



European Economic and Social Committee

CCMI/047
Aeronautics industry

Brussels, 3 December 2008

OPINION

of the

European Economic and Social Committee

on

The European aeronautics industry: current situation and prospects
(own-initiative opinion)

On 27 September 2007, the European Economic and Social Committee, acting under Article 29(2) of its Rules of Procedure, decided to draw up an own-initiative opinion on

The European aeronautics industry: current situation and prospects.

The Consultative Commission on Industrial Change, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 18 November 2008. The rapporteur was Mr Opran and the co-rapporteur was Mr Baudouin.

At its 449th plenary session, held on 3 and 4 December 2008 (meeting of 3 December 2008), the European Economic and Social Committee adopted the following opinion by 110 votes in favour, 9 against with 5 abstentions.

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Preface

This opinion concerns the fixed-wing sector of the EU civil aeronautics industry serving the passenger and freight transport market. Other sectors (military aeronautics, helicopters, maintenance etc.) are explicitly excluded from the scope of this opinion.

Part I - CONCLUSIONS AND RECOMMENDATIONS

Objective: Maintaining the global leadership of the fixed-wing sector of the EU civil aeronautics industry: identifying threats, defining priorities and proposals for a successful strategy for 2008–2012

1. The STAR 21 report reveals that the industry has played a greater role in developing partnerships with the world of research (universities, other higher education institutions, government laboratories, etc.). The aeronautic sector is a melting pot of crucial skills and technologies and an essential lever for innovation. This industry is built on the civil and defence sectors, which are interdependent and rely on the application of state-of-the-art technologies.
 - 1.1 The aeronautics industry – both civil and military - plays a decisive role as a solid industrial base and in terms of technological development and economic growth. It also carries weight at the international level and influences economic and political decisions.
 - 1.2 Moreover, it contributes to creating high-skill employment in Europe and pays relatively higher salaries than other sectors.

- 1.3 In short, the Lisbon Strategy (2000) and the conclusions of the Barcelona European Council (2002)¹ are still as relevant as ever.
2. The Committee believes that there are five key factors that present a real risk to the European aeronautics industry unless they are anticipated by political and industrial decision-makers.
- 2.1 The exponential increase in the cost of developing aircraft, combined with the inability of manufacturers to finance the entire development of new models themselves, in their European industrial strategies, leads to the financial risk being transferred to equipment suppliers and subcontractors, ever longer delays in obtaining a return on investment and an increase in debt and insecurity for equipment suppliers and subcontractors.
- 2.2 The weakness of the US dollar, beginning in 2005 until the start of the current global crisis and continuing today with a fluctuating and volatile exchange rate (characterised by a general growth tendency vis-à-vis the euro, with no economic justification), entails:
- a loss of competitiveness for European industry²;
 - constant efforts to minimise fixed costs (the wage bill);
 - an incentive to relocate to the dollar zone;
 - a reduction of the number of subcontractors in Europe;
 - an encouragement of partnership development in other areas outside Europe.
- 2.3 The effect known as the "*Papy Boom*", which will reach its height in 2015³, will cause many high-skill jobs to be lost (half of those employed in the European air transport sector are due to retire by 2015), which means that strategic skills could be lost forever.
- 2.4 Increasing competition and the emergence of new and very aggressive competition in the regional aeronautics sector (from India and Brazil) has led the industry to cut costs in order to improve its competitiveness and profitability, as well as establish partnerships with emerging countries such as China despite the risks involved in technology transfers and the establishment of local manufacturing operations to penetrate these new markets. This competition also causes manufacturers to focus on the core business of their customers.

¹ "In order to narrow the gap between the EU and its major competitors, an overall effort must be made to boost R&D and innovation significantly in the European Union, with particular emphasis on frontier technologies."

² Between 2000 and 2007, the euro rose by 48% (66% if you take into account the average exchange rate of the first eight months of 2008) against the US dollar; if this phenomenon, which has currently come to a halt, resumes (or even intensifies), it could force Airbus to cancel "Power8" (developed for a maximum euro:dollar parity of 1.37) and introduce further cutbacks, which would have disastrous social and political consequences.

