



European Economic and Social Committee

TEN/451
Single European Sky II

Brussels, 21 September 2011

OPINION
of the
European Economic and Social Committee
on the
Single European Sky II
(own-initiative opinion)

Rapporteur: **Mr Krawczyk**

On 18 January 2011 the European Economic and Social Committee, acting under Rule 29(2) of its Rules of Procedure, decided to draw up an own-initiative opinion on the

Single European Sky II.

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 22 June 2011.

At its 474th plenary session, held on 21 and 22 September 2011 (meeting of 21 September), the European Economic and Social Committee adopted the following opinion by 152 votes with one abstention.

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1. Conclusions and recommendations

- 1.1 The European air traffic management (ATM) system has suffered from fragmentation and weaknesses for decades. By creating a Single European Sky (SES), safety can be enhanced and flight efficiency improved. This would significantly reduce CO₂ emissions per flight and greatly mitigate other environmental impacts (aviation-related CO₂ emissions could be reduced by 12% per flight) while also generating considerable cost savings.
- 1.2 The creation of a Single European Sky is also essential to ensuring the competitiveness of the EU's aviation industry in the global market place. It is essential that the European Commission play a key role in the implementation of SES II. Only strong and unquestioned leadership by the Commission will enable the various obstacles and political problems faced in previous years to be successfully overcome.
- 1.3 Successful implementation of the performance scheme based on realistic, but ambitious targets for safety, cost efficiency, capacity/delays and flight efficiency is a crucial factor in achieving the Single European Sky. The EESC is concerned that the current level of commitment among EU Member States towards a Single European Sky is not sufficient.
- 1.4 Functional Airspace Blocks (FABs) need to be developed based on operational needs and bearing in mind safety, airspace capacity, cost efficiency improvement objectives and environmental improvements through increased flight efficiency. The European Commission should set and closely monitor the performance parameters that have to be achieved by the various FAB initiatives by making use of the SES II performance framework.

- 1.5 The EESC believes that Eurocontrol could play a role in strengthening European ATM network functions such as route network design, central flow management and the management of scarce resources, but only on condition that this is performed under EU law, that the reform of the Eurocontrol agency is completed successfully and that Eurocontrol's cost base is further rationalised. The EESC welcomes the European Commission's decision to nominate Eurocontrol as Europe's "Network Manager".
- 1.6 The EESC believes that safety and performance objectives as well as interoperability with non-EU ATM systems (such as the US NextGen initiative) should remain the driving force for the Single European Sky ATM Research (SESAR) programme. The EESC therefore feels that the following challenges related to the deployment of SESAR need to be addressed:
- Ensure the synchronised deployment of airborne and ground infrastructure upgrades.
 - Secure timely and adequate financial resources for SESAR deployment.
 - Establish the right governance for the deployment of SESAR.
- 1.7 Safety goes beyond safety regulations. It also encompasses: human capabilities, a safety culture, competencies and training and team resource management. In this context, it is important to:
- recognise human performance in terms of managing safety risks proactively;
 - ensure an adequate level of competence and training of professionals;
 - promote the involvement of the social partners in the implementation of the Single European Sky at all levels; and
 - build a sound safety culture integrating open reporting and "just culture" as the basis for safety performance.
- 1.8 The EESC notes that the SES II package has extended the scope of the European Aviation Safety Agency's (EASA) system to ATM safety regulation at EU level, thereby ensuring an integrated approach for ATM safety regulation and oversight in the EU in a gate to gate concept.

2. **Introduction**

- 2.1 By creating a Single European Sky, safety can be enhanced and flight efficiency improved. This would significantly reduce CO₂ emissions per flight and greatly mitigate other environmental impacts (aviation related CO₂ emissions could be reduced by 12% per flight) while also generating considerable cost-savings.
- 2.2 The creation of a Single European Sky is also essential to ensuring the competitiveness of the EU aviation industry in the global market place. Furthermore, the current ATM system will be unable to cope with the traffic demand forecast for the period between now and 2030

(according to the latest Eurocontrol long-term forecast, traffic will grow to 16.9 million flights by 2030 (1.8 times current traffic levels).

