SAFETY AND ENVIRONMENT AVIATION

INTRODUCTION

Safety has always been a priority for Community aviation policy because of the potentially catastrophic consequences of even relatively minor mishaps. Some environmental issues, such as noise around airports, have also been a traditional concern, but, in the 1990s, the Commission and the Member States began to focus more attention on other environmental areas linked with aviation, in particular air quality and climate change.

Because a large proportion of all flights are international, and because there is a great deal of competition between carriers, regulatory action tends to be taken at an international level within the International Civil Aviation Organisation (ICAO), a UN agency, set up under the terms of the 1944 Chicago Convention, responsible for ensuring the safe and orderly growth of civil aviation. The ICAO draws up binding technical and regulatory standards, as well as non-binding recommendations. At a European level, the European Civil Aviation Conference (ECAC) offers a point of contact between governments, allowing them to coordinate their positions within ICAO and develop compatible policies. Its associate body, the Joint Aviation Authorities (JAA) seeks to establish uniform technical standards.

By and large, the European Commission aims to ensure that international standards are transposed in a consistent and equal fashion by the Member States, and that they are applied correctly and consistently to non-EU carriers as well as to EU operators. It also tries to shape international policy, as far as possible, in line with the EU's own objectives.

The EU's first laws for aviation safety, adopted in the early 1990s, were largely focused on harmonisation of technical measures drawn up within the JAA. In October 1994, the Council adopted a general Resolution on civil aviation, and it signalled an intention to strengthen safety policy with the following statement: "*The completion of the common air transport market should also find expression in common provisions and in uniform procedures for the safety of air traffic. Consideration on the development of an efficient regulatory authority for Europe, based on the JAA, dealing with safety standards should be pursued without delay. In the same spirit common airworthiness certification for aeronautical products should be considered.*"

Safety highlighted in Council Resolution on civil aviation

In February 1996, following the air crash in the Dominican Republic in which many Europeans were killed, the European Parliament adopted a Resolution calling on the Commission "to speed up the submission of practical proposals with a view to improving and increasing the safety of civil aviation, with particular regard to the technical and commercial operating conditions of non-scheduled airlines". The March meeting of transport ministers called for the Commission to set up a high-level group to look more carefully at aviation safety. The group reported within three months, and the Commission then put forward a Communication, in June 1996, entitled "Defining a Community aviation safety improvement strategy". Within a few days, the Transport Council had confirmed "the need for the Community to take a more active stance in the field of aviation safety" and welcomed the proposed strategy.

The strategy itself looked most carefully at the safety of foreign carriers - notably, at ECAC's recently launched Safety Assessment of Foreign Aircraft (SAFA) programme - and also at safety within the Community. Moreover, it listed actions that should be taken, respectively, by the Member States, ECAC/JAA, and the Commission itself. The Commission suggested it should take the following steps:
- propose a draft Directive formalising the SAFA procedure and a related cooperation mechanism;
- consider how to support the SAFA procedure;
- prepare a number of common positions for the Member States to adopt in international procedures, notably a system for when formal cases are made to third countries in relation to deficient aircraft; a system for appeals in ICAO where disagreements with third countries arise; the development of ICAO standards for bilateral air service agreements; and the encouragement of ICAO's efforts towards aviation safety worldwide;
- present a proposal for a European Aviation Safety Authority (EASA);
- develop a cooperation policy to assist third countries willing to improve their aviation safety oversight capabilities;
- accelerate work related to accident prevention, and develop proposals for reporting incidents,and analysing the data collectively.

Measures to reinforce the SAFA procedure

Chapter Nine

Most of the Commission's work through to the end of the decade has been based on this list, although it has been less than successful in getting some of its proposals through the Council. Several important laws developed primarily for the internal aviation market also have an important safety aspect. Regulation 2407/92 on the licensing of Community carriers, part of the third package of liberalisation measures, contains provisions aimed at ensuring Community carriers demonstrate their fitness to operate services, even when foreign aircraft (and crew) are leased. Furthermore, Community policy towards airline liability, although not exactly a safety issue, is connected to the subject. These policies, however, are discussed in Chapter Three.