³ The "*papy boom*" (French: "granddad boom") refers to the large number of retirements taking place between 2000 and 2020 in the developed countries. It is a logical and predictable consequence of the post-war baby boom and the drop in the birth rate, which results in demographic ageing. This phenomenon will have a major impact on the economy, raise health care and pension costs and lead to a reduction in the active population.

- 2.5 Currently advantageous oil prices should not mask the persistent uncertainty as to short- and medium-term price fluctuations, in the context of a global economic crisis whose full scale and duration cannot yet be determined. These factors impact on demand, undermine airline companies and force manufacturers to consider ways of cutting aviation costs, particularly through the use of alternative fuels and corresponding technologies.
3. The Committee believes that the sector's key challenges consist in remaining competitive, being useful to the public and broadening its international reach.
4. The Committee therefore has several **recommendations** to propose and urges the Commission and the Member States to place emphasis on the leading role played by the aeronautics industry in the EU and its importance for the public due to its knock-on effect for many other European industries.
- 4.1 With reference to technological development, growth and cooperation, a new framework has to be set up to encourage businesses in different EU countries to work together more effectively in order to set and meet their industrial priorities. This will strengthen competitiveness and improve reactions to market fluctuations. There is an urgent need to set new quality and efficiency standards by maximising the effectiveness of R&D financing.
- 4.1.1 Coordination between the European Commission and the European Defence Agency (EDA) must be increased in order to promote the development of new dual-use technologies to be implemented in both the military and civilian segments of the aeronautics industry. At the same time, it is vital to ensure that the European commission and the EDA have control over the further dissemination of technology which may be of use in both the military and civilian segments of the aeronautics industry.
- 4.1.2 Industrialists should receive support – with particular attention being given to the development of SMEs in the equipment supplier sector of the supply chain – for a quick and in-depth implementation of CLEAN SKY JTI; this would, on the one hand, contribute to meeting the EU's environmental objectives and, on the other hand, enable the industry to play an important role in the establishment of a new-generation air traffic management system (SESAR-ATM) to support the Single European Sky programme (SES)⁴.
- 4.2 The Committee advocates promoting the direct active participation of EU countries with a recognised tradition in aeronautics to set up a network of European aeronautics subcontractors with the capacity to give effective support to aircraft manufacturers such as Airbus, Saab, Alenia, ATR, etc. It is important to maintain and increase their skills, notably by concentrating on new technologies.

⁴ An EU initiative to structure airspace and air navigation services at pan-European level in order to better manage air traffic and provide a uniform and high level of safety in Europe's skies.

- 4.3 The EU regional aeronautics sector is making a significant recovery thanks to ATR aircraft⁵ and the fuel economies they permit. The aeronautics market is also shifting towards RJ aircraft (regional jets)⁶. The Committee underscores the importance of supporting businesses that have developed innovative industrial strategies like "Open Innovation"; SuperJet International is probably the best example to date.
- 4.4 The Committee considers it vital for Member States to reduce the dependence of subcontractors on current principals (support for market diversification and internationalisation) and draw up a charter for long-term reciprocal commitment between manufacturers and their subcontractors.
- 4.5 The Committee is convinced that there is an urgent need to support the development of innovative strategies by subcontractors in order to enable them to supply new high added-value products and services in the long term and to help them work together in order to reach critical mass.
- 4.6 Despite the EU-US dispute at the WTO, the Committee advises the Commission and the Member States to consider a financing procedure that would ensure the continuity of the manufacturing process. This procedure could take the form of pooled loans for subcontractors in the sector. It could also take the form of loan guarantees based on refundable advances or EIB (European Investment Bank) loans at preferential rates. It would also be appropriate to develop measures to cover financial risks of, for instance, fluctuating exchange rates.
- 4.7 In addition to the industrial aspect, the Committee believes that developments and changes in employment should be anticipated by introducing job and skills forecast management at all levels, i.e. the occupational sectors and EU, national, regional and local bodies. Setting up observatories for occupations in the aeronautics sector would help to identify the jobs of tomorrow and training needs, in cooperation with academic authorities.
- 4.8 The Committee underlines the importance of creating economic monitoring tools in order to follow developments in the performance of businesses and identify risks as early as possible. On the one hand, these tools have to be innovative in training terms and, on the other hand, they have to strengthen ties between research, universities and the industry so that young people and workers can be better prepared for the jobs of tomorrow and technological changes on the horizon.