- 2.3 An initial EU Single European Sky (SES I) package came into force in 2004. At the time the greatest problem in air traffic management was congestion in the air and subsequent delays, hence this, together with safety, became the main focus of SES I.
- 2.4 Over the past years the ATM situation has changed somewhat and whilst safety and capacity are still major objectives, the picture has become more varied with a greater emphasis on the environment (flight efficiency) and cost efficiency. Additionally, the regulatory approach has been changed due to requests from Member States and stakeholders for a less prescriptive approach ("better regulation").
- 2.5 Although some of the SES objectives were achieved, the difficulties of the Member States to deliver some SES I objectives, together with updated objectives such as environment and performance have led to the launch of the Single European Sky II (SES II) package. It was adopted by the EU legislator in 2009 and published in the Official Journal of 14 November 2009. It provides for the essential tools, the legal framework and the building blocks to implement a Single European Sky from 2012 onwards.
- 2.6 In addition, the SESAR programme was kicked off as the technical and operational complement to the institutional reforms envisaged through SES II.
- 2.7 Substantial challenges, however, remain. To overcome these challenges major operational improvements are required, along with continuous political action to ensure a swift implementation of the SES II package based on ambitious performance targets and with the ultimate goal of closing the performance gap between the EU's ATM system and non-EU ATM systems.
- 2.8 The EESC has previously highlighted the need for a Single European Sky in earlier opinions, in particular TEN 354-355 on improving the performance of the European aviation system through SES II. The present own-initiative opinion aims to provide a high-level vision for the implementation of the SES II package and for the deployment of SESAR, and addresses the following aspects:
- implementation of the SES II performance scheme with ambitious performance targets;
 - implementation of FABs that are based on those ambitious performance targets;
 - strengthening the ATM network functions based on a reformed Eurocontrol;
 - reform of Eurocontrol in support of SES and with a reduced cost base;
 - SESAR as the technical and operational element of SES with public funding to support the implementation phase;
 - the European Aviation Safety Agency (EASA) as the single safety regulator with safety rules based on safety principles and building on the existing rules.

The human factors principle and the need for social dialogue with front-line staff and proper consultation with all stakeholders is a key element which should underpin all of those aspects.

3. Implementation of the SES II performance scheme with ambitious performance targets

- 3.1 Successful implementation of the performance scheme based on ambitious targets for safety, cost efficiency, capacity/delays and flight efficiency is a crucial factor in achieving the Single European Sky. Unwavering political commitment will be needed to ensure a swift delivery of its benefits. In this context, the EESC stresses the importance of the EU Member States honouring their commitment to accelerating the implementation of a Single European Sky, as decided at the EU Transport Council in May 2010. The EESC is concerned that the current level of commitment among EU Member States to a Single European Sky is low.
- 3.2 The EESC believes that it is essential to ensure consistency between the Community-wide performance targets and the national FAB targets. This will require the development of a system for resolving inconsistencies between those targets. In practice this means that the worst performers will need more ambitious targets than those who are better performers. The Eurocontrol Performance Review Commission's ATM performance benchmarking (ACE) reports should be used for setting the detailed targets for individual ATM providers. Safety metric targets should be developed and implemented to ensure a balanced approach in conjunction with the other performance targets. In this context, there should be no compromise of safety levels and safety should continue to be improved.
- 3.3 The EESC stresses the importance of safeguarding the independence of the National Supervisory Authorities (NSAs) from the Air Navigation Service Providers (ANSPs) as well as from political interference; this is essential for ensuring successful implementation. Therefore adequate resources for NSAs should be ensured. The European Commission should closely monitor the strict adherence to those principles by making use of the tools available within the SES II package. Moreover, the NSAs should better coordinate by making intensive use of the established NSA platform and, where appropriate, consolidation within the context of the FABs should be envisaged to ensure economies of scale and to prevent an increase in supervision costs. In this context, the role of the FAB coordinator could be enhanced.
- 3.4 The performance scheme should address both en-route and terminal charges. This is essential to ensure meaningful benefits for airlines and passengers, based on the gate-to-gate concept. If a clear roadmap is achieved, it will lead to a reduction in direct and indirect costs of the EU ATM system in the longer term and thus reduce Air Traffic Control (ATC) charges billed to airspace users, thus affecting passengers and freight customers.
- 3.5 The EESC considers that the SES II performance scheme should be linked to a well-developed incentive scheme. The biggest incentive will be the abolition of the full cost

recovery system in ATM as already agreed through the SES II package, and its replacement with a fixed cost system.

