European Aviation Safety Agency

Opinion No 07/2017

Revision of the operational rules for sailplanes

RMT.0698

EXECUTIVE SUMMARY

This Opinion addresses a proportionality issue related to sailplane operations. Its specific objective is to establish a simpler and proportionate regulatory framework for air operations with sailplanes.

For this purpose, this Opinion proposes the extraction of the rules for air operations with sailplanes from Regulation (EU) No 965/2012 (except for the authority requirements specified in Annex II (Part-ARO)) and the issue of a new regulation related to air operations with sailplanes. The scope of this new regulation may be extended at a later stage to include other areas related to sailplanes. The final goal would then be to develop — at least to a certain extent — a single 'sailplane rule book'.

With the new draft regulation, EASA proposes rules for air operations with sailplanes which are less complex and which are proportionate to the complexity and risks of such operations.

In summary, the proposed changes are expected to maintain safety while reducing the regulatory burden especially for sailplane pilots/operators.

Action area:	General aviation		
Affected rules:	Regulation (EU) No 965/2012 on air operations; Decision 2014/025/R (Part-ARO); Decision 2014/017/R (Part-ORO); Decision 2014/015/R (Part-CAT); Decision 2014/016/R (Part-NCO); Decision 2014/018/R (Part-SPO)		
Affected stakeholders:	Sailplane pilots/operators, competent authorities		
Driver:	Efficiency/proportionality	**Rulemaking group:**	No
Impact assessment:	Light	**Rulemaking Procedure:**	Accelerated

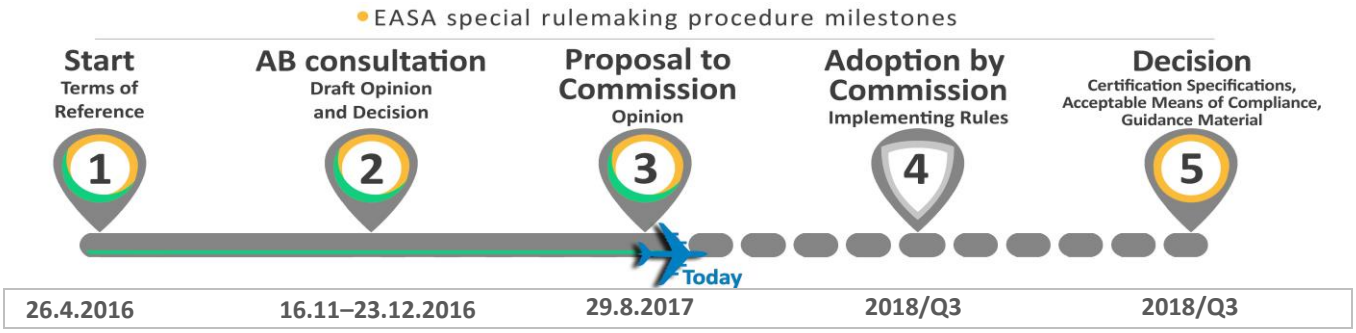

Table of contents

1. About this Opinion....3

1.1. How this Opinion was developed....3
1.2. The next steps....3

2. In summary — why and what....4

2.1. Why we need to change the rules — issue/rationale....4
2.2. What we want to achieve — objectives....5
2.3. How we want to achieve it — overview of the proposals....5
2.4. What are the stakeholders' views — outcome of the consultation....6
2.5. What are the expected benefits and drawbacks of the proposals....10
2.6. How do we monitor and evaluate the rules....10

3. Regulatory impact assessment (RIA)....12

3.1. Issue analysis....12
3.1.1. Safety risk assessment....13
3.1.2. Who is affected....14
3.1.3. How could the issue evolve....14
3.2. Methodology....15
3.3. How it could be achieved — options....16
3.4. What are the impacts....17
3.4.1. Safety impact....17
3.4.2. Social impact....18
3.4.3. Economic impact....19
3.4.4. GA and proportionality issues....20
3.5. Conclusion — Comparison of options....21

4. References....23

4.1. Affected regulations....23
4.2. Related decisions....23

5. Appendices....24

5.1. Appendix 1 — Comparison between draft new rules in Annex II (Part-SAO) and existing rules....24
5.2. Appendix 2 — Information gathered for the RIA....26

1. About this Opinion

1.1. How this Opinion was developed

The European Aviation Safety Agency (EASA) developed this Opinion in line with Regulation (EC) No 216/2008[1] (hereinafter referred to as the 'Basic Regulation') and the Rulemaking Procedure[2].

This rulemaking activity is included in the EASA 5-year Rulemaking Programme[3] under rulemaking task RMT.0698. The scope and timescales of the task were defined in the related ToR[4].

The *draft* text of this Opinion has been developed by EASA, with the significant support of external experts[5]. All interested parties were consulted through a 1-day public workshop[6] and a written consultation of the affected EASA Advisory Bodies[7].

The *final* text of this Opinion (i.e. the explanatory note and the draft regulations) has been developed by EASA based on the input received during the consultation. The rule text proposed by EASA is published on the EASA website[8].

The major milestones of this rulemaking activity are presented on the title page.

1.2. The next steps

This Opinion contains the proposed new regulation related to operations with sailplanes and the proposed amendments to Regulation (EU) No 965/2012[9], and their potential impacts. It is submitted to the European Commission to be used as a technical basis in order to prepare an EU regulation.

For information, EASA published the draft text for the related EASA decision containing acceptable means of compliance (AMC)/guidance material (GM). The final decisions issuing the AMC/GM will be published by EASA once the European Commission has adopted the regulations.

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1 Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC (OJ L 79, 19.3.2008, p. 1) (http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1467719701894&uri=CELEX:32008R0216).

2 EASA is bound to follow a structured rulemaking process as required by Article 52(1) of Regulation (EC) No 216/2008. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure).

3 http://easa.europa.eu/rulemaking/annual-programme-and-planning.php

4 http://www.easa.europa.eu/system/files/dfu/ToR%20RMT.0698%20Issue%201.pdf

5 In the time frame from May 2016 to February 2017, EASA organised four technical meetings with external experts (competent authorities and sailplane stakeholders, including the European Gliding Union (EGU)).

6 On 8.12.2016.

7 In accordance with Article 52 of Regulation (EC) No 216/2008 and Article 16 of the Rulemaking Procedure; written consultation in the time frame 16.11.-23.12.2016.

8 http://easa.europa.eu/document-library/opinions

9 Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) (http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1474965863160&uri=CELEX:32012R0965).

2. In summary — why and what

2.1. Why we need to change the rules — issue/rationale

Currently, the European rules for air operations with sailplanes in force are laid down in Regulation (EU) No 965/2012. This Regulation does not only contain rules on sailplanes, but also the technical requirements and administrative procedures regulating air operations with aeroplanes, helicopters and still for balloons[10]. In this respect, stakeholders have continuously raised the following concerns as regards the sailplane rules:

— The Regulation is too complex to handle: For different sailplane operations, such as NCO, CAT or SPO[11], different parts and different points within the regulation are applicable, sometimes 'hidden' and not easily identifiable[12].

— Many rules for sailplanes have been 'translated', e.g. from the rules for large passenger aeroplanes. This resulted in an overregulation for sailplanes which, compared to large passenger aeroplanes for example, are simple aircraft.

— From the way the rules are written, it is not always clear whether they are applicable to sailplanes, and when they are, to which extent (e.g. rules on the operations manual, on the minimum equipment list (MEL), task specialist, etc.).