⁵ ATR, which had received 12 orders in 2004, received 113 firm orders in 2007 (source: ATR).

⁶ *Regional jet*: civil passenger aircraft with a seating capacity of less than 100 (which, in due course, will encroach on the single-aisle "short haul" sector).

- 4.9 The development of interactions between poles of competitiveness in order to meet environmental and technological objectives set by the EU should lead to networking and a better distribution of roles and European funds, which would prevent competition among European regions and improve synergies.
- 4.10 EU financial participation should fall within the framework of competitiveness poles. These were created so that that the EU could remain at the forefront of state-of-the-art technologies with a competitive and innovative industry that meets high environmental quality (HEQ) standards. For instance, when using composite materials for their strength and lightness we should take into consideration whether or not they can be recycled or destroyed.
- 4.11 The Committee stresses the importance of a rapid implementation of a set of measures on:
- making air transport more environment-friendly;
 - passenger satisfaction and safety;
 - the reduction of CO₂ emissions by the air transport sector (in line with EU policies on the overall reduction of CO₂ emissions in Europe), noise pollution and fuel consumption;
 - the development of concepts that make it easier to dismantle old equipment (use of recyclable materials etc.).
- 4.12 The Committee believes that the Commission and the Member States should react very swiftly to the need for a strategic aeronautics policy. Such a policy would include the implementation of practical measures at EU level and in regions with an aeronautics tradition in order to better forecast change and minimise its social impact. The Commission and the Member States should facilitate the implementation of a social dialogue committee within the EU aeronautics sector, as recommended by the social partners.

Part II - REASONS

5. Context and background

- 5.1 In 2007, analysts predicted that air traffic would more than double within the next twenty years at an average growth rate of 6% per annum (5 billion passengers by 2025 as opposed to approximately 2 billion in 2006). In order to meet the expected increase in traffic, forecasts for orders for new aircraft (90-plus seating capacity) over the next twenty years are optimistic and range between 22 600 (source Airbus) and 23 600 (source Boeing) aircraft.
- 5.2 The growing liberalisation of air transport, the explosion of demand in emerging countries (Asia-Pacific and the Middle East) and the financial recovery of airlines in 2007, should be able to sustain the process.

- 5.3 On 27 September 2007, the EESC assembly authorised the Consultative Commission on Industrial Change (CCMI) to draw up an own-initiative opinion on the future of the aeronautics industry in Europe (excluding the military aeronautics sector, helicopters, maintenance, etc.).
- 5.3.1 The Committee decided to draw up this opinion because the aeronautics industry is of fundamental importance to European industry as a whole due to its weight in terms of production, exports, employment and investment in R&D. It is also the driving force for a number of industries (subcontractors and downstream sectors such as aircraft maintenance) and for entire regions. No less important, it is a standard bearer for European added value and proves that joint efforts enable Europe to compete against global competitors, such as the United States.
- 5.3.2 The experience gained by the CCMI in drawing up its opinion on *Value and supply chain development in a European and global context*⁷ will prove useful for carrying out an analysis of the aeronautics industry, which is a very complex sector in this respect.
- 5.4 Furthermore, a new set of **risks** threaten growth and are liable to generate new problems.
- 5.4.1 Heavy manufacturer dependence on emerging markets could mean that an unexpected slowdown in growth in Asia (not just in China and India) would have an immediate and very harmful impact on the entire sector.
- 5.4.2 Profound changes in relations between principals and equipment suppliers, and continual restructuring by principals have destabilised the sector. It is now difficult to measure the consequences of the increase in financial risks for tier one equipment suppliers, who are put under pressure by principals via risk-sharing agreements.
- 5.4.3 There is insufficient national and EU financing for the development of new technologies. It would also be useful to allocate funds to fundamental research in relation to business strategy and innovation strategy.
- 5.4.4 A drift towards the use of composite materials has made a complete reorganisation of the chain necessary (sell-off of Airbus plants, etc.) before the technology has even had time to prove itself, cf., for example, the massive use of composite materials in the B787, for which there are more than 800 orders despite the fact that the plane has yet to be qualified.
- 5.4.5 Between 2000 and 2007, the euro rose by 48% (66% if the average exchange rate of the first eight months of 2008 is taken into account) against the US dollar. If this trend, which has currently come to a halt, resumes (or even intensifies), Airbus may be forced to launch new cost-cutting plans (a 10c depreciation of the dollar costs the aircraft manufacturer

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OJ C 168, 20.7.2007, p. 1 (CCMI/037 - rapporteur: Mr van Iersel; co-rapporteur Mr Gibellieri).