- 3.6 Network functions such as Eurocontrol's Central Flow Management Unit (CFMU) and Central Route Charges Office (CRCO) should also be based on clear performance targets but should include safeguards to ensure that the EU Performance Review Body (PRB) is strictly independent from those network functions.

4. **Implementation of FABs based on these ambitious performance targets**

- 4.1 Converging to a minimum number of FABs mainly based on traffic flow requirements, capacity and cost efficiency, remains an objective. The same safety measures and procedures should apply to all FABs. The FABs are an essential tool for enabling the individual ANSPs to meet the ambitious performance targets from 2012 onwards.
- 4.2 FABs need to be developed based on operational needs and bearing in mind safety, airspace capacity, cost efficiency improvement objectives and environmental improvements through increased flight efficiency. The achievement of this objective requires political commitment and monitoring at the highest level. The European Commission should set and closely monitor the performance parameters that have to be achieved by the various FAB initiatives by making use of the SES II performance framework.
- 4.3 FABs need to ensure the gradual technical integration of the fragmented European ATM system based on a roadmap with clear targets. To reach this target, clear coordination and cooperation between FABs is required.
- 4.4 In terms of changes to working practices, good industrial relations are essential. This can only be achieved by proper and ongoing consultation in the true meaning of the word. Going forward, good social dialogue is imperative if we wish to avoid these problems in the future. The workers in the industry are key assets, and changes to working practices can lead to industrial unrest unless they are handled considerably.
- 4.5 Under the SES Regulation, ANSPs are required to have contingency plans in place for all the services they provide where events result in a significant degradation or interruption of their services. ANSPs must focus on solutions which are more efficient and cost effective by first looking for fall-back options within existing national infrastructure (i.e. other Area Control Centres (ACCs) or military facilities) and must anticipate provisions in FAB developments for such contingencies.
- 4.6 Cooperation between civil and military service providers is crucial to ensuring the further development of SES and the elimination of the most important capacity bottle-necks in core Europe. The Member States and the European Commission must seek civil-military cooperation in the context of the FABs, which reconciles civil and military needs in a

pragmatic and non-political manner. In view of the fact that non-EU States and the USA are also involved, closer coordination with NATO is essential. The reallocation of some military training areas, away from the main civil traffic streams, as envisaged by some FABs is welcomed by the EESC and should be actively pursued by all FAB initiatives. In addition, the implementation of an ATM night route network, as envisaged by some FABs, should also be pursued by all FABs as a means of improving night-time flight efficiency when military training areas are not used.

4.7 The EESC also believes it essential to extend the FABs and the Single European Sky principle beyond EU borders, in particular towards countries adjacent to Europe. This will require further cooperation at international level.

4.8 Political commitment is essential to ensure that FABs deliver real benefits to end users. The EU Commission and EU FAB Coordinator should continue to remind Member States of their duty to deliver on the implementation of SES and FABs.

5. Establishment of a European Network Manager to perform ATM network functions

5.1 The EESC agrees that strengthening European ATM network functions such as route network design, central flow management and the management of scarce resources (frequencies and transponder codes) is an essential element of the SES II package.

5.2 The EESC believes that Eurocontrol could play a role in those functions but only on condition that this is performed under EU law, that the reform of the Eurocontrol agency is completed successfully and that Eurocontrol's cost base is further rationalised. This will require the full political commitment of all Eurocontrol Member States to push through the restructuring of the agency. The EESC welcomes the European Commission's decision to nominate Eurocontrol as Europe's "Network Manager".

5.3 The EESC therefore asks the European Commission to ensure strict adherence to this essential element when granting the mandate to Eurocontrol.

5.4 The EESC expresses concerns about the projected increase in ATC delays during summer 2011. The EESC encourages Eurocontrol, as the SES network manager, in cooperation with ANSPs and airspace users, to find short term solutions to mitigate the impact on air traffic and the travelling public.

5.5 Finally, the EESC would recall that the Eyjafjallajökull volcanic eruptions in Iceland in 2010 resulted in airspace closures that led to major disruptions for the airline industry and the travelling public. This has had a huge cost impact on the aviation industry and the EU economy as a whole. Following these events, it was agreed that Europe needed to review its procedures. In this context, the EESC stresses the need for Europe to align its procedures with the best practices in place in other parts of the world such as in the USA. Specifically, Europe

is the only region in the world where responsibility for dealing with the potential hazards of volcanic ash does not reside with the airlines. The recent volcanic ash exercise (April 2011) of the International Civil Aviation Organisation (ICAO) has highlighted that although some progress has been made, more solid guidance is needed to avoid another fragmented approach. The EESC urges EASA to provide clear guidance to all EU Member States in adopting a revised policy.