In the context of the General Aviation (GA) Road Map[13], EASA took into consideration the concerns raised by stakeholders and decided to develop simpler and proportionate rules for air operations with sailplanes. This includes the following major measures:

— Establishment of a new regulation for sailplanes. The present Opinion only contains draft rules in the area of air operations. However, the scope of the new regulation may be extended to include further areas (e.g. flight crew licensing[14]) to have — at least to a certain extent — a single 'sailplane rule book' with rules on sailplanes under 'one roof'.

— Restructuring, amendment and simplification of the rules, extracted from Regulation (EU) No 965/2012, to establish a simpler and proportionate regulatory framework for air operations with sailplanes.

In this context, it should be noted that the present proposal for sailplanes follows the proposal for the rules for air operations with balloons, considering also the amendments introduced during the adoption process of the latter ones.

As regards the structure of the new regulation, EASA is proposing the following annexes to the new act:

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[10] For balloons, the process of extracting the air operations requirements from Regulation (EU) No 965/2012 is already in a further advanced stage, i.e. the associated EASA Opinion (Opinion No 01/2016) was published in January 2016.

[11] NCO = non-commercial operations with other-than complex motor-powered aircraft, CAT = commercial air transport, SPO = specialised operations.

[12] In an analysis of the implementing rules and the AMC/GM, EASA identified approximately 100 typed pages which are applicable to sailplanes. These rules and provisions are spread over a total of approximately 1 900 pages of Regulation (EU) No 965/2012 and the associated AMC/GM.

[13] http://www.easa.europa.eu/easa-and-you/general-aviation/general-aviation-road-map and http://easa.europa.eu/system/files/dfu/European%20GA%20Safety%20Strategy.pdf

[14] EASA RMT.0701 on 'Revision of the sailplane licensing requirements'.

— Annex I (Part-DEF), containing the definitions used in the rules for air operations with sailplanes; and

— Annex II (Part-SAO, that is 'sailplane air operations'), containing the rules for conducting non-commercial as well as commercial operations.

EASA is of the opinion that the simple structure of the new regulation meets the needs of stakeholders. This especially holds, since the main part, Annex II (Part-SAO), contains 11 typed pages only. Sailplane pilots and operators are expected to be able to handle easier such concise regulatory framework which does not compromise safety.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 2 of Regulation (EC) No 216/2008. This proposal will contribute to the achievement of the overall objectives by addressing the issues outlined in Chapter 2.

The specific objective of this proposal is to establish dedicated sailplane operations requirements that are better considering the specificities of sailplanes and are proportionate to the complexity and risks of sailplane flying.

2.3. How we want to achieve it — overview of the proposals

The discussion of the major technical proposals is provided in Section 2.4., together with the outcome of the consultation.

Proposed new regulation related to operations with sailplanes (Annex I to the Opinion)

The structure of the draft new rules for sailplanes is as follows:

The act

The act contains the following four articles:

— Article 1 'Subject matter and scope': It states that the regulation lays down detailed rules for air operations with sailplanes.

— Article 2 'Definitions': Definitions for terms used in the act are provided.

— Article 3 'Air operations': It regulates the applicability of the regulation as regards non-commercial operations and commercial operations, as well as derogations.

— Article 4 'Entry into force and application': The date of entry into force and the applicability date are specified.

Annex I (Part-DEF) — Definitions

In addition to Article 2 of the act, Annex I contains numerous definitions related to sailplane operations which are used in Annex II.

Annex II (Part-SAO) — Sailplane air operations

As explained above, Part-SAO contains the rules to be followed by all operators conducting non-commercial as well as commercial sailplane operations. The rules of this Part have been mainly extracted from Annex VII (Part-NCO) to Regulation (EU) No 965/2012. Some text from Annex VII

(Part-NCO) has been transferred unchanged, while other text has been amended and simplified (for details, see **Table A1.1** of Appendix 1). Part-SAO is divided into the following five subparts:

— Subpart GEN 'General requirements': It contains the basic organisational and operating requirements, including rules as regards the scope, competent authority, responsibility of the pilot-in-command, crew member responsibilities, compliance with rules, documents and information to be carried, etc.

— Subpart OP 'Operating procedures': It contains all rules as regards operating procedures. This includes the use of aerodromes and operating sites, passenger briefing, flight preparation, meteorological conditions, etc. In addition, requirements for specialised operations (concerning checklists) are included.

— Subpart POL 'Performance and operating limitations': This short subpart contains rules as regards weighing and performance in general.

— Subpart IDE 'Instruments, data and equipment': It contains rules on instruments and equipment in general, flight and navigational instruments, supplemental oxygen, survival equipment, etc.

— Subpart DEC 'Declaration': This short subpart contains rules on the declaration for commercial operations.

Finally, the Appendix to Part-SAO contains the form for a declaration.

Proposed amendments to Regulation (EU) No 965/2012 (Annex II to the Opinion)

This Opinion proposes the extraction of the rules for air operations with sailplanes from Regulation (EU) No 965/2012, except for the authority requirements specified in Annex II (Part-ARO)[15]. Consequently, the said Regulation, including its annexes, needs to be amended.

2.4. What are the stakeholders' views — outcome of the consultation

As described in Chapter 1, the new draft rules for air operations with sailplanes were intensively discussed with the dedicated experts during technical meetings and during a focused consultation (public workshop and written consultation of EASA Advisory Bodies). The outcome of the discussion on the major issues can be summarised as follows:

— **No preference for returning to national regulation:** The majority of the external experts made it clear that they prefer uniform European rules. Consequently, the proposed rules do not contain any re-delegation to national or regional level.

— **Authority requirements:** After a substantial discussion, EASA proposes not to transfer the authority requirements laid down in Annex II (Part-ARO) to Regulation (EU) No 965/2012 to the new regulation on sailplanes. The reason is that all air operation authority requirements should remain under 'one roof', and should not be split for different aircraft categories[16].

— **No additional requirements for commercial operations:** After a substantial discussion, EASA proposes not to introduce additional requirements for commercial operations, except for requiring a declaration (see below). This proposal is in line with the opinion of the majority of competent authorities and sailplane stakeholders. It is justified taking into account the changes

[15] For the justification, see Section 2.4 under the heading 'authority requirements'.

[16] The same approach has been chosen for balloons (see Opinion No 01/2016).

and simplifications the 'new' Basic Regulation[17] foresees for commercial operations of sailplanes. More specific, the main reasons are:

- Using a risk-based approach, no indication could be identified that a commercial flight with a pilot and one passenger is riskier than the same flight if it would be conducted as a non-commercial one.
- Such additional requirements would mean an unnecessary administrative burden and overregulation.
- For sailplanes, the attractiveness of conducting commercial operations is limited, since only one passenger can be carried.

— **Declaration instead of an air operator certificate (AOC)** (point SAO.DEC.100): At present there are only very few, if any, commercial operations with sailplanes[18] conducted within the Union. However, to enable the competent authority to obtain an overview on these commercial operations, EASA proposes that the operator of such operations is required to provide a declaration. This approach was supported by the majority of competent authorities, and was accepted also by the sailplane stakeholders[19].

— **Cost-sharing** (sub-paragraph (2)(a) of Article 3): In Regulation (EU) No 965/2012, cost-shared operations by private individuals are permitted under the condition that only the direct costs are shared between the pilot and the passenger. The majority of external experts expressed the opinion that, in addition, annual costs should also be shared. Following this approach, EASA proposes that a proportionate contribution of the annual cost is shared[20].