EUR 1 billion, as the president of Airbus has pointed out several times) which could have dramatic consequences for subcontractors, many of whom are unable to afford cover, leading to more relocations, which would have a disastrous social and political impact.

- 5.4.6 The technical setbacks affecting the A380 and the A400M, as well as the B787, and their immediate consequences clearly illustrate the difficulties manufacturers have in mastering the growing complexity of new aircraft.
- 5.4.7 The impact of the current international crisis cannot yet be predicted accurately. At least in the short term, the drop in oil prices may be beneficial for airlines. However, the crisis is dampening international tourism and consequently reducing the demand for air tickets.
- 5.5 Irrespective of possible developments in air transport and despite current growth, the economic and social impact of ongoing and future reorganisation in this sector in Europe is real and there is a serious risk of the further decline of the European air transport sector.
- 5.6 This process could entail major risks such as the loss of key skills and Europe's world leadership due to its inability to make the necessary investment in developing new key technologies, as well as the disappearance of a substantial number of European subcontractors from the supply chain and massive job losses.

6. **Main goals and challenges for the EU aeronautics industry**

- 6.1 The Committee believes that the key issues for the sector are maintaining competitiveness and improving its public image.
- 6.2 It is difficult for new operators to enter the aeronautics sector, and becoming a leading player has become impossible. There are only two manufacturers of 100-seater plus aircraft left on the world market: Airbus and Boeing. The technology, skills and infrastructure that are being permanently eroded or lost are extremely difficult to recreate.
- 6.3 Europe must therefore ensure that countries with a recognised aeronautics tradition are able to:
 - 6.3.1 maintain and build on their skills, especially by focusing on high technologies, and participate in the construction of a European network of subcontractors with the capacity to give effective support to principals such as Airbus, Saab, ATR etc.;
 - 6.3.2 play a greater role in developing partnerships with the world of research (universities, other higher education institutions, government laboratories, etc.) in the field of fundamental research.

- 6.4 Europe cannot ignore the strong links between military and civilian research in the United States. Although the B787 programme is behind schedule, Boeing has received financial support from NASA and DARPA in order to accomplish the technological leap involved in the transition to composite structures. The Committee therefore considers it necessary to increase coordination between the European Commission and the European Defence Agency (EDA) in order to promote the development of new dual-use technologies to be implemented in both the military and the civilian segments of the aeronautics industry.
- 6.5 The aeronautics industry cannot disregard the REACH Regulation, EC 1907/2006, adopted by the European Parliament and the Council on 18 December 2006 and in force from 1 June 2007. This was initially expected to require the evaluation, authorisation and, potentially, restriction of around 30 000 substances on the European market in significant quantities. However, in recent weeks, all 100 000 "existing substances" are reported to have been pre-registered. This will increase the risk of supply disruption, in particular when assessing substances used in complex or composite materials. It is therefore imperative for the EU to support businesses with composite-intensive activities situated at the poles of competitiveness when they assess the risks of the individual component substances. In this way the Commission and the Member States can help the European air transport industry to meet environmental objectives.
- 6.6 The EU has committed to lowering CO₂ emissions, noise pollution and fuel consumption (also by promoting biofuels). The Commission will therefore have to provide industry, including SMEs, with the necessary framework for a rapid and smooth implementation of the joint technological initiative "Clean Sky".
- 6.7 With regard to short-haul air traffic, Europe should take timely steps to develop an R&D programme for aircraft of this type in order to facilitate the replacement of A320 with NSR⁸ aircraft by helping the European industry to avoid the mistake made with the A350. This has now become urgent due to impending fundamental industrial changes concerning single-aisle planes with 100-plus seating capacity.
- 6.7.1 Indeed, the next ten years should see the end of the Boeing-Airbus duopoly in this strategic sector, which is expected to account for approximately 65% of the 29 400 new aircraft to be built by 2027 (about 19 160 aircraft)⁹ but only 40% of value, a sign of growing competition and strong pressure downward on the price of this type of aircraft.
- 6.7.2 New entrants, such as the recently merged Avic 1+2 (China), Sukhoi (Russia), Bombardier (Canada) and Embraer (Brazil), will probably be operational in 2015-2020. Europe will not

⁸ *New Short Range.*

⁹ Source: Boeing Forecast 2008-2027.

necessarily win the price war in this sector but, on the other hand, it can hold its own by maintaining its technological edge through innovation.

