sup>25</sup>
- 72 **Switzerland:** The Swiss NSA indicated the section as "not applicable" and explained that the military

<sup>24</sup> Ejército del Aire.

<sup>25</sup> The Swedish NSA indicated in the questionnaire that the determined costs for the use of the military communication amounts to 600K€ per year but marked "not applicable" for actual costs. The PRB understands that such costs are actually incurred and should also be reported as actual costs.

do not provide any services for GAT IFR in the en route airspace.

*Costs for ANS provided by the military included in the en route cost bases*

- 73 **Belgium:** The military costs included in Belgium-Luxembourg's en route charging zone correspond to the costs of MET equipment used by skeyes and represent 0.1% of Belgium-Luxembourg en route actual costs in 2021. SAR costs are not included in the en route cost base.
- 74 **Italy:** The military costs included in Italy's en route cost base are those of ITAF (60). These are reported as a separate entity in the en route reporting tables and represented 8% of the en route actual costs in 2021. In respect of the methodology used for calculating the determined/actual costs for ANS provided by the military to GAT IFR flights which are included in the en route cost base, the NSA indicates that determined/actual costs "are attributed to civil aviation globally for the resources acquired for their exclusive needs and pro-rata percentage for the resources acquired for common needs, mainly dividing them using the traffic data managed in the year". The PRB understands that ITAF provides MET services in the entire en route charging zone of Italy (MET costs account for half of the ITAF costs reported for the en route cost base), however, the geographical scope for the ATM/CNS costs is unclear and not provided in the RP3 performance plan or in the additional information to the reporting tables. The PRB assumes that the geographical scope is related to the airspace around military aerodromes used also for GAT flight (see section 3.4 and Table 4 of the report) and that a portion of the related approach costs is allocated to the en route charging zone. For the sake of transparency, the PRB recommends that Italy describes the services provided by ITAF and their allocation methodology between en route and terminal in the appropriate sections of the additional information to the en route reporting tables.
- 75 **Spain:** The military costs included in Spain's cost bases (Continental and Canarias) are those of the Spanish Airforce - EA (para 70). These are reported as separate entities in the en route reporting tables (ANSP-EA and NSA-EA) and represented 6% of the en route actual costs in 2021. In respect of the methodology used for calculating the determined/actual costs for ANS provided by the

military to GAT IFR flights which are included in the en route cost base, the NSA indicates to refer to Spain's RP3 performance plan. The PRB understands that SAR costs in the en route charging zones of Spain are entirely provided by ANSP-EA (they account for around 45% of the EA-ANSP costs reported for the en route cost bases). The Spanish NSA clarified that regarding ATM services, "military ANSP provides en route and approach service in Zaragoza TMA, and approach service for traffics in and out LEMI (Murcia Internacional)" and "CNS services are provided in the entire airspace under the responsibility of Spain (Spain Continental and Spain Canarias)".

- 76 **France:** the military costs included in France's en route cost base (and recorded as part of DSNA costs in the reporting tables) correspond to a portion of ATS services around four airports (see section 3.4 and Table 4 of the report) and ATC in some limited en route areas, including buildings and equipment. They account for 1% of France's en route actual costs in 2021. In respect of the methodology used for calculating those costs included in the en route cost base, the French NSA indicated that, for the services around the four airports, a cost base relying on similar costs for civil airports, which is then allocated between the en route and terminal charging zones according to DSNA's cost allocation methodology.
- 77 **Hungary:** The military costs included in Hungary's en route cost base relate to SAR. These are reported as a separate entity in the en route reporting tables and represent 2% of Hungary's en route actual costs in 2021.
- 78 **Greece:** The military costs included in Greece's en route cost base relate to SAR and MET. These are reported as two separate entities in the en route reporting tables and represent 14% of Greece's en route actual costs in 2021 (SAR accounted for 8% and MET for 6%).
- 79 **Sweden:** The military costs included in Sweden's en route cost base correspond to the costs of the communications network used by LfV and represent 0.3% of Sweden's en route actual costs in 2021. These are recorded as part of LfV's costs in the en route cost base.
- 80 The other States have not reported any costs for services or equipment provided by the military and included in their en route cost bases. The PRB notes that in some instances, the services and

equipment are provided on a reciprocity basis and compensated by the services provided by the civil ANSPs to non-GAT flights (e.g., Romania).