— **Sailplane specialised operations** (point SAO.OP.155): At the beginning of the rulemaking activity, EASA identified the following sailplane operations to be considered specialised operations[21], which consequently require a risk assessment and a checklist:

- parachute operations;
- sailplane towing;
- aerial advertising flights, i.e. banner towing with powered sailplanes;
- aerial photography flights (news media flights, television and movie flights);
- flying display;
- competition flights; and
- aerobatic flights.

[17] At present, the 'new' Basic Regulation, replacing Regulation (EC) No 216/2008, is being established. It is expected that the new Basic Regulation will enter into force before the new regulation for sailplanes will become applicable.

[18] EASA has no knowledge of the exact numbers, see also Section 3.1.

[19] In this context, it should be mentioned that Regulation (EU) No 965/2012 requires an AOC for CAT operations with sailplanes. EASA and the external experts agreed that this clearly would mean overregulation, and would be clearly in contrast to the goals of the GA Road Map.

[20] This proposal is in line with what has been accepted as regards the rules for air operations with balloons during the adoption process of Opinion No 01/2016.

[21] These operations were taken from the list of specialised operations in the GM to Annex VII (Part-NCO) to Regulation (EU) No 965/2012.

During the discussion on this subject, it became clear that sailplane towing, competition and aerobatic flights should not be considered specialised operations due to the following reasons:

- **Sailplane towing** is a very common launch method. In many flying clubs it is the only launch method available. It is in no way an unusual or a specialised operation. As for all other normal sailplane operations, pilot licensing requirements, aircraft flight manual (AFM) operating limitations and instructions, and established good practices provide adequate risk mitigation during sailplane towing.
- **Competition flights** are a common part of sailplane operations. A gliding competition is not a classic aeroplane air race; in fact, it is a series of normal cross-country flights involving a number of sailplanes flying a similar route. This holds for both formal competitions and routine/informal competitive flying between sailplane pilots. It can be concluded that extra risk assessments and checklists would bring no safety benefit.
- **Aerobatic flights** are commonly carried out by trained and qualified pilots during instructional and other flying, and are considered an acknowledged method of improving handling skills of pilots. Limitations and operating instructions are described in the AFM. The range of attitudes routinely adopted by sailplanes is much wider than for other GA aircraft. Simple aerobatics may well occur during a flight without them having been planned before take-off. Requiring formal risk assessments and extra checklists would be unreasonable for sailplane aerobatics outside of a display environment.

In summary, introducing specific requirements for such operations in addition to those for normal operations would be disproportionate and of no benefit, and would lead to an additional, unnecessary bureaucratic overhead. Following this approach, EASA proposes to consider sailplane towing, competition and aerobatic flights as normal operations. Therefore, the list of specialised operations for sailplanes, provided in the AMC/GM, contains the following flights:

- parachute operations;
- aerial advertising flights, i.e. banner towing with powered sailplanes;
- aerial photography flights (news media flights, television and movie flights); and
- flying display.

— **Portable electronic devices (PEDs)** (point SAO.GEN.145): In point NCO.GEN.125 of Annex VII (Part-NCO) to Regulation (EU) No 965/2012, the requirement on PEDs is phrased as follows:

'The pilot-in-command shall not permit any person to use a PED on board an aircraft that **could adversely affect** the performance of the aircraft's systems and equipment.'

The majority of the external experts agreed on the following: The wording could be interpreted as if the pilot has to make a thorough assessment whether the effects could occur, even under the most remote circumstances. This is seen as a typical task of a certification process and/or drafting of a technical standard. Clearly, this is outside the possibilities of a pilot.

In addition, the following points were raised:

- The possible adverse effects upon the safe operation of a sailplane are rather small and improbable. The worst case of a total failure of the propulsion system (in case of a powered sailplane) inherently does not result in a catastrophic situation, since sailplanes are designed to fly and land safely with the engine shut down.
- Vast experience of operating a large multitude of PEDs on board of sailplanes has not brought up safety issues.
- PEDs are often an important and very useful and safety-increasing device in a typical modern sailplane cockpit. Non-certified and handheld devices are carried and operated, since they allow much easier navigation, flight planning and flight management than older traditional instruments and equipment.

After analysing the points raised, EASA decided to change the phrase 'could adversely affect' into 'adversely affects'.

— **Dangerous goods** (point SAO.GEN.150): Dangerous goods are not 'transported' with sailplanes. In addition, during the drafting and the subsequent consultation, it became clear that in general dangerous goods should not be 'carried' on board. The rules on dangerous goods have been adjusted and simplified accordingly.

— **Documents, manuals and information to be carried** (point SAO.GEN.155): Based on the input received, EASA proposes to further reduce the number of documents which have to be carried on board. Even further, all documents may remain on the ground, when the sailplane is intended to remain within the sight of the aerodrome or the operating site, or remains within a distance determined by the competent authority. The reasons for these simplifications are as follows:

- Sailplane fuselages are designed to minimise drag and as such have a small cross section; unlike most aeroplane cockpits and balloon baskets, sailplane cockpits are designed to accommodate the pilot and nothing else. By design, most sailplanes do not have equipment or document storage/stowage.
- Loose articles are a significant hazard in sailplanes. Especially older commonly operated sailplanes have exposed control mechanisms within the cockpit and in the centre fuselage that can be reached by loose articles present in the cockpit. Pilots are trained to secure or remove loose articles. AFMs specifically require pilots to remove loose articles ahead of a particular activity, e.g. before carrying out aerobatics.
- Unlike balloon and aeroplane pilots, the operating environment is such that sailplane pilots cannot routinely take time out during flight to read publications. From launch to landing, the pilot will be focused on looking out, flying the sailplane and decision-making. Details needed in flight other than those usually displayed in flight electronically or on a chart are pre-briefed by reference to the AFM or are subject of theoretical knowledge study. Where reasonably possible, the AFM should be carried on board, especially when landing at a different landing site.

— **No specific rules for air operations with touring motor gliders (TMGs):** Powered sailplanes are divided in two groups, self-sustaining and self-launching sailplanes, whereby self-launching

sailplanes are divided again in two sub-categories. One of the sub-categories of self-launching sailplanes is usually designed for having the engine running during all phases of flight, capable of taxiing with the wing level and having an endurance of several hours. A common term for this sub-category is touring motor glider (TMG).

Annex VII (Part-NCO) to Regulation (EU) No 965/2012 contains specific requirements for TMGs. One of these requirements states that TMGs shall follow the rules for aeroplanes when they are power-driven by an engine. During the technical meetings, the external experts expressed that in their view such a requirement is burdensome and of no benefit as regards safety. EASA agreed to this point of view and proposes to delete this requirement. Instead, TMGs have to follow the rules for sailplanes, even when the engine is running. Therefore, in this respect, no specific requirement is needed.

EASA, together with the technical experts, analysed the other but less far-reaching requirements on TMGs in Annex VII (Part-NCO) to Regulation (EU) No 965/2012. The conclusion is that these requirements are superfluous and do not lead to an additional safety benefit. In conclusion, no specific requirements for TMGs are needed and, therefore, the term 'TMG' is not mentioned in the air operations requirements related to sailplanes.

— **Task specialist:** The vast majority of the external experts agreed with EASA that task specialists do not play an important role for specialised operations with sailplanes. Consequently, EASA proposes not to introduce any implementing rules for task specialists.