- 6.8 Regional air traffic is rising by 8% per annum. Orders reached a peak in 2007 for regional jets (RJ) and turboprop aircraft (for which orders doubled). Given the background (rising cost of fuel and the financial crisis), the success of turboprops is expected to continue with a probable transfer from the RJ to the turboprop market. Nevertheless, the growth of the RJ market should continue since demand for this category is strong and is expected to encroach on the Boeing and Airbus segment, with new ranges of aircraft, such as the Bombardier CSeries and new entrants such as Sukhoi and Avic.
- 6.8.1 The EU regional aeronautic sector is making a significant recovery thanks to ATR planes and the fuel economies they permit. The aeronautics market is also shifting towards RJ-type aircraft, a segment where, in contrast to the limited competition in the LCA sector (Airbus-Boeing duopoly), there is keen competition between prime contractors Bombardier (Canada) and Embraer (Brazil), followed at some distance by ATR and several other national operators (e.g. Japan, Russia, China).
- 6.8.2 In the RJ sector, Europe's dominant position, now almost entirely lost, could be regained thanks to SuperJet International. This 51:49 joint venture between Alenia Aeronautica (Italy) and Sukhoi Aircraft (Russia), which is developing a 75-100 seater regional jet range, is a concrete example of best practice in relaunching European regional jet production that is well adapted to a fluctuating oil price situation.
- 6.8.3 This programme draws on the best European and international expertise, namely via partnerships with major French suppliers (Thales and Safran supply 30% of the aircraft's value) as well as other European suppliers including Liebherr (Germany) and Intertechnique (France), non-EU suppliers like Honeywell (USA), and other international centres of excellence, such as those located in India.
- 6.9 The aeronautics industry is a bone of contention between Europe and the United States. Nevertheless, the financing of US civil aeronautics activities via military contracts could be construed as a hidden government subsidy, which in fact distorts competition. Up until a few months ago, this was further amplified by the weakness of the dollar. Support from EU and national institutions in the form of refundable or similar advances not only complies with the EU-USA Large Civil Aircraft (LCA) agreement, but is also a transparent instrument – and compatible with market rules – for financing the development of new programmes.
- 6.10 Given the fluctuations in the euro-dollar situation, it does not make sense for the major principals (Airbus) to transfer the exchange rate risk to their subcontractors by paying them in dollars when EADS, Airbus's parent company, has incomparably greater currency hedging capacity than its subcontractors. These same principals try to transfer the financial and technological risks of new programmes to tier one and two subcontractors.

- 6.10.1 Against this background, could the development of active partnerships between principals and subcontractors be an option? These could take various forms. Risk sharing and the work package would have to be discussed. The partnership would also have to include R&D. The principal would have to cover the total cost of the most high-tech applied research, whereas SME-SMI subcontractors would contribute to industrial process research.
- 6.10.2 Another form of active partnership might concern the supply of raw materials. We know that Airbus buys titanium and resells it to its subcontractors at cost price. It would undoubtedly be useful if principals contributed to pooling raw material procurement. One possibility worth considering would be for SME-SMI subcontractors and principals to make arrangements to pool raw material supplies, which would lower the cost.
- 6.11 At present SME-SMI subcontractors are very dependent on a single aeronautics principal (e.g. Airbus). In many cases, the rate of dependence is about 70%, especially in the mechanical engineering, metallurgy and electronic component sectors, and it is around 67% in the service sector¹⁰.
- 6.11.1 For this reason, principally to mitigate the aeronautics sector's cyclical impact, SME-SMI subcontractors need to diversify their activities to other sectors by relying on Europe's strongest points. However, these businesses need high adaptation capacity to establish themselves in areas of activity not originally their own. They must also be able to manage several types of activity by allocating financial and human resources to them. This means that, on the one hand, SME-SMI subcontractors should have access to regional and/or European funds in order to develop and manage diversified activity and place it on an industrial footing. The principal should contribute to the diversification efforts and provide the skills required in various fields.
- 6.11.2 Needless to say, this raises the issue of spin-out in one form or another. One example is the region of Aquitaine, where an ex-Aérospatiale plant developed a plasma torch marketed by Europlasma.
- 6.12 All industrial change requires a substantial financial effort. This is why businesses need the support of the public authorities, be they national or European. In this spirit, and in compliance with WTO rules, the EU should take the fluctuation of the dollar into consideration. What can the EU do to help reduce the financial risk to the aeronautics sector associated with the euro/dollar exchange rate? Transferring the exchange rate risk to subcontractors cannot be considered an altogether satisfactory solution because it does not alter the fact that the euro-dollar parity leaves us at a competitive disadvantage, especially vis-à-vis the United States.