### 5.3 *ANS costs for Implementation and operation of FUA*

- 81 The received questionnaires have not provided clear answers for all Member States regarding the FUA implementing and operating costs. Some Member States mixed the FUA costs with costs incurred by ANSP for ATM/ANS service provision to military OAT or exempted flights or induced by the impact of military activities. There is a link between OAT flights and FUA concept in that the reserved FUA airspace structures provide safety operational layer for especially military training and operational flights. The provision of the ASM function with FUA is considered a functional system, including people, procedures, and systems. When looking into costs associated with implementing FUA, it is expected to receive costs data related e.g. labour, training, real estate, infrastructure, system procurement, installations, and service to maintain all three ASM levels.
- 82 Austria, Greece, Lithuania, Slovakia, Malta, Cyprus and Slovenia have reported no FUA costs incurred by the ANSP, some of them because of costs being paid by the Member State or servicing low number or no national OAT IFR flights.
- 83 Belgium does not separate FUA costs from other costs. Skeyes operates co-located civil military coordination aiming at full integration by 2030. The Belgian NSA clarified that Belgium has a civil-military AMC staffed by civil and military personnel and that no billing takes place from civil to military or vice versa.
- 84 According to the questionnaire, Bulgaria performs co-located civil military coordination and identified investment costs related to the CIMACT system and minor operating costs. The Bulgarian NSA clarifies that the part of the costs borne by BULATSA are included into the cost base.
- 85 Croatia does not record FUA costs separately. The civil-military costs including FUA are born individually by the respective domain. It is therefore estimated that the civil part of the FUA costs financed by Croatia Control is included in the cost base. No details are available.
- 86 Provision of ASM function based on the FUA concept in the Czech Republic is considered an

integrated process provided by ANS CR with direct participation of military stakeholders. The total costs related to all ASM levels are included in the route charges justified by benefits for all airspace users.

- 87 Finland provides integrated ASM function based on the FUA concept to civil and military stakeholders. Fintraffic ANS includes total AMC related costs to the cost base. It is not clear whether the costs related to ASM L1 and ASM L3 are also included.
- 88 France performs co-located civil-military coordination including ASM/FUA tasks. The tasks are executed by joint AMC and dedicated coordination civil and military units. The FUA costs per civil part are included in the cost base.
- 89 Germany indicates that “there are a number of agreements between the German Armed Forces or the German Military Aviation Authority on one side and DFS and/or MUAC on the other side to address and allocate operational and infrastructure costs of FUA-implementation. In application of these arrangements, costs are shared between the civil (Enroute ANS charges) and the military (federal budget) side. This cost sharing agreement is periodically re-viewed by a civil-military expert group to adapt / adjust the sharing mechanism and to ensure a none-impact on the ANSPs enroute cost base due to military requirements”.
- 90 Hungary provides integrated ASM function based on the FUA concept. The NSA reported the ASM activities to be a part of the daily ATM/ANS operations without any further incremental costs. Without further details, it is assumed that the FUA related costs are included in the cost base.
- 91 Ireland did not fill in the section of the questionnaire on FUA.
- 92 Italy provides separated civil-military ANS. The NSA reported the ENAV does not register the FUA costs separately from other operational costs. The NSA stated that the costs are allocated proportional along the cost centres referred to en route services. The explanation, however, does not provide for the cost structure description, values or further explanation. It is assumed that the costs are included in the cost base.
- 93 Latvia provides for separated civil-military ANS. The NSA report does not seem to refer to the FUA cost rather to costs related to traffic and