Further information on the modifications introduced, based on the input received, is provided in **Table A1.1** of Appendix 1. As regards the new Annex II (Part-SAO), this table provides a comparison between each new point and the existing point of Regulation (EU) No 965/2012 concerning the content of the rule.

2.5. What are the expected benefits and drawbacks of the proposals

The expected benefits of the envisaged new regulation for sailplanes are simpler and proportionate rules. While reducing the regulatory burden especially to sailplane pilots/operators, the new regulatory framework is expected to maintain a high level of safety. This goal has been achieved by incorporating many of the proposals made by external experts, including:

— establishing common rules for all operations (no additional rules for commercial operations except for requiring a declaration, see next bullet point);

— requiring a declaration for commercial operations (instead of an AOC, as required in Regulation (EU) No 965/2012); and

— considering sailplane towing, as well as competition and aerobatic flights as normal operations (and not as specialised operations which would imply additional requirements).

2.6. How do we monitor and evaluate the rules

EASA will monitor and evaluate the implementation of the proposed new rules related to operations with sailplanes by discussing them with the competent authorities and the sailplane stakeholders in different forums (meetings of the EASA Advisory Bodies, workshops, aviation fairs and exhibitions, etc.). In addition, EASA will regularly monitor sailplane accidents and incidents by updating its sailplane

safety risk portfolio (see Section 3.1.1.). At this stage, aside of these measures, it is not envisaged to implement further evaluation arrangements on a systematic basis.

3. Regulatory impact assessment (RIA)

3.1. Issue analysis

EASA sent two surveys to the competent authorities in 2016 to gather general information on the sailplane sector in EASA Member States. The first survey was directly related to the present rulemaking task to gain information on sailplane activities, while the second one was initiated to analyse the safety occurrences in the States[22]. With these two surveys and with additional data provided by the European Glider Union (EGU), information from 28 of the 32 EASA Member States[23] is available.

Based on this data, the sailplane activities for one single year[24] can be summarised as follows (see **Table A2.1** and **Figures A2.1–A2.2** of Appendix 2 for more details):

— More than 25 000 sailplanes exist in 25 EASA Member States, with an uneven distribution among the States (see Figure A2.1).

— Nearly 2 200 000 flights are conducted per year in 21 EASA Member States, again unevenly distributed among the States (see Figure A.2.2).

— No EASA Member State reported that it has implemented Regulation (EU) No 965/2012. Instead, the States are using the possibility to postpone the introduction of the European air operations requirements and still apply national rules.

— Through the survey no commercial operations could be identified, except for France that reported that two commercial operators are offering their service. It can be concluded that, with very few exceptions, at present all sailplane operations in Europe are non-commercial.

Table A2.1 also shows the following number of safety occurrences in the EASA Member States in the time frame 2012–2016:

— The total number of reported occurrences is 1 025, of which 109 were fatal[25] and 916[26] were non-fatal.

— The reported number of fatalities in the 5-year time frame is 122[27].

As described above, the EASA Member States are using the possibility to postpone the introduction of the European air operations requirements and to wait for the outcome of the present rulemaking task. As a consequence, the assessment of this rulemaking proposal may be perceived from two different angles:

— From EASA's point of view, the 'official' baseline scenario is Regulation (EU) No 965/2012 which, at present, foresees the implementation of the European rules for air operations with sailplanes in April 2019 at the latest.

[22] For the analysis of the second survey, see also Section 3.1.1. on the safety risk assessment.

[23] However, not all of the requested information is available from all of these 28 EASA Member States.

[24] The last reporting year (depending on the EASA Member State, either 2016 or 2015).

[25] 17 EASA Member States provided data.

[26] 24 EASA Member States provided data.

[27] 17 EASA Member States provided data.

— However, since the vast majority of the EASA Member States have not yet started implementing Regulation (EU) No 965/2012, their 'practical' baseline scenario are the national rules. Therefore, EASA Member States and the sailplane community will also compare the envisaged new regulation with the existing national rules.

Nevertheless, it was confirmed during the technical meetings that none of these baseline scenarios are the way forward, and that common, proportionate European rules to ensure safety and a level playing field are imperative. As a consequence, the general issue is to establish a new regulation containing rules for air operations with sailplanes that will especially address the concerns raised by the GA community and the sailplane sector in terms of level of details in the rules, including:

— complexity of the rule structure: it is difficult to identify the relevant rules for sailplane operations in Regulation (EU) No 965/2012; and

— proportionality: it is difficult to apply rules which are not proportionate for the sailplane sector, e.g. requirements on operations manual, MEL, task specialist, dangerous goods, etc.

3.1.1. Safety risk assessment

EASA analysed the safety occurrences in the EASA Member States for the years 2012–2016 ('EASA safety risk portfolio for sailplanes') showing the main risks in sailplane operations. As mentioned above, an overview of the occurrences per country in this time period is provided in Table A2.1.

Overall, the safety risk portfolio shows that approximately 45 % of all fatal accidents are attributed to aircraft upset in flight. In more detail, the following main operational safety issues have been identified:

Recognition and recovery from abnormal attitudes during en route (search for updraft): The main results are:

— stall during ridge soaring, winch launch and outlandings; and

— loss of control after mid-air collisions[28].

This safety issue has the highest score of fatal accidents in sailplane operations and is highly related to 'maintaining adequate separation between the aircraft on the ground and in the air' (see below).

Recognition and recovery from abnormal attitudes during take-off: This safety issue comes in 2nd in number of fatalities. The main causes are:

— wing tip strike during the initial winch launch procedure causing the sailplane to turn over and crash on its back;

— lack of coordination within the launch team;

— high angle of attack during winch launch, causing a stall during initial climb; and

— lack of recent experience.

Recognition and recovery from abnormal attitudes during approach and landing: This safety issue is the 3rd on the list over fatal accidents. The main causes are:

[28] However, the voluntarily installation of non-approved traffic awareness systems has reduced the number of mid-air collisions in the past decade.

— stall (one wing stall) when turning on final approach for landing and speed monitoring; and

— lack of situational awareness during approach, leading e.g. to incorrect use of air brakes or incorrect distance estimation.

Maintaining adequate separation between aircraft on the ground and in the air: This issue is strongly related to the first safety issue. The main cause is narrow space between sailplanes when climbing in circles. During such an operation, it can be difficult to monitor the altitude and behaviour of the aircraft around. This has resulted in mid-air collisions causing loss of control of one or both aircraft.

Human-related safety issues: Other safety issues attributed to several fatal accidents are human-related issues. Two examples are:

— personal readiness and crew impairment, meaning either medical impairment of some kind, psychological events like alertness and fatigue or physical impairment; and

— flight crew perception and awareness, and decision-making and planning, meaning that the way a pilot perceives his or her environment affects his or her decisions.

EASA compared these main safety issues and the envisaged revised rules for the operation of sailplanes and concluded that no further requirements are needed. The rules addressing the safety issues are already existing or being established to the possible extent in the course of the present rulemaking task. Nevertheless, and due to the nature of these safety issues, it is considered that some might need to be targeted via other means, e.g. safety promotion activities, in order to mitigate the risks.

3.1.2. Who is affected

The sailplane community is affected. This includes sailplane pilots, operators and competent authorities. The proposals are expected to affect:

— more than 70 000 sailplane pilots[29];

— more than 4 000 sailplane operators[30];

— competent authorities in 32 EASA Member States and their staff performing oversight over sailplane activities.