There are two basic environmental problems linked to aviation. The more traditional one of noise around airports, for which Community legislation dates back to 1980, was looked at carefully in a Commission consultation paper in 1996. Future remedies to noise problems, it suggested, lay in the areas of RTD, noise monitoring/zoning and land use rules, and noise abatement operational procedures. The most important single measure in recent years, however, has been the move to ban acoustically-modified hushkitted Chapter II aircraft from Community airports. Atmospheric pollution is the second environmental problem to be considered at the Community level, but the two main areas for possible action - standards on NOx emissions, and a kerosene tax - have been stalled in deference to developments in ICAO.

This chapter examines the Commission's air safety policy from the two basic elements of the strategy: measures designed to improve the already high level of safety within the Community; and measures aimed specifically at addressing the safety of third country carriers who, while nominally certified to ICAO standards, may not in reality fulfil necessary safety requirements. It also covers air traffic control and flight time rules. The chapter concludes with an examination of the environmental problems of air transport.

AVIATION SAFETY MEASURES AT COMMUNITY LEVEL

The level of aviation safety in Europe is acknowledged to be relatively high. According to ICAO figures, the region accounts for roughly a third of the world's air traffic, but only one tenth of the casualties. Nevertheless, the Commission believes there is no reason to relax efforts to improve safety within Europe, for two reasons. Firstly, most flying by EU citizens takes place on aircraft registered in the Community; and, secondly, it does not want to give the impression that Community action concentrates on foreign air carriers. The primary responsibility of the Community and its Member States, the Commission said in its 1996 strategy paper, is to ensure their own carriers are the safest in the world.

Historically, national aviation authorities have established their own detailed standards for implementing norms agreed by ICAO in accordance with the Chicago Convention. However, this has led to variations in certification procedures, and to additional costs for the manufacturing industries which are forced to comply with different sets of rules. To minimise these problems, the national authorities of a number of European states set up, within the ECAC forum, the JAA to cooperate informally in developing and implementing common regulatory standards and procedures.

Transposition of JAA standards into EU law

Regulation for transposal of JARs

In December 1991, the Council of Ministers adopted its first air safety Regulation in order to enable the transposition of JAA standards (Joint Aviation Requirements - JARs) into Community law. Since then, the main Regulation has been updated twice by Commission Regulations, once in 1996 and once in May 1999, in the "light of technical and scientific progress". Although the procedure is for the Commission (as opposed to Council) to adopt the amending Regulations, the content is fully discussed in a committee of national aviation safety regulators. This procedure, however, is far from satisfactory. The report of the high-level group, which met in 1996, stated: "*There is concern at the speed of follow-up action: proposals from the Commission to complete the set of applicable rules and update them in the light of the work done by the national aviation authorities in their association, the JAA, have been seriously delayed.*"

The problem has only become more severe since then. Several Member State representatives were extremely critical of the system at the February 1999 meeting of the aviation regulators. Germany proposed a more automatic system of updating the Community rules with the JARs, but the Commission said this would be like giving the JAA de facto power to legislate for the Community. Spain and France both mentioned the "bad functioning" of the Regulation and insisted on a better mechanism.

The Commission also intended to use the same Regulation for transposal of the JAA's detailed operational requirements (JAR-OPS) into Community law. But this too has proved very difficult. For one set of JAR-OPS, concerning common safety requirements for cabin crews, the Commission decided, in July 1997, on the alternative approach of a Council Directive. However, by autumn 1999 (by which time the Commission had slightly amended its original proposal), the Council had failed to reach any consensus on the Commission's proposal - because of serious misgivings from a number of Member States.

Draft Directive on safety requirements for cabin crews

Under the terms of the draft law, any crew member with safety responsibilities would have to pass regular medical examinations, complete an initial safety training course, and, when first assigned to a particular type of aircraft or when changing to a different aircraft type, would have to complete a further course of "conversion or differences" training. Two other areas covered by the proposal were ongoing training, and an "attestation of professional competence" issued by an officially approved body and acceptable Community-wide. Going beyond the JAR-OPS, the draft Directive also proposed that the competent national civil aviation authority should authorise the content and organisation of training courses.

A further proposal from the Commission, put forward in December 1998, called on the Council to amend the 1992 Regulation to create a system for authorising mutual recognition agreements between individual Member States and third countries (covering approvals of products, organisations or personnel) either for a two year period, or pending the entry into force of an EC-level mutual recognition agreement (covering those same aspects). However, as of late 1999, again no Common Position was forthcoming in the Council.

Towards a European aviation safety authority

In the October 1994 Resolution on civil aviation, the Council formally acknowledged that the JAA - only set up to be a temporary first step - was an inadequate mechanism for the future safety of European aviation. It said: "*Considerations on the development of an efficient regulatory authority for Europe, based on the JAA, dealing with safety standards should be pursued without delay.*" However, it was easier to state the policy than to enact it.