- exempted military flights. It is not possible to perform analysis without further details.
- 94 MUAC provides integrated ANS function including ASM to Belgium, Luxembourg, Germany, and Netherlands. MUAC signed a contract for the provision of FUA service in the Netherlands. Belgium and Germany provide ASM functions based on the FUA concept by the national ANSPs.
- 95 The Netherlands signed a contract with MUAC for the provision of FUA service in the Netherlands. The Netherlands pays the full cost for the FUA cell at MUAC. The detailed cost structure including e.g., ASM L1 and ASM L3, operating and maintenance costs for the FUA relevant infrastructure based in the Netherlands is not clear.
- 96 Norway does not register the FUA costs separately from other service provision costs. The NSA reported figures that include military activities, traffic separation, airspace design, advisory services etc. without further details which makes it difficult to evaluate the FUA only costs. Without further details it is assumed that the FUA costs are included in the cost base of the ANS service provision.
- 97 Poland identifies FUA costs as those related to performance of all three ASM levels. PANSAs operates joint civil-military AMC and supporting systems paid separately by civil and military stakeholder. Civil part of the FUA cost is assumed to be part of the cost base.
- 98 Romania has reported operating collocated ASM functions with FUA. The NSA stated that there are no costs associated to FUA implementation and application. No further details nor figures have been provided. It is not clear how the ASM levels and infrastructure are financed, and costs split between civil and military stakeholders.
- 99 Spain provides co-located ASM function with FUA. Civil part of the FUA cost is reported to be part of the cost base without further details regarding the structure and value. The NSA added that “military costs regarding the implementation and operation of FUA are not included in the cost base and therefore financed by the State”.
- 100 Sweden has an integrated civil/military service. “The economic burden for the integrated service is treated through allocation keys and agreements, and financed by Route charges (civilian part) and budget (military part)”.
- 101 Switzerland provides separated ANS services and ASM function with FUA. The NSA reported figures for the FUA cost and indicates that “FUA is almost entirely a human factor. Hardware and software costs are negligible”.
- 102 Table 2 (next page) summarises the information from the NSA reports to the questionnaires regarding the FUA costs included in the en route cost bases. “No cost” refers to answers stating that no FUA costs have been identified. “State” means that the FUA cost are fully covered by the Member State. “Civil part” and “Both” means that refers to the part recovered from route charges.

Member State	Organisation for the provision of ANS between civil and military	Inclusion of FUA costs in the en route cost bases
Austria	Co-located	No costs
Belgium	Co-located	Civil part
Bulgaria	Separated	Civil part
Croatia	Integrated	Civil part
Cyprus	Integrated	State
Czech Republic	Integrated	Both
Finland	Integrated	Both
France	Co-located	Civil part
Germany	Integrated	OAT and FUA
Greece	Separated	State
Hungary	Separated	?
Ireland	Co-located	?
Italy	Co-located	Both
Latvia	Separated	?
Lithuania	Separated	No costs
Malta	Integrated	No costs
Netherlands	Co-located	Both
Norway	Integrated	Both
Poland	Separated	Civil part
Romania	Co-located	No costs
Slovakia	Co-located	State
Slovenia	Integrated	No costs
Spain	Co-located	Civil part
Sweden	Integrated	Both
Switzerland	Integrated	Both

Table 2 – Civil-military ANS provision organisation and recovering the FUA costs from route charges. (source: PRB elaboration of the NSA responses).

#### 5.4 ANS Costs for services provided to exempted Military GAT IFR flights

103 The actual costs for services provided to en route exempted GAT military flights in 2019-2021 and the amounts financed in respect of these costs, as reported by the NSAs in questions 14 and 15, are presented in Table 3.

State	Actual costs for exempted military flights (in M) Question 14			Amounts financed in respect of exempted military flights (in M) Question 15		
	2019	2020	2021	2019	2020	2021
Austria	0.5	0.3	0.4	0.5	0.3	0.4
Belgium	0.8	2.0	2.0	0.8	2.0	2.1
Bulgaria	1.6	3.3	2.8	1.6	3.3	2.9
Croatia	0.7	1.7	0.2	N/A, State confidential		
Cyprus	None			None		
Czech Republic	36	43	44	36	43	44
Finland	50	25	35	49	23	35
France	5.7	14.4	11.5	5.7	14.4	11.5
Germany	1.7	1.8	1.8	1.7	1.8	1.8
Greece						
Hungary	248	528	487	299	238	248
Italy	9.6	7.6	7.7	9.6	7.6	7.7
Latvia	0.2	0.1	0.2	N/A		
Lithuania				0.1	0.1	0.2
Malta	Not available			Not available		
Netherlands						
Norway	32.3	-	-	32.3	-	-
Poland	5.8	7.2	7.6	5.8	7.2	7.6
Romania	5.5	7.3	8.6	5.5	7.3	8.6
Slovakia	0.6	0.5	0.5	0.6	0.5	0.5
Slovenia	-	-	-	0.1	0.0	0.1
Spain	4.5	3.3	3.0	4.5	3.2	3.0
Sweden	22.5	46.8	32.2	4.5	6.3	6.2
Switzerland	Not available			Not available		

Table 3 – Costs for en route exempted military flights in million national currency (source: PRB elaboration on the questionnaire).