Potential interface issues with other GA-related rulemaking tasks[31] have been dealt with continuously during the process, as necessary, to ensure overall consistency and to avoid possible overlaps.

3.1.3. How could the issue evolve

Implementing the rules for air operations with sailplanes as laid down in Regulation (EU) No 965/2012 would mean a disproportionate burden for this sector and could lead to a decrease of sailplane operations in EASA Member States.

[29] According to the EASA survey, there are more than 70 000 pilots in 14 EASA Member States (only 14 States provided data).

[30] According to the EASA survey, there exist more than 4 000 operators in the 14 EASA Member States that provided data. It should be noted that gliding is organised in a different manner in the various States (e.g. single private owner vs large flying clubs) and/or that the term 'operator' may be understood differently in different States. This holds although the term 'operator' is defined in Article 3 of the Basic Regulation as follows: *'operator' shall mean any legal or natural person, operating or proposing to operate one or more aircraft or one or more aerodromes*.

[31] RMT.0657 on 'Training outside ATOs (Opinion No 11/2016), RMT.0674 on 'Revision of the European operational rules for balloons' (Opinion No 01/2016) and RMT.0701 on 'Revision of the sailplane licensing requirements'.

3.2. Methodology

The methodology applied for this RIA is the multi-criteria analysis (MCA) which allows comparing all options by scoring them against a set of criteria.

MCA covers a wide range of techniques that aim to combine a range of positive and negative impacts into a single framework to allow easier comparison of scenarios. The MCA key steps generally include the following:

— establishing the criteria to be used to compare the options (these criteria must be measurable, at least in qualitative terms); and

— scoring how well each option meets the criteria; the scoring needs to be relative to the baseline scenario.

The criteria used to compare the options were derived from the Basic Regulation, and the guidelines for the RIA were developed by the European Commission. The principal objective of EASA is to 'establish and maintain a high uniform level of safety' (Article 2(1) of the Basic Regulation). As additional objectives to those mentioned above, the Basic Regulation identifies social, economic and proportionality aspects which are reflected below.

As shown in detail in **Table 1**, the scoring of the impacts uses a scale of – 5 to + 5 to indicate the negative and positive impacts of each option (i.e. from 'very low' to 'very high' negative/positive impacts). Intermediate levels of benefits are termed 'low, 'medium' and 'high' to provide for a total of five levels in each one of the negative and positive directions, with also a 'no impact' score possible.

Table 1 — Impact scoring scale

Negative impact	Score	Positive impact	Score
-5	Very high negative impact	+5	Very high positive impact
-4	High negative impact	+4	High positive impact
-3	Medium negative impact	+3	Medium positive impact
-2	Low negative impact	+2	Low positive impact
-1	Very low negative impact	+1	Very low positive impact
0	Neutral/insignificant		

3.3. How it could be achieved — options

The possible options for the regulatory framework for air operations with sailplanes are listed in **Table 2**.

Table 2 — List of policy options

Option/ sub-option	Short title	Description
0	No policy change	To implement Regulation (EU) No 965/2012 as currently foreseen on 8 April 2019 at latest.
1	Revised rules	To establish a new regulation for air operations with sailplanes with proportionate European rules (see Section 2.4. for more details).
1.1	Additional rules for commercial operations	In addition to revised rules for non-commercial operations, revised rules for commercial operations are introduced to encompass the commercial operation specificities. For commercial operations, a declaration is required.
1.2	Common rules for all operations, declaration for commercial operations	The revised rules are applicable to both, non-commercial and commercial operations. In addition, for commercial operations, a declaration is required.
1.3	Common rules for all operations without declaration	The revised rules are applicable to both, non-commercial and commercial operations. For commercial operations, no declaration is required.
1.4	Extended scope of sailplane specialised operations	The following sailplane operations are considered specialised operations: parachute operations, aerial advertising flights, aerial photography flights, flying display, sailplane towing, competition flights and aerobatic flights. These flights would require a risk assessment and a checklist.
1.5	Limited scope of sailplane specialised operations	The scope of the sailplane operations considered specialised would be limited to: parachute operations, aerial advertising flights, aerial photography flights and flying display. These flights would require a risk assessment and a checklist. Sailplane towing, competition and aerobatic flights are not considered specialised operations; they represent a normal activity.
2	National rules	To stop the implementation of Regulation (EU) No 965/2012 and keep national rules instead

Option 0 may overregulate the sailplane sector as described in Section 2.1.

Option 1 establishes simpler and proportionate European rules. It has several sub-options, addressing two major issues:

— Distinction between commercial and non-commercial sailplane operations: The question is whether or not additional requirements for commercial operations, reflecting the specificities of commercial operations, are needed. This issue is analysed in Sub-options 1.1, 1.2 and 1.3.

— Sailplane towing, competition and aerobatic flights: The question is whether these operations need to be considered specialised operations or not. This issue is analysed in Sub-options 1.4 and 1.5.

Option 2 would mean repealing of Regulation (EU) No 965/2012 for sailplane operations and retaining national rules. However, in order to have common, proportionate European rules to ensure a uniform level of safety and a level playing field, this option is discarded and not further analysed.

All other options/sub-options are analysed below.

3.4. What are the impacts

3.4.1. Safety impact

Option 0: Compared to the present situation, safety benefits could be gained with the strict safety requirements of Regulation (EU) No 965/2012, when it is applicable in all EASA Member States. These safety requirements are much more demanding than the current safety requirements of most of the national regulations and thus could lead to safety improvement. Despite that, it may be expected that the sailplane community may not fully acquire these benefits, due to the complexity and, in their view, disproportionality of the requirements. This may lead to some negative consequences when applying the European rules. The overall impact is, therefore, considered neutral.

Option 1: In general terms, having requirements proportionate to the scale and complexity of the sailplane operations could result in safety benefits comparable to the ones of Option 0. However, one has to analyse in more detail the different sub-options:

Sub-option 1.1: It is expected that additional rules for commercial operations would not result in safety benefits, considering the nature of sailplane operations. In practice, both commercial and non-commercial operations require teamwork of sailplane clubs/operators and pilots, and the same efforts to ensure safety are needed. There is no indication that a commercial flight with a pilot and one passenger is more risky than the same flight conducted as a non-commercial operation. The overall impact is, therefore, considered neutral.

Sub-option 1.2: Same safety impacts as for Sub-option 1.1.

Sub-option 1.3: This option is expected to have a very low negative safety impact, since the competent authorities might not be aware of commercial sailplane operations and thus hampering the effective oversight. This may result in deterioration of the safety level.

Sub-options 1.4 and 1.5: Considering sailplane towing, competition and aerobatic flights specialised operations implies additional actions (namely a risk assessment and a checklist) with very limited safety benefit, because:

— these operations are very common; and

— the safety barriers embedded in pilot licenses and ratings as well as in aircraft certification are considered strong safeguards to ensure the same level of safety as if these operations would be conducted as specialised operations.

Therefore, as described in more detail in Section 2.4.[32], in terms of safety impact, it makes no difference whether sailplane towing, competition and aerobatic flights are assigned as specialised operations or not. The overall safety impact of both sub-options is considered neutral.

The safety impact is summarised in **Table 3**.