It took the Commission until December 1996 to put forward a draft mandate (not a public document) for it to negotiate the creation of a European aviation safety authority. It proposed such an organisation should be empowered to:
- draft and adapt binding rules with regard to safety of civil aviation (design, operation, and maintenance of aircraft, as well as for the persons and bodies involved in those tasks);
- cooperate with contracting parties to ensure uniform application of the common rules;
- conduct the technical inspections, directly or through competent bodies, required to check conformity with the rules, issue the appropriate certificates, and guarantee the regular follow-up of the level of aviation safety;
- establish the necessary international relations within its field of competence.

The draft mandate also proposed that the Community, in its own right, should be a member of the authority alongside the Member States, so that its centralised competences should be safeguarded. With the EU as a member, the organisation would be responsible for adopting safety regulations and policing their implementation, as well as controlling various certification processes, in particular in the aeronautics sector.

Long negotiations before agreement on mandate for EASA

After 18 months of intense negotiations, the Member States finally agreed on the extent of the mandate in June 1998, but deferred some difficult political decisions, especially over voting systems: it agreed to three types - simple majority, qualified majority, and weighted qualified majority (on the basis of financial contributions) - but did not agree on how the allocation of voting rights to particular types of decisions should be made. Many of the larger States had argued that voting powers in all areas should be linked to financial contributions via a weighted qualified majority system. This was unacceptable to smaller States, who said qualified majority should not apply to areas directly related to safety, although it was acceptable for procedural issues. A special committee was subsequently set up by the Council to liaise with the Commission during the negotiations. The Commission has also reported regularly back to the Transport Council.

A change of direction over the future EASA?

One of the Commission's first tasks was to prepare the framework for EASA. In May 1999, the then Transport Commissioner Neil Kinnock said (in answer to a written question from an MEP) that a draft founding convention had been prepared and that "extensive discussions within the

special negotiation committee created by the Council to assist the Commission have to take place before negotiations with third parties are initiated". On a more specific point, he also noted that the Council and the Commission were agreed that the new EASA should have competence in the field of airport safety, but that, subject to the agreement of parties involved, "this may not be a priority task for the new organisation, and the implementation of its powers in this specific field could be decided at a later stage".

The Association of European Airlines (AEA) expressed reservations about the EASA proposal, and suggested, in particular, that it would impose too much bureaucracy: "*AEA believes that a large proportion of the potential task of the EASA has no political dimension whatever - literally nuts and bolts issues - and it should be possible to devise an institutional structure which can create binding rules without the delay and compromise resulting from bureaucratic intervention.*"

Problems with EASA lead to talk of a Community agency

In autumn 1999, the newly installed Transport Commissioner, Loyola de Palacio, revealed in a speech to AEA, that there were problems with the draft founding convention and that she believed there were some serious constitutional problems. In December 1999, at the Transport Council, she expressed doubts about the feasibility of establishing EASA as an international agency and suggested the option of Community agency should be examined. Although some Member States saw no reason for a change of direction, the Commissioner was given the go-ahead to prepare her ideas and report to the Council promptly.

Cooperation over accidents and incident reporting

Although Community rules on cooperation over air accidents had existed since 1980, it was only with a Directive in 1994 that the Community stepped up its role in this area. This law obliges Member States to ensure that every accident or serious incident is investigated, with the sole objective of preventing future incidents. Reports, and if necessary recommendations, must be forwarded to the relevant parties, the national aviation authorities concerned and the Commission. It also states: "*Member States shall take the necessary measures to ensure that the safety recommendations made by the investigating bodies or entities are duly taken into consideration, and, where appropriate, acted upon without prejudice to Community law.*"

The 1996 strategy report, however, drew attention to the need for more information about accidents. The fundamental principles, laid down in the 1994 Directive, were insufficient, it said, because accidents are rare and they do not give rise to safety information covering all situations. "It would be unacceptable just to wait for accidents to occur and to react after the event", it said.

Likely scope of future proposal on a reporting system

The Commission was expected to draft a proposal for a mandatory reporting system soon after the report, and, each year since then, it has included such a proposal on its work programme. The Commission again intended to bring forward a proposal in 1999, but, by the time the Santer Commission resigned, it had not emerged. Nevertheless, the Commission's aim for such a proposal is clear. The Member States will be obliged to connect to a central database, known as the European Coordination Centre for Aviation Incident Reporting System. After a two year transitional period, they would then be obliged to provide reports on aviation incidents within their airspace. Details of those reports would be held on the database, and made available to other Member States' civil aviation authorities.