- 104 The PRB analysis of the reported amounts and the explanations provided by the NSAs on the financing of the costs for exempted military GAT flights in question 15 are summarised below for each individual State.
- 105 **Austria:** The Austrian NSA reports that the amounts financed in relation to exempted military GAT flights are calculated by the CRCO (based on the unit rate and the actual service units for exempted military GAT flights, (Formula 2) and invoiced to the Ministry of Defence.
- 106 **Belgium-Luxembourg:** The Belgian NSA reports amounts financed in relation to exempted military GAT flights in question 15, which correspond to the determined costs for exempted military flights

reported under question 14. The PRB understands that these amounts are calculated based on Formula 1 applied to the determined costs of the Belgian entities for the en route charging zone of Belgium-Luxembourg. In respect of the financing, the NSA indicates that these “costs incurred for services provided to exempted flights are financed by the Belgian State”.

- 107 **Bulgaria:** The Bulgarian NSA reports amounts financed in relation to exempted military GAT flights in question 15, which are calculated “based on the ratio of the actual service units related to the exempted military flights and total service units for the same year, taking into account BULATSA costs only”, i.e. applying the Formula 1. In respect of the financing, the NSA indicates that these are “settled on a multiannual basis” and financed from the following sources: Eurocontrol internal tax and “amounts from the state where dividend owed to the state was determined by the state at a rate lower than 100%”. The PRB understands that there is no direct annual reimbursement by the State of BULATSA costs incurred for ANS to exempted military flights and that the costs incurred by BULATSA in respect of these flights are indirectly covered by the State through a portion of the en route charges collected by BULATSA on behalf of the State but kept by the BULATSA. The PRB also notes that Bulgaria does fill in the section of the additional information relating to the “description of the policy on exemptions and description of the financing means to cover the related costs”.<sup>26</sup>
- 108 **Croatia:** The Croatian NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15 and has indicated that this information is “State confidential”. The PRB notes that the amounts reported by the NSA in question 14 are calculated using Formula 1. In respect of the financing, the NSA indicates that these are financed by the “State budget for the exempted military flights”.
- 109 **Cyprus:** The Cypriot NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15 but indicated that “these are financed through the State budget – no extra costs for providing services to military flights

are foreseen in the PP”. The PRB understands that the revenue from en route charges in Cyprus is collected by the State, which in turn finances DCA Cyprus.

- 110 **Czech Republic:** The amounts reported by the Czech NSA in question 15 are the same as those reported as actuals in question 14. The NSA explains that the determined costs reported in question 14 correspond to the “State budget subsidy to cover the cost of the exempt flights concerned for the particular year”, while the actual costs reported in question 14 are the “actual amount of the subsidy after clearance”. The NSA confirms that “exempted military flights are financed through state budget”. The PRB notes that this financing is reflected in ANS CR annual accounts.<sup>27</sup>
- 111 **Finland:** The Finnish NSA reports amounts financed in relation to exempted military GAT flights in question 15, which are similar to those reported as actuals in question 14., in line with the PRB computations of Formula 2. The Finnish NSA explains that “Fintraffic ANS has a contract with Finnish Airforce to cover the cost of military GAT flights”.
- 112 **France:** The French NSA reports amounts financed in relation to exempted military GAT flights in question 15, which are roughly equivalent to 70% of the PRB computation of Formula 1. The NSA did not indicate in question 15 how these costs are financed. The PRB notes that France reports in the additional information relating to the “description of the policy on exemptions and description of the financing means to cover the related costs”<sup>28</sup> that “exempted flights are financed through the general budget of the Direction Générale de l’Aviation Civile (DGAC)”.
- 113 **Germany:** The German NSA indicates that the amounts financed in relation to exempted military GAT flights are calculated using the “flight-related billing using the published unit rate”, i.e. Formula 2. The PRB understands that these amounts relate only to the part of the unit rate relating to DFS (and not to MUAC, the METSP or the NSA). In respect of the financing, the NSA reports that these “charges for exempted flights are reimbursed by the German Ministry of Defence to the ANSP”.