6. Reform of Eurocontrol in support of SES and with a reduced cost base

6.1 The EESC applauds the significant progress made by Eurocontrol, under the leadership of its Director-General, in restructuring itself as a leaner organisation in support of SES. This ongoing process should be accelerated and will require the full commitment of all Eurocontrol Member States.

6.2 The EESC congratulates Eurocontrol on the establishment of the SES pillar within its agency to provide technical support to SES. There is a need for full transparency on the different Eurocontrol functions, their required resourcing and the way they should be financed. Clearly airlines should not pay for governmental functions such as the SES pillar. This will require further work on establishing the right governance principles for Eurocontrol, making full adherence to SES objectives possible.

6.3 The EESC also stresses the importance of maintaining a pan-European approach that goes beyond the EU borders. The European Commission should therefore extend the European Common Aviation Area to all neighbouring countries of the European Union.

7. SESAR as the technical and operational element of SES with public funding to support the implementation phase

7.1 The SESAR programme has been established as the technical and operational complement to SES II. The European Commission expects SESAR to "deliver a future European ATM system for 2020 and beyond which can, relative to today's performance:

- enable up to a threefold increase in air traffic movements whilst reducing delays;
- improve the safety performance by a factor of 10;
- enable a 10% reduction in the effects aircraft have on the environment; and
- provide ATM services at a cost to the airspace users which is at least 50% less".

7.2 The EESC believe that these objectives as well as interoperability with non-EU ATM systems (such as the US NextGen initiative) should remain the driving force for the SESAR programme. The EESC welcomes the memorandum of cooperation that was signed between SESAR and NextGen in Budapest on 3 March 2011 as a step towards a better synchronisation of the two most important development projects in global ATM systems.

- 7.3 The EESC believes it essential to continue to involve front-line staff in the development of SESAR. In this context, the need to train staff for the use of new technology and new operational concepts is deemed essential.
- 7.4 The EESC would stress that despite the longer-term benefits for airspace users, EU citizens and the environment, SESAR faces many complex deployment challenges. A timely and effective implementation of SESAR is crucial. In addition to strong industry engagement, extensive political and financial support in a public-private partnership will be necessary. SESAR deployment should therefore be an integral part of the EU 2020 strategy to ensure strong economic governance based on a clear business model and mutual cooperation and harmonisation with the US NextGen system.
- 7.5 The EESC therefore feels that the following challenges related to the deployment of SESAR need to be addressed:
- 7.5.1 Ensure the synchronised deployment of airborne and ground infrastructure upgrades.
- Update the master plan defining a clear roadmap whereby the Commission, the Member States, ANSPs and airspace users commit to ensuring greater consistency with the SES framework including FABs. As a matter of urgency, the SESAR Joint Undertaking should prioritise the review of the work undertaken to date and identify how each main SES enabler will contribute to the EU, FAB and national performance targets.
 - SESAR technologies should be deployed subject to a well-established positive business model that includes a credible safety case and positive and credible cost-benefit analysis on the basis of which the performance improvement needs are agreed and set. Where technologies cannot be proven to contribute to EU-wide targets (including those regarding safety) or to enable a safe and timely transition, the work should be discontinued.
 - The realisation of the SESAR master plan will need the full commitment of all EU Member States.
- 7.5.2 Secure timely and adequate financial resources for SESAR deployment.
- 7.5.2.1 The implementation of SESAR will generate significant economic, environmental and strategic value for Europe as a whole. A 10 year delay in the implementation of SESAR represents a direct negative GDP impact of over EUR 150 billion for the EU-27 and a loss of energy efficiency of over 150 million tons of CO₂.
- 7.5.2.2 However, SESAR deployment requires total investments exceeding EUR 30 billion and the early funding and equipage of SESAR equipment (airborne and land-based) is a major challenge to deliver the performance expected from the implementation of the new technologies as soon as possible.