PROMOTING HIGH SAFETY STANDARDS FOR FOREIGN CARRIERS

Although measures to improve safety within the Community were considered important by the Commission in its 1996 Communication on aviation safety, the driving force behind the strategy was the need to improve safety among foreign air carriers. The reasons were summed up by the Commission as follows: "*The need to take action with regard to foreign airlines and aircraft arises from the failure by an increasing number of countries to meet their international obligations concerning the implementation and enforcement of international safety standards. This may have an unacceptable impact on the European Union largely because EU citizens travel widely all over the world and constitute an important percentage of passengers on international flights. And, of course, the airports of the Community are also major points of destination or stop over for foreign carriers and aircraft.*"

A failure to meet international obligations

Under the Chicago Convention, contracting states issue or validate certificates of airworthiness and competency for all aircraft and crew registered in that state. The Convention's Article 33 ensures that such certificates are recognised by other contracting states, provided they are issued under conditions which meet or exceed minimum international (i.e. ICAO) standards. However, the Convention does not provide any specific mechanism for one contracting party to query the way in which another contracting state implements or enforces those standards; nor does it

provide for objective assessments of a contracting state's compliance with international standards. A state may, though, refuse to recognise certificates where it has reason to doubt safety standards are being met, and may make checks on aircraft if necessary.

The 1996 high-level group agreed on the need to implement a procedure for systematically checking the safety of third country carriers. However, it rejected the approach, followed by the US Federal Aviation Authority, which entailed checking the ability of national administrations to meet their ICAO obligations. It warned that the situation created by bilateral aviation agreements with third countries, which do not usually include specific provisions for safety oversight or provide for unilateral action, could make it difficult to draw up 'black lists' of third country carriers. Moreover, it said, the risk of diplomatic retaliation from targeted countries should be avoided. The Commission elected, in cooperation with the JAA and ECAC, to introduce a system of bottom-up safety evaluation of third country carriers (similar to the port state control mechanism employed in the maritime sector - Chapter Eleven). This led to the drawing up, by the JAA, of the SAFA procedure, which made use of the Chicago Convention's right to board aircraft, inspect documents, and carry out checks (the so-called ramp checks) if necessary.

US approach to checking third country aircraft rejected

Negotiations for a ramp checks Directive scuppered

As recommended in the 1996 aviation strategy, the Commission put forward, in February 1997, a draft Directive aimed at providing a legal basis to the exchange of information, setting out a harmonised procedure for conducting ramp checks and reporting findings, and allowing action to be taken in cases where problems should be discovered.

Specifically, the draft Directive proposed minimum requirements for the collection and exchange of information on safety between Member States and the Commission (using standard report forms), and minimum conditions for the frequency and nature of ramp checks on suspect aircraft. It also proposed conditions for grounding unsafe aircraft, and for allowing aircraft, not meeting the required standards, to fly on to a further airport for repairs to be carried out. It suggested Member States retain a degree of flexibility, in particular concerning the scope of the checks themselves; however, it also prescribed a strong supervisory role for the Commission, aided by an advisory committee of Member States' experts.

During the negotiations in the Council, the German, Swedish and UK delegations suggested that the Directive should also apply to EU carriers on the principle that any discrimination against third country operators could be contrary to their obligations under the Chicago Convention. However, the Commission and other States argued that Community carriers already fulfil higher safety standards than those being sought by means of the draft Directive.

The Council agreed a Common Position in June 1997, and, in the process, weakened the Commission's role. The original Article 9 - which gave the Commission the right to impose systematic ramp inspection or surveillance on a specific operator, or on operators from a specific third country, and, moreover, to ban or impose conditions on such operators - was deleted. Instead, the Common Position text would provide for these measures to be implemented by the individual Member State, while any further measures would be decided upon by an advisory committee. It would also allow the Member States more discretion, than the Commission had proposed, in deciding under what circumstances ramp checks should be carried out. MEPs gave the proposal two readings under the cooperation procedure and, confirmed in their opinion on the Common Position, a call for half yearly publication of safety statistics, a system allowing the Commission to propose EU-wide measures to confront safety problems, and changes to clarify the text and protect the confidentiality of information given by airline employees.