Table 3 — Safety impact

Type of impact	Option 0	Sub-option 1.1	Sub-option 1.2	Sub-option 1.3	Sub-option 1.4	Sub-option 1.5
	No policy change	***Additional rules for commercial operations***	***Common rules for all operations, declaration for commercial operations***	***Common rules for all operations without declaration***	***Extended scope of sailplane specialised operations***	***Limited scope of sailplane specialised operations***
Safety impact	Safety risks are mitigated.	Safety benefits as in Option 0	Safety benefits as in Option 0	Negative impact on safety, hampering the oversight	Safety benefits due to risk assessment and a checklist	Safety benefits as in Option 1.4, because of equivalent level of safety measures
	0	0	0	-1	0	0

3.4.2. Social impact

The social impact is analysed from the perspective of the effect on the labour market and employment as regards the sailplane community[33].

Option 0: The complex and to some extent overregulating requirements of Regulation (EU) No 965/2012 may lead to a negative effect on employment and the labour market as regards sailplane production and maintenance. Some of the existing operators and pilots may cease their activities due to the demanding requirements. Therefore, the overall impact is considered very low negative.

Option 1: Simplified rules will not bring additional social benefits, but keep stability for gliding clubs and pilots, in terms of social aspect. Possible negative impact that might be expected from the requirements of Regulation (EU) No 965/2012 will be overcome. In addition, it is expected that the simplified rules could increase the attractiveness of sailplane activities among interested persons (e.g. persons considering to become a pilot). The overall impact is considered neutral for all Sub-options 1.1, 1.2, 1.3, 1.4 and 1.5.

The social impact is summarised in **Table 4**.

[32] See in Section 2.4. under the sub-heading 'Sailplane specialised operations'.

[33] EC Better Regulation Guidelines (http://ec.europa.eu/smart-regulation/guidelines/ug_chap3_en.htm).

Table 4 — Social impact

Type of impact	Option 0	Sub-option 1.1	Sub-option 1.2	Sub-option 1.3	Sub-option 1.4	Sub-option 1.5
	No policy change	***Additional rules for commercial operations***	***Common rules for all operations, declaration for commercial operations***	***Common rules for all operations without declaration***	***Extended scope of sailplane specialised operations***	***Limited scope of sailplane specialised operations***
Social impact	Negative impact on the employment and the sailplane labour market	Stability in performing sailplane activities from a social point of view				
	-1	0	0	0	0	0

3.4.3. Economic impact

Option 0: The regulatory costs associated with sailplane operations under the Regulation (EU) No 965/2012 is considered high, when considering the simplicity of the aircraft and its operation. This holds for all operations as regards administrative burden in different areas (e.g. specialised operations and dangerous goods). But this is even more relevant for commercial operations, where e.g. an AOC is required and a management system has to be established. On the other hand, however, the number of commercial operations in the EASA Member States is very marginal (see Section 3.1.). Taking the latter into account, the overall impact is considered low negative.

Option 1: Compared to Option 0 and in general terms, the revised and simplified rules, adapted to the level of complexity of the activity, provide an economic benefit. However, one has to distinguish between the different sub-options:

Sub-option 1.1: Even though the rules will be simplified, introducing an additional and separate set of rules for commercial operations would not completely resolve the issue of overregulating. Having in mind that even for commercial operations only one passenger can be carried, such a set of rules would not be appropriate to the level of complexity of the commercial operation. Although, as of today, there are almost no commercial sailplane operators in the market (see Section 3.1.), an additional set of rules for commercial operations would have a negative impact on such operations. Therefore, despite having simplified rules, the overall positive impact will be neutralised.

Sub-option 1.2: As regards commercial operations, for both, sailplane operators and competent authorities, the administrative burden and the associated costs are expected to be lower for a declaration than for an AOC, the latter required by Regulation (EU) No 965/2012. Overall, the economic impact of Sub-option 1.2 is considered low positive.

Sub-option 1.3: Not requiring a declaration for commercial sailplane operations would result in slightly lower costs for operators compared to Sub-option 1.2. On the other hand, not being provided with a declaration might have a negative impact on the competent authorities which may need more

resources to ensure an appropriate level of oversight. For non-commercial operations there is no difference to Sub-option 1.2. The overall economic impact is the same as for Sub-option 1.2, namely low positive.

Sub-option 1.4: A negative economic impact might be expected for the additional specialised operations, namely sailplane towing, competition and aerobatic flights. This is, because the requirements would impose additional actions (risk assessment and checklist) as regards these activities, respectively more costs. Although this additional burden exists, the overall economic impact is still very low positive.

Sub-option 1.5: Compared to the previous sub-option, sailplane towing, competition and aerobatic flights are considered normal flights and would not constitute any additional cost as regards the risk assessment and the checklist. Therefore, the overall impact is higher than for Sub-option 1.4, namely low positive.

The economic impact is summarised in **Table 5**.

Table 5 — Economic impact

Type of impact	**Option 0**	**Sub-option 1.1**	**Sub-option 1.2**	**Sub-option 1.3**	**Sub-option 1.4**	**Sub-option 1.5**
	No policy change	***Additional rules for commercial operations***	***Common rules for all operations, declaration for commercial operations***	***Common rules for all operations without declaration***	***Extended scope of sailplane specialised operations***	***Limited scope of sailplane specialised operations***
Economic impact	Requirements pose administrative burden	Simplified rules. Nevertheless, additional rules might result in more costly commercial operations.	Proportionate requirements. Declaration is considered neutral as regards the costs.	Proportionate requirements. In total, not requiring a declaration is considered neutral as it leads to a balance between benefits and costs.	Extended scope leads to additional costs for sailplane towing, competition and aerobatic flights.	Limited scope leads to reduced costs for sailplane towing, competition and aerobatic flights.
	-2	**0**	**+2**	**+2**	**+1**	**+2**

3.4.4. GA and proportionality issues

The assessment under the current criterion is made on the basis of alignment with the GA Road Map, including proportionality issues[34].

Option 0: As described in Section 2.1., the regulatory framework for the operations of sailplanes as laid down in Regulation (EU) No 965/2012 is considered being too complex and, therefore, not in line with

[34] It should be noted that proportionality issues as regards economic impacts have been covered in Section 3.4.3.

the GA Road Map. Overall, it can be stated that the said Regulation would have high negative impact on the sailplane community.

Option 1: The new rules are in line with the principles of the GA Road Map. However, again one has to distinguish between the different sub-options.

Sub-option 1.1: This sub-option requires additional rules for commercial operations. However, in any case, only one passenger can be carried and the risks involved in general is the same for both, non-commercial and a commercial operations. Therefore, this sub-option would not be entirely in line with the GA Road Map. The overall result is a very low positive impact.

Sub-option 1.2: This sub-option is in line with the GA Road Map, establishing simpler, 'better' and proportionate rules for the GA community. Therefore, it would result in a medium positive impact.

Sub-option 1.3: Same as for Sub-option 1.2.

Sub-option 1.4: This sub-option might create a risk of overregulation as regards specialised operations. Therefore, it is not entirely in line with the GA Road Map and has a low positive impact.

Sub-option 1.5: This sub-option is in line with the GA Road Map, since specific operations are not overregulated, but considered normal operations. Therefore, it would result in a medium positive impact.

The GA and proportionality issues are summarised in **Table 6**.