<sup>26</sup> Item b) of the additional information to reporting tables 2 on the unit rate calculation.

<sup>27</sup> ANS CR Annual Report 2019 p. 109.

<sup>28</sup> Item b) of the additional information to reporting tables 2 on the unit rate calculation.

- 114 **Greece:** The Greek NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15. The NSA has also not reported any determined or actual costs for exempted military flights in question 14. In respect of financing, the NSA explains that “costs are financed through the Government Budget and are not charged to airspace users. However, due to the organizational structure of HASP, HASP is not compensated for the provision of these services and all relevant costs are not calculated and neither billed nor charged by HAPSP to the State”. The PRB understands that the revenue from en route charges in Greece is collected by the State, which in turn finances HASP.
- 115 **Hungary:** The amounts reported by the Hungarian NSA in question 15 differ from those reported as actuals in question 14. The additional information provided to the reporting tables<sup>29</sup> of the Hungarian cost base indicates that the costs financed in respect of exempted flights are based on “actual costs and the rate of exemptions”. The additional information also specifies that “a governmental decision was passed in 2010 to arrange the financing of the exempted flights from the annual state budgets” and that “costs of exempted flights are covered by the relevant Ministries (based on exemption codes) in year n+2”. The NSA confirms in question 15 that the “cost of exempted military flights are financed by the Ministry of Defence in n+2”.
- 116 **Ireland:** The Irish NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15, nor any information on the means of financing costs for exempted military flights. The NSA has also not reported any determined or actual costs for exempted military flights in question 14. The PRB notes that the additional information provided to the reporting tables of Ireland’s cost base indicates that the funding of the exempted flights “is provided by the State” but does not present any amounts for exempted IFR flights.
- 117 **Italy:** The amounts reported by the Italian NSA in question 15 are the same as those reported as actuals in question 14. The PRB notes that these amounts are in line with the PRB computations based on Formula 2. The NSA indicates that, “for GAT military IFR flights Italy applies Regulation (EC) 2019/317 and the Italian Interdepartmental Decree of 28-12-2007. The exempted service is reimbursed by the Italian State”.
- 118 **Latvia:** The Latvian NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15 but has reported actual costs for exempted military flights in question 14. The PRB understands that these costs are computed on the basis of Formula 2. The NSA indicates that “the exemptions are currently financed (reimbursed to ANSP) through the difference between the Eurocontrol costs included in en-route reporting tables and actual payables.” The PRB understands that the costs for services to exempted flights are indirectly covered by the State through a portion of the en route charges collected by LGS on behalf of the State but kept by LGS.
- 119 **Lithuania:** The Lithuanian NSA reports amounts financed in relation to exempted military GAT flights in question 15, which are in line with the amounts computed by the PRB under Formula 2. The NSA explains that the CRCO calculates en route and terminal charges of exempted military flights and submits data to Lithuania on ETNA. Invoices are issued by Oro Navigacija to Air Force / MoD in line to submitted data.
- 120 **Malta:** The Maltese NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15, nor any information on the means of financing costs for exempted military flights. The NSA has also not reported any determined or actual costs for exempted military flights in question 14, indicating that such information in “not available”. The PRB notes that the additional information provided to the reporting tables of Malta’s cost base indicates that “the Maltese Government reimburses MATS for the costs related to exempted flights through a long-term agreement”. The PRB finds it unclear how such agreement applies in the absence of available amounts.
- 121 **Netherlands:** The Dutch NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15, nor any information on the means of financing costs for exempted military flights. The NSA has also not reported any determined or actual costs for exempted military flights in question 14, indicating that “all military

<sup>29</sup> Item b) of the additional information to reporting tables 2 on the unit rate calculation.

flights are exempt from en route charges. As military flights use civil services only occasionally, they are not administered separately from other exempt flights. Therefore, data is not available on determined and actual costs specifically for military flights". For MUAC, the Dutch NSA indicates that "MUAC provides integrated civil military ATS services, therefore exemption of military flights is not applicable".