Details of the Council's Common Position on ramp checks

Unfortunately, the draft Directive never made it onto the statute books. Although the Treaties do not lay down a timetable for negotiation of laws prior to the Common Position stage (some dossiers thus languish on the Council's table for years), they do impose a strict timetable in the latter stages of the legislative process. In this, somewhat rare, instance, the Council failed to formally adopt the Common Position as a Directive within the allotted timespan after the EP's second reading. This was because of a dispute between Spain and the UK concerning Gibraltar (Chapter Three). Whereas previously, in relation to a number of laws, the two countries had made concessions over the Gibraltar problem, in this case, the UK was not prepared to exclude Gibraltar airport from the scope of the Directive, and Spain, therefore, used a reserve it had held over the Common Position to block its final adoption.

A rare failure to adopt a Common Position

The Commission will, almost certainly, put forward a new proposal, based on the redundant Common Position, as soon as a way round the Gibraltar problem has been agreed. However, the Parliament will have codecision powers over any new proposal.

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Chapter Nine

MORE EFFICIENCY NEEDED IN AIR TRAFFIC MANAGEMENT

Effective air traffic management (ATM), covering air traffic control (ATC), air traffic flow management and airspace management, is vital for the safety of air transport, particularly in Europe's crowded skies. Indeed, air traffic has grown so fast that ATM systems are struggling to cope, and their capacity, dictated by safety limits, is a key factor restricting further growth of the market. The principal problem is the fragmentation of ATM structures in Europe. Because ATM services and functions are the responsibility of individual countries, who put in place the necessary infrastructure and operate their own organisational structures, technology and services can vary widely. In Europe, according to AEA figures, there are 49 European air traffic control (ATC) centres using 22 different operating systems. As a result, the overall system is inefficient.

A measure of cooperation in ATM matters is provided for at international level through ICAO, which adopts "ICAO standards" to ensure interoperability of systems. At the European level, the European Organisation for the Safety of Air Navigation (Eurocontrol), a sister organisation to ECAC, was set up in 1960 by an international convention to provide ATC services for the entire upper airspace of its members. However, before it even entered into force, several of the parties decided the loss of sovereignty was too great and pulled out. Eurocontrol, thus, became an organisation providing ATC services for the Benelux countries and northern Germany.

Failure to reform ATM in the 1980s

Since the 1980s, the European Commission has tried to play an active role in promoting more efficient ATM. In 1988, it put forward a package of proposals, but these were rejected by the Council which confirmed that it preferred a multilateral approach through ECAC. It said the Commission should help Eurocontrol achieve its tasks, using Community legal instruments where necessary, to ensure the implementation of decisions taken at international level.

Some progress through ECAC and Eurocontrol in the 1990s

Significant efficiencies in ATM were, in fact, achieved during the early 1990s. These were attributable to improved cooperation at European level, through ECAC and Eurocontrol. ECAC adopted its 'en route' strategy in 1990, which resulted in the launching of Eatchip, the European air traffic control harmonisation and integration programme. The programme, implemented by Eurocontrol, provides for the adoption of joint rules, procedures and specifications to ensure the interoperability and interaction of national systems. At the same time, a "Convergence and implementation programme" was launched, under which ECAC states agreed to upgrade their ATC systems according to joint objectives. Other initiatives included the setting up of the Central Flow Management Unit from 1992 onwards, operated by Eurocontrol; research aimed at creating a uniform European ATM system; and the creation of a strategy to improve the interface between airports and air traffic services, jointly run by Eurocontrol and the ECAC secretariat.

The difficulty of transposing Eurocontrol standards into EU law

In 1993, the Community did act in one specific area. The Council adopted a Directive enabling the Commission to give legal force to standards drawn up within Eurocontrol, making it mandatory for air navigation bodies to use those standards in procuring ATM equipment and systems. However, by autumn 1999, only two of the seven standards produced by Eurocontrol - the OLDI standard for on-line data interchange and the ADEXP standard for air traffic services data exchange presentation - had been incorporated into EC legislation, by means of a Commission Directive in 1997; a third one - on the flight data exchange interface control document - was in preparation, along with updates for the first two standards.