Table 6 — GA and proportionality issues

Type of impact	Option 0	Sub-option 1.1	Sub-option 1.2	Sub-option 1.3	Sub-option 1.4	Sub-option 1.5
	No policy change	***Additional rules for commercial operations***	***Common rules for all operations, declaration for commercial operations***	***Common rules for all operations without declaration***	***Extended scope of sailplane specialised operations***	***Limited scope of sailplane specialised operations***
GA and proportionality impact	Not in line with the GA Road Map	Risk of overregulating commercial operations	In line with the GA Road Map	In line with the GA Road Map	Risk of overregulating specific operations	In line with the GA Road Map
	-4	**+1**	**+3**	**+3**	**+2**	**+3**

3.5. Conclusion — Comparison of options

As summarised in **Table 7,** Option 1 offers the most positive impacts across the different domains. It will allow the implementation of proportionate requirements for sailplane operations. The sub-options of Option 1 cover two different issues:

1. Segregation of commercial and non-commercial sailplane operations: The question is whether or not additional requirements for commercial operations, reflecting the specificities of commercial operations, are needed. This issue was analysed in Sub-options 1.1, 1.2 and 1.3.

2. Treatment of sailplane towing, competition and aerobatic flights: The question is whether these operations need to be considered specialised operations or not. This issue was analysed in Sub-options 1.4 and 1.5.

The RIA demonstrates that the preferred policy options are the combination of:

— Sub-option 1.2: common rules for-commercial and non-commercial operations, with a declaration for commercial operations; and

— Sub-option 1.5: limited scope of sailplane specialised operations.

The combination of these two sub-options will deliver maximum benefits by providing a cost-efficient and proportionate regulatory framework for sailplane operations with sustainable safety benefits and by establishing a uniform level of safety in Europe.

Table 7 — Summary of impacts per criteria and option

Type of impact	**Option 0**	**Sub-option 1.1**	**Sub-option 1.2**	**Sub-option 1.3**	**Sub-option 1.4**	**Sub-option 1.5**
	No policy change	***Additional rules for commercial operations***	***Common rules for all operations, declaration for commercial operations***	***Common rules for all operations without declaration***	***Extended scope of sailplane specialised operations***	***Limited scope of sailplane specialised operations***
Safety	0	0	0	-1	0	0
Social	-1	0	0	0	0	0
Economic	-2	0	+2	+2	+1	+2
GA	-4	+1	+3	+3	+2	+3
Total	**-7**	**+1**	**+5**	**+4**	**+3**	**+5**
Preferred option	**No**	**No**	**Yes**	**No**	**No**	**Yes**

Cologne, 23 August 2017

[signed by]

Patrick KY
Executive Director

4. References

4.1. Affected regulations

— Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1)

4.2. Related decisions

— Decision 2014/015/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-CAT of Commission Regulation (EU) No 965/2012 and repealing Decision 2012/018/R of the Executive Director of the Agency of 24 October 2012 — 'AMC and GM to Part-CAT — Issue 2'

— Decision 2014/016/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-NCO of Commission Regulation (EU) No 965/2012 and repealing Decision 2013/022/R of the Executive Director of the Agency of 23 August 2013 — 'AMC and GM to Part-NCO — Issue 2'

— Decision 2014/017/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ORO of Commission Regulation (EU) No 965/2012 and repealing Decision 2012/017/R of the Executive Director of the Agency of 24 October 2012 — 'AMC and GM to Part-ORO — Issue 2'

— Decisions 2014/018/R of the Executive Director of the Agency of 24 April 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-SPO of Commission Regulation (EU) No 965/2012 — 'AMC and GM to Part-SPO'

— Decision 2014/025/R of the Executive Director of the Agency of 28 July 2014 adopting Acceptable Means of Compliance and Guidance Material to Part-ARO of Commission Regulation (EU) No 965/2012 and repealing Decision 2014/014/R of the Executive Director of the Agency of 24 April 2014 — 'AMC and GM to Part-ARO — Issue 3'

All Decisions are available at http://easa.europa.eu/agency-measures/agency-decisions.php.

5. Appendices

5.1. Appendix 1 — Comparison between draft new rules in Annex II (Part-SAO) and existing rules

Table A1.1 — Comparison between points in the draft new Annex II (Part-SAO) and existing points in Regulation (EU) No 965/2012

New paragraph	Existing paragraph	Comparison
Subpart GEN — General requirements		
SAO.GEN.100 Scope	Not applicable	New text
SAO.GEN.105 Competent authority	NCO.GEN.100	Text adapted to ensure legal certainty
SAO.GEN.110 Demonstration of compliance	NCO.GEN.101	Text adapted to ensure legal certainty
SAO.GEN.115 Introductory flights	NCO.GEN.103	Text adapted to fit for sailplanes
SAO.GEN.120 Immediate reaction to a safety problem	NCO.GEN.145	Text adapted to ensure legal certainty
SAO.GEN.125 Designation of the pilot-in-command	Not applicable	New text to ensure legal certainty
SAO.GEN.130 Responsibilities of the pilot-in-command	NCO.GEN.105	Text adapted to fit for sailplanes
SAO.GEN.135 Responsibilities of crew members	NCO.SPEC.115	Text adapted and simplified
SAO.GEN.140 Compliance with laws, regulations and procedures	NCO.GEN.110	Text adapted to ensure legal certainty
SAO.GEN.145 Portable electronic devices	NCO.GEN.125	Text adapted and simplified
SAO.GEN.150 Dangerous goods	NCO.GEN.140	Text adapted and simplified
SAO.GEN.155 Documents, manuals and information to be carried	NCO.GEN.135	Text adapted to fit for sailplanes
SAO.GEN.160 Journey log	NCO.GEN.150	Text adapted to fit for sailplanes
Subpart OP — Operating procedures		
SAO.OP.100 Use of aerodromes and operating sites	NCO.OP.100	Only one editorial change ('sailplane' instead of 'aircraft')
SAO.OP.105 Noise abatement procedures — powered sailplanes	NCO.OP.120	Text adapted to fit for sailplanes
SAO.OP.110 Passenger briefing	NCO.OP.130	Only minor editorial changes
SAO.OP.115 Carriage of special categories of passengers (SCPs)	CAT.OP.NMPA.115	Text transferred from Part-CAT of Reg. 965/2012, and adapted to fit for sailplanes
SAO.OP.120 Flight preparation	NCO.OP.135	Text adapted to fit for sailplanes
SAO.OP.125 Refuelling with persons on board — powered sailplanes	NCO.OP.145	Text adapted to fit for sailplanes
SAO.OP.130 Smoking on board	NCO.OP.156	Text adapted to fit for sailplanes