7.5.2.3 Difficulties in the financing of the SESAR deployment arise from the partial disconnection between investments and benefits during the transition phase: an airline investing in a new airborne equipage will not see any benefit before the ANSPs have made the corresponding investment. On the other hand, for an ANSP (which will have to invest in a performance constrained environment in order to deliver benefits), the business case may not become positive until a significant number of aircraft are equipped. Finally, there may be some changes with an overall network benefit and a positive business case but requiring some stakeholders to invest whilst this will remain a net cost for them. In this case funding should be made available.

7.5.2.4 Funds made available by the EU for supporting deployment would therefore be used to bring about a synchronised and rapid adoption of the SESAR technology by the operators (ANSP airspace users, airports). Furthermore, in order to ensure the continued investments in R&D and innovation, additional funds in line with those available for the current R&D phase would be needed for the 2014–2020 period in the ATM field.

7.5.2.5 To achieve the pace that is necessary to meet the ATM performance targets, it is estimated that SESAR deployment would require EU funds of around EUR 3 billion, an amount that would be leveraged by combining different financial facilities that are under discussion at the moment, such as - but not limited to - own resources from industry, EU project bonds, guarantees, EIB loans, etc. For the period between 2014 and 2020 it can be concluded that:

without an effective allocation of EU resources to support SESAR it is unlikely that the programme will be implemented in time.

7.5.3 Establish the right governance for the deployment of SESAR.

- Establishment of an independent entity for the deployment of SESAR, integrating financing and deployment in a single unique management framework.
- This deployment entity should be industry-driven and have a governance structure that is composed of airspace users, airports and ANSPs as the major investment-risk takers. Other aviation stakeholders should be duly consulted.
- Throughout the implementation phase of SESAR, representatives of the employees in the air transport sector should be duly consulted.
- The role of the (equipment) manufacturers in the deployment phase is primarily to sell SESAR compliant equipment to airlines, airports and ANSPs. Unlike in the case of the current governance of the SESAR Joint Undertaking, manufacturers should therefore not be involved in the governance of the SESAR deployment in order to avoid conflicts of interest.
- Ensure coordination at European level for the synchronised deployment of SES technologies in compliance with binding network targets. In executing this task it could issue recommendations for funding purposes.

- 7.6 Finally, the EESC would like to point out that SESAR will only be able to deliver if the political and institutional problems referred to in the previous paragraphs are solved without further delay and if the required public funding is made available for implementation.

8. **Single EU safety regulator based on the EASA system**

- 8.1 The EESC notes that the SES II package has extended the scope of the European Aviation Safety Agency's (EASA) system to ATM safety regulation at EU level, thereby ensuring an integrated approach for ATM safety regulation and oversight in the EU in a gate to gate concept.
- 8.2 Robust oversight functions by the EASA - e.g. aiming at performance inspections of NSAs to ensure that ANSPs adhere to common requirements - will help deliver SES.
- 8.3 While supporting this concept, the EESC considers it essential to closely monitor the practical implementation of these new EASA competences. It is important that the EASA ATM safety rules are built on the existing SES rules rather than EASA trying to reinvent the wheel through burdensome rules which would have no safety justification.
- 8.4 The EESC believes that in the short-term Eurocontrol's resources and expertise should be used as technical support to the EASA ATM safety regulation activities.
- 8.5 Finally, the EESC would like to reiterate the importance of a "just culture" as already outlined in its opinion TEN/416 on the regulation on investigation and preventions of accidents and incidents in civil aviation. In the interests of aviation safety, it is essential to provide a legal framework under which all parties involved in accidents or incidents can share information and speak freely and in confidence. The EESC stresses that more action is required at EU level to ensure that all Member States amend their national criminal law systems ensuring a just culture. In particular the EESC stresses the importance of developing an EU charter on "just culture".

9. **Safety and human factors**

Safety goes beyond safety regulations. It also encompasses: human capabilities, a safety culture, competencies and training and team resource management.

In this context, it is important to:

- recognise human performance, notably the effects of fatigue, in terms of managing safety risks proactively;
- ensure the adequate level of competence and training of professionals;
- promote the involvement of the social partners in the implementation of the Single European Sky at all levels; and

- build a sound safety culture integrating open reporting and "just culture" as the basis for safety performance.

Brussels, 21 September 2011.

The President
of the
European Economic and Social Committee

Staffan Nilsson