122 The PRB notes that the additional information provided to the reporting tables of the Netherlands en route cost base indicates that "in line with Article 31, a financial compensation is provided by the State for the services provided to the exempted flights in the Amsterdam FIR".<sup>30</sup> The PRB understands that the amounts provided in the additional information for all IFR exempted flights together are calculated on the basis of Formula 2 and on the basis of the unit rates for the entire charging zone, i.e. also including MUAC.

123 **Norway:** The Norwegian NSA only reported amounts financed in relation to exempted military GAT flights for year 2019 in both questions 14 and 15 and reported 0 for 2020 and 2021. The amounts reported for 2019 in questions 14 and 15 are also the same as reported as FUA costs in question 12 and reported as costs for ANS provided by the civil ANSP to non-GAT IFR in question 6. The PRB understands that these amounts relate to the costs of FUA and to the costs of ANS provided by Avinor to military non-GAT flights (see para 19) and not the costs of ANS provided to exempted GAT military flights.

124 The Norwegian NSA indicated in the answer to question 6 that "Avinor ANS invoices the military for A-B flights (approx. 6,5 MNOK) according to the same principles as for the civil airspace users". The PRB understands that these related to the costs for services to exempted military flights and that those costs, which were covered by Avinor AS through commercial income until 2019 are now billed to the Norwegian military since 2020. The PRB also understands that the amounts reported in the additional information for all exempted flights are calculated according to Formula 2. The PRB however notes discrepancies between the NSA answers to the questionnaire and the

additional information in respect of the source(s) of financing of the costs for exempted IFR flights.

125 **Poland:** The Polish NSA indicates that the amount presented in question 15 represent the "equivalent to air navigation charges that would be paid by the users for these flights if these flights were not exempted (product of the number of service units generated by military flights subject to exemption from the charges and the unit rate of charge)", i.e. applying Formula 2. The NSA clarifies that the amounts reported are higher than the amounts computed by the PRB under Formula 2 due to the "fact that the amounts subject to the subsidy are calculated based on internal PANSAs systems which provide greater details on exempted military flights than the data provided by the CRCO".

126 In respect of the financing, the NSA reports that the "costs of providing air navigation services to exempted military flights are covered by the State budget – they are financed by the means of budgetary subsidy granted by the minister responsible for transport on the application of designated service provider".

127 **Romania:** The amounts reported by the Romanian NSA in question 15 are the same as those reported as actuals in question 14. The PRB notes that these amounts are in line with the PRB computations based on Formula 2. In respect of the financing, the NSA reports that the "costs of the exempted flights have been billed by ROMATSA to the Romanian Ministry of Transport and Infrastructure".

128 **Slovakia:** The amounts reported by the Slovak NSA in question 15 are the same as those reported as actuals in question 14. The PRB notes that the amounts are in line with the PRB computations based on Formula 2 for 2019 but are lower than the PRB computations for 2020 and 2021. The PRB understands that for these two years, only the costs of the ANSP have been considered. The NSA reports that the costs are covered by a "State subsidy for financing costs related to exempted flights".

129 **Slovenia:** The amounts reported by the Slovenian NSA in question 15 are in line with the PRB computations based on Formula 2. In respect of the financing, the NSA specifies that the costs are "covered by the ministry responsible for defence

<sup>30</sup> Item b) of the additional information to reporting tables 2 on the unit rate calculation.

(MoD) for the exempted military flights. The MoD also covers the costs for all other exempted flights if the flights are operated by military aircraft”.

- 130 **Spain:** The Spanish NSA indicates that the amounts reported in question 15 are calculated based on Formula 2 for “the complete unit rate of all organizations contributing to the cost base. The amounts reported by Spain represents the portion of the exempted flights financed by the State related to military flights”.
- 131 **Sweden:** The Swedish NSA indicates that the amounts financed in relation to exempted military GAT flights are calculated using Formula 2. The PRB understands that these amounts relate only to the part of the unit rate relating to LFV (and not to ACR, ARV SDATS, the METSP or the NSA). In respect of the financing, the NSA indicates that “all

exempted flights are financed by the State according to the unit rate each year. A large part of this is for military exemptions”. The NSA also clarifies that “LFV only, receives State compensation for exempted flights”.