Slow transposition of Eurocontrol standards

In October 1999, the Commission published an assessment of this Directive. It reported that many Member States were slow to transpose the Directive, largely because it was the first EC measure in the ATM field and "the sector was manifestly unaccustomed to transposing Community measures". It warned also that "translation of the highly technical, specialised Eurocontrol standards poses considerable problems for several Community languages". It gave three reasons why four of the Eurocontrol standards had proved impossible to incorporate into EU legislation: because they are regulatory standards, with weak links to the procurement process that forms the focus of the Directive; because their content "does not really lend itself to Community integration"; and because they present difficulties in terms of monitoring and compliance, not least because of their wide scope for exemptions.

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The developing European framework - involving the new Eurocontrol Convention, the ongoing reform of the organisation's working methods, and the Community's membership (see below) - would help resolve these problems, the Commission said. However, it argued in the report that the range of regulatory action needed to integrate national ATM systems today went far beyond the simple technical interoperability of equipment and systems. "Other means will therefore have to

be envisaged to make the various Eurocontrol decisions enforceable in the Community, particularly when the time comes for the Community to join Eurocontrol", it stated.

The Community's future membership of Eurocontrol

The problem of severe airspace congestion reemerged in the mid-1990s and led to the Commission adopting a Communication on "Congestion and crisis in air traffic" in 1995, and a white paper, called "Freeing Europe's airspace", in 1996. The Commission concluded, that in order for the shortcomings of European ATM to be addressed, there was a need for a major restructuring of the organisational and institutional arrangements governing its development. It noted that most inefficiency in the system sprang from "weaknesses in the area of policy-making at the most strategic level". It suggested that there was a need for "a single regulatory authority while leaving existing mechanisms for service provision very largely unchanged".

The Commission proposed exploiting a revision of Eurocontrol, under way at the time within ECAC, so as to give it "greater political legitimacy, and invest it with powers as well as the necessary decision taking, monitoring and support mechanisms to enable it to carry out its tasks properly". The Commission, furthermore, argued that the Community should become a full member of a reinvented Eurocontrol, with voting rights in those areas for which competences already existed. The Commission followed up this suggestion in November 1996, with a proposal for the Council to grant it a mandate to negotiate Community accession to the new body.

Although the ECAC talks on the revision of Eurocontrol were stalled while the Commission's ambitious plans were considered, they did not lead to the wholesale revision that had been proposed. In February 1997, a text was agreed for a new Convention but it left Eurocontrol to remain simply a coordinating body, without legislative powers. However, the ECAC strategy did envisage the creation of a new Europe-wide institutional structure for Eurocontrol, including a general assembly at ministerial level, and the use of majority voting. The new Eurocontrol Convention was formally adopted by the then 26 Eurocontrol States in July 1997.

Following a year of extensive discussions at expert level, the EU's transport ministers, in June 1998, granted the Commission a mandate to negotiate Community membership, although as with the EASA mandate (agreed at the same meeting), the Member States ducked out of some of the more difficult questions, particularly concerning the delineation of competences, which they agreed should be settled further down the line. In late 1999, the Commission's negotiations with Eurocontrol were still ongoing, but plans were being made for a possible diplomatic signing conference in January 2000.

Expressions of serious concern over air traffic delays

In June 1998, the EU's transport ministers also agreed a Resolution, formally adopted some weeks later, acknowledging, with "serious concern", the situation regarding air traffic delays in Europe. Although in the Resolution, the Council accepted that the responsibility for dealing with air traffic delays lay with Eurocontrol, it also asked the Commission "to submit to the Council in 1999 a Communication on recent and ongoing measures aimed at reducing air traffic delays and congestion in Europe, so as to enable the Council to evaluate the impact of such actions and decide, if necessary, on new initiatives to be taken". The Commission was also requested to propose adequate measures such as the systematic publication of punctuality indicators, "to continue to keep the public informed about developments in this field".

The Commission President, Romano Prodi, and Commissioner de Palacio emphasised, on several occasions after taking office in September 1999, their determination to act against ATM delays. Then, in late November, the Commission put forward its boldest Communication so far, entitled "The creation of the single European sky". Although only six pages long (plus 30 pages of annexes), it proposed major changes to Member States' ATM policies. It noted that about one flight in three was not on time and that about half of the delays were directly due to air traffic delays, leading to an economic cost estimated at over Eur5bn, as well as various other burdens on holiday-makers and business travellers. Short-term action is urgent, it said, and this should involve Eurocontrol in overseeing a common reference framework for planning by all parties, including end users of air transport, and formal annual undertakings by each country. It should also propose alternative routes, and draw up emergency plans.