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Source: Insee, Dossier No. 138, March 2007.

- 6.12.1 The Midi-Pyrénées region is an interesting case. Since 2000, when the A380 was launched, the region was implementing the ADER plan (Action Plan for the Development of Regional Enterprises) to support SME-SMI subcontracting aeronautics companies. This initiative produced interesting results and is to be continued in order to help SME-SMI subcontractors adapt to the Airbus POWER8 plan.
- 6.12.2 The new measure, ADER II, will provide case-by-case support to help businesses form groupings, increase their technological capacity, enter new markets, pool resources for purchasing raw materials, etc.
- 6.13 The globalisation of aeronautics has a strong impact on salaries and jobs. To counter this, research and training measures must be strengthened and supported in order to tap job creation potential. One option could be human resource planning.
 - 6.13.1 Human resource planning should serve to anticipate future change. It should allow workers to cope better with future uncertainty, to develop long-term projects, to give meaning to their work, and to develop their career and investment in their company, while taking account of their needs and aspirations. It should enable businesses to adapt to change and competition.
 - 6.13.2 Human resource planning must be part of a proper career and skills framework with very long-term objectives (30 years). Its goal should be to define training and skills development needs that it would be desirable to implement in the medium term in the supply of initial and lifelong training from the perspective of the industry as well as that of trainers and workers' representatives. It could be part of a debate on the employment pool.
- 6.14 Maintaining an aeronautics industry with a high level of technology and skills depends on the industry being able to recruit personnel with a high level of initial training in areas currently in development such as composite materials or the environment. Furthermore, other areas, such as industrial risk management, new materials, clean fuels, etc., must be developed.
 - 6.14.1 Training schemes should not concentrate solely on white collar workers but also on blue collar jobs, which have suffered from a bad image for too long and have been neglected by most European educational systems, although they are important to the competitiveness of the European aeronautics industry.
 - 6.14.2 Initial training should also include apprenticeships, with agreements between schools, universities or manual occupations and companies. Lifelong vocational training should facilitate major retraining, and retraining for workers with very low skills. But it is primarily an essential and practical tool for implementing a strategic plan, narrowing any gaps that might exist between current resources and future needs. More generally, all European workers should be able to access a minimum level of training throughout their lives.

6.15 All measures, whatever their nature, require the highest possible level of consultation between company management and worker representatives. This consultation often exists at a national level but must be extended to the European level. An initial step has been accomplished via Directive 94/45/EC on the establishment of a European Works Council. Since company managements establish their strategy at European level, European works councils are the only appropriate bodies for gathering information at the relevant level and taking stock of the situation prior to any negotiations. The Commission and the Member States should facilitate the establishment of a social dialogue committee for the European aeronautics sector.

7. Proposals for future opinions

7.1 The aeronautics sector is so complex that it is impossible to study all its aspects in this opinion. The CCMI should therefore consider continuing its work on this subject in future opinions at the earliest opportunity.

7.2 Future opinions could address the following areas:

- the military aeronautics sector;
- military and civilian helicopters;
- aeronautics maintenance;
- military and civilian avionics, including advanced weapons systems;
- new state-of-the-art procedures, standards and equipment for aircraft landing in emergency conditions.

Brussels, 3 December 2008.

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of the
European Economic and Social Committee

The Secretary-General
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European Economic and Social Committee

Mario Sepi

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