- 132 **Switzerland:** The Swiss NSA has not reported any amounts financed in relation to exempted military GAT flights in question 15 and indicated that these figures are “not available as all costs related to exempted flights are booked together (Civil and Military)”. The NSA confirmed that “All exempted flights (military and civilian) are fully financed by the Swiss Confederation”. The Swiss NSA further clarifies that “exempted military flights refer only to foreign military flights. The exempted national flights are part of the service level agreement”.

## 6 PRB COMPUTATIONS OF THE AMOUNTS TO BE FINANCED BY THE STATES IN RESPECT OF ANS PROVIDED TO EXEMPTED GAT MILITARY FLIGHT

- 133 For the computations of amounts based on Formula 1, the PRB has used the actual costs for each charging zone and the proportion of service units for military exempted flights on the total service units for the charging zone from the CRCO data (Annex, Section 4).
- 134 For the computations of amounts based on Formula 2, the PRB has used the national unit rates applied for each charging zone from the RP2 and RP3 reporting tables and the actual service units for exempted military flights as reported by the CRCO (Annex, Section 4). The differences between the PRB computations and the amounts reported by the NSAs, if small, may be due to the fact that States are using the global unit rate (including the administrative unit rate), or the monthly adjusted unit rates.
- 135 The PRB computations of the amounts to be financed by the States in respect of ANS provided to exempted GAT military flight are shown in Table 4 (next page).

Member States	Amounts reported in question 15			PRB computation Formula 1			PRB computation Formula 2			Formula applied in question 15
	2019	2020	2021	2019	2020	2021	2019	2020	2021	
Austria	464	342	411	444	665	699	464	342	411	F2
Belgium-Lux-	797	2,032	2,087	886	2,134	2,114	786	978	1,128	F1, DC
Bulgaria	1,650	3,315	2,941	1,679	3,562	2,977	1,850	1,809	1,931	F1, DC BULATSA
Croatia	N/A, State confidential			786	1,790	1,642	804	798	1,231	?
Cyprus	None			575	1,453	1,038	691	504	479	?
Czech Republic	36,172	42,844	43,723	39,633	90,646	68,130	36,237	42,743	44,147	F2
Denmark *				3,041	8,348	7,874	3,285	3,661	3,518	?
Estonia *				29	55	61	26	27	36	?
Finland	49	23	35	42	44	61	49	23	35	F2
France	5,685	14,352	11,529	8,408	20,380	16,151	8,359	7,679	8,060	F1, 70%
Germany	1,745	1,770	1,837	1,871	4,524	3,995	2,025	2,043	2,227	F2, DFS
Greece				1,862	3,493	2,395	2,416	2,527	2,115	?
Hungary	299,494	238,488	247,785	255,949	552,819	500,864	250,757	245,904	309,179	F1, adjusted
Ireland				969	1,749	1,377	1,105	817	912	?
Italy	9,588	7,599	7,715	7,882	16,758	12,843	9,567	7,582	7,682	F2
Latvia	N/A			141	226	188	155	137	159	?
Lithuania	144	147	165	131	233	206	145	146	165	F2
Malta	Not available			677	1,575	1,285	659	846	862	?
Netherlands				2,116	4,876	4,301	1,713	1,997	2,008	?
Norway	32,272	-	-	7,381	11,569	11,065	6,545	6,693	7,492	?
Poland	5,825	7,165	7,607	4,652	9,699	6,623	4,839	5,259	5,297	F2
Portugal*				968	1,905	1,802	675	975	1,258	?
Romania	5,506	7,256	8,571	6,415	14,782	13,257	5,434	7,247	8,574	F2
Slovakia	574	493	527	568	1,143	819	572	553	590	F2, ANSP
Slovenia	59	35	56	53	77	93	57	33	56	F2
Spain	4,540	3,160	3,045	4,328	8,746	6,596	4,850	3,298	3,224	F2
Sweden	4,100	2,600	4,000	5,837	11,052	11,179	5,429	3,488	5,250	F2, LfV
Switzerland	-	-	-	86	264	295	100	92	149	?

Table 4 – PRB computations of the Amounts to be financed by the States in respect of en route ANS provided to exempted GAT military flight in '000 national currency (source: PRB elaboration).