New paragraph	Existing paragraph	Comparison
SAO.OP.135 Meteorological conditions	NCO.OP.160	Text adapted and simplified
SAO.OP.140 Ice and other contaminants — ground procedures	NCO.OP.165	Editorial changes (e.g. 'sailplane' instead of 'aircraft')
SAO.OP.145 In-flight fuel or other energy management — powered sailplanes	NCO.OP185	Text adapted to fit for sailplanes
SAO.OP.150 Use of supplemental oxygen	NCO.OP.190	Text changed into a performance-based rule. Specifics transferred to the AMC.
SAO.OP.155 Sailplane specialised operations — checklist	NCO.SPEC.105	Text adapted to ensure legal certainty
Subpart POL — Performance and operating limitations		
SAO.POL.100 Weighing	NCO.POL.105	Text adapted to ensure legal certainty
SAO.POL.105 Performance — General	NCO.POL.110	Text adapted to ensure legal certainty
Subpart IDE — Instruments, data and equipment		
SAO.IDE.100 Instruments and equipment — general	NCO.IDE.S.100	Text adapted to fit for sailplanes
SAO.IDE.105 Flight and navigational instruments	NCO.IDE.S.115/ NCO.IDE.S.120	Two points merged and text adapted
SAO.IDE.110 Operating lights	NCO.IDE.A.115	Text adapted to fit for sailplanes
SAO.IDE.115 Supplemental oxygen	NCO.IDE.S.130	Editorial changes
SAO.IDE.120 Live-saving and signalling equipment — Flight over water	NCO.IDE.S.135	Text changed into a performance-based rule. Specifics transferred to the AMC.
SAO.IDE.125 Live-saving and signalling equipment — Search and rescue difficulties	NCO.IDE.S.140	Minor editorial changes
SAO.IDE.130 Radio communication equipment	NCO.IDE.S.145	Text adapted to ensure legal certainty. Point (b) transferred to the AMC.
SAO.IDE.135 Transponder	NCO.IDE.S.155	Text adapted to ensure legal certainty
Subpart DEC — Declaration		
SAO.DEC.100 Declaration	Points (a) to (c) of ORO.DEC.100	Text adapted to ensure legal certainty
SAO.DEC.105 Changes to the declaration and cessation of commercial operations	Points (d) and (e) of ORO.DEC.100	Text adapted to ensure legal certainty

5.2. Appendix 2 — Information gathered for the RIA

Table A2.1 — Status of the information on sailplane sector for EASA Member States

	Safety occurrences[35]				Operations[36]	
State	**Fatal**	**Non-fatal**	**Total**	**Fatalities**	**Number of sailplanes**	**Number of flights**
Austria	1	18	19	1	4 306	99 030
Belgium	no data	5	5	no data	450	58 000
Bulgaria	no data	no data	no data	no data	no data	no data
Croatia	1	3	4	1	44	no data
Cyprus	no data	no data	no data	no data	no data	no data
Czech Republic	2	68	70	2	600	83 400
Denmark	1	23	24	1	465	63 320
Estonia	no data	no data	no data	no data	no data	no data
Finland	1	10	11	1	359	35 500
France	18	66	84	21	2 125	214 552
Germany	44	368	412	49	10 970	876 000
Greece	1	no data	1	1	no data	no data
Hungary	no data	13	13	no data	315	39 659
Iceland	no data	no data	no data	no data	10	1 000
Ireland	no data	1	1	no data	14	800
Italy	2	13	15	3	no data	no data
Latvia	no data	no data	no data	no data	39	no data
Liechtenstein	no data	no data	no data	no data	no data	no data
Lithuania	1	6	7	1	142	no data
Luxembourg	no data	1	1	no data	8	1 350
Malta	no data	no data	no data	no data	0	0
Netherlands	3	23	26	3	600	138 692
Norway	1	7	8	1	89	6 200
Poland	8	67	75	9	783	159 791
Portugal	no data	1	1	no data	69	No data
Romania	no data	3	3	no data	no data	42 220
Slovakia	no data	9	9	no data	269	17 000
Slovenia	no data	4	4	no data	145	7 500
Spain	1	8	9	1	248	no data
Sweden	1	11	12	1	324	30 139
Switzerland	12	29	41	13	1 200	80 000
United Kingdom	11	159	170	13	1 984	240 000
Total	**109**	**916**	**1 025**	**122**	**25 558**	**2 194 153**

[35] In the time frame 2012–2016.

[36] For the last reporting year (depending on the EASA Member State, either 2016 or 2015).

Figure A2.1 — Number of sailplanes by country for the last reporting year (2016 or 2015)

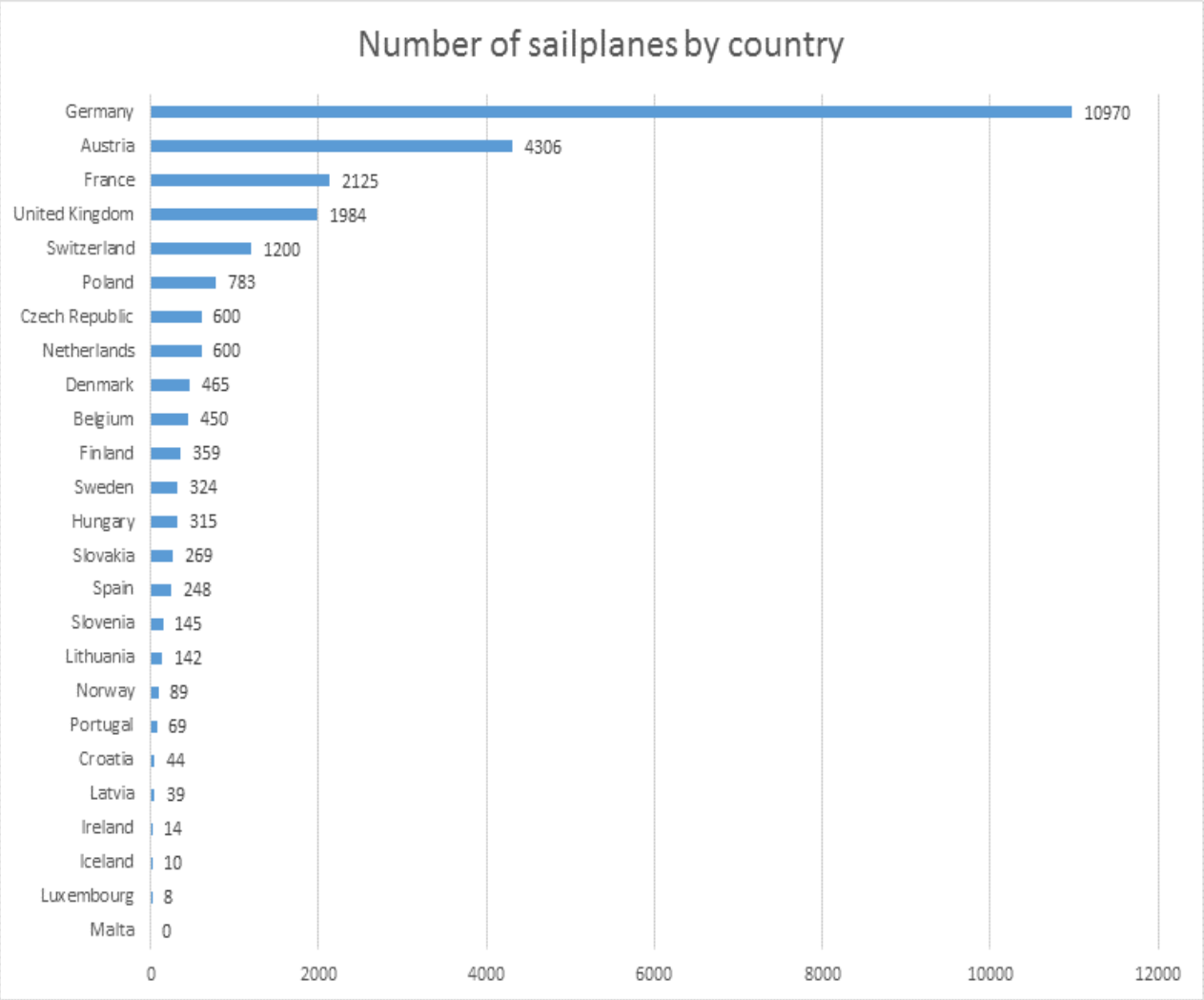

Figure A2.2 — Number of sailplane flights by country for the last reporting year (2016 or 2015)