More fundamentally, though, the Communication said, there was a need for far-reaching reform: "*The Community must assume its responsibilities by bringing management of the airways in line with its economic and political integration. . . Europe cannot keep the frontiers in the sky that it has managed to eliminate on the ground; it must allow the freedom of movement of persons goods and services beyond such frontiers. This would not be interpreted as undermining Eurocontrol, but rather as the will of the Commission to highlight the complementarity of the Community's*

political goals and the specific responsibilities of Eurocontrol to help meet the objectives of the Community while recognising the rights of countries which are not members of the EC."

A programme of measures for a single European sky

The creation of a single sky requires quite specific measures, the Commission said, and these will go beyond technical and operational solutions, to collective management requiring substantial reorganisation of structures. Sectors must be sub-divided, it said, with routes established regardless of frontiers. Moreover, there must be changes to the way the civil and military airspace is currently divided to take account of the collective interests of the EU. In an area as diverse and complex as air traffic management, the paper went on to say, the collaboration of a large number of players will be required, and this itself will require a new collective commitment and new decision-making mechanisms. The Commission also put forward, in the paper, a programme of further actions to develop new system tools and procedures and to ensure cost efficiency.

If only to guarantee interoperability, the Commission said, many of the proposed measures would need to be developed as a priority within Eurocontrol, and, to this end, it will submit proposals to reform Eurocontrol's procedures. This should be easier to manage once the Community has become a member in its own right, the Commission added. It also made clear, in the paper, that it does not want to jeopardise cooperation within Eurocontrol, but that, in the face of opposition, it would be prepared to make alternative proposals.

IDEAS FOR FUTURE FLIGHT TIME LIMITATION REGULATIONS

The aviation sector was left out of the original working time rules. However, all non-mobile workers in the sector are due to be brought within their remit by a new Directive, for the excluded sectors, which entered into the final stages of negotiation in autumn 1999. Although, the same law will see mobile workers subject to some aspects of the rules (Chapter Eight), the situation for the more important parameters is somewhat different. The Commission has focused its attention on the possible development of a Community flight time limitation (FTL) scheme, with added social provisions covering holidays and medical assessments. It held a forum on the issue in June 1996, and subsequently set up a task force, comprising members of all interested groups, including employers, employees, experts, and regulators. A consensus - on what the precise objective of an FTL scheme should be, how it should be structured, or what kind of values should be set for concepts such as "minimum rest" - has since proved difficult to find.

Difficulties between employers and the pilots' unions

The main differences that arose during the task force meetings were between the employers' associations and the pilots' associations and unions. The employers favoured introducing a loose framework scheme aimed mainly at ensuring operational safety. It should, they said, concentrate on setting out basic FTL principles and establish only a bare minimum of compulsory requirements, such as an eight hour minimum rest period. This would allow a maximum of flexibility, and permit all current practices considered essentially safe. However, the unions favoured a more comprehensive scheme laying down mandatory maximum duty, flight duty and flying periods as well as minimum rest periods, which would also take account of the health and safety requirements of crew.

Working paper on flight time limitation compromise

In an attempt to reconcile the interests of the various parties, the Commission circulated, in early 1998, a working paper outlining a possible compromise solution. Under the proposed solution, air operators would be responsible for drawing up their own FTL programmes, in consultation with their employees. Within these overall schemes, they would be allowed to introduce specific systems to cope with varying needs on different parts of their networks. The Community, meanwhile, would establish a regulatory framework within which such schemes would need to operate. This would include automatic approval mechanisms allowing the relevant national authorities to clear FTL schemes which fulfilled necessary criteria. Other schemes would be subject to review at Community level using a committee procedure, with mandatory consultation of a group of Member States' experts.

At the time, the Commission explained that the system would meet the employers' need for flexibility, while fulfilling the main requirements of the pilots. However, the discussions since then, which have included modifications to the schemes proposed by industry, have not borne fruit. When the Santer Commission resigned in spring 1999, there was no indication that a formal proposal was imminent; nor was such a proposal on the new Commission's short term work plan.

THE COMMISSION'S AIR TRANSPORT AND ENVIRONMENT PAPERS

As part of its efforts to develop an EU strategy for controlling the social and environmental problems caused by the growth of air transport, the Commission published, in July 1998, a consultation paper on "Air transport and environment". It warned that air transport could rise 75-100% by 2010,

compared to mid-1990s levels, and that industry estimates have referred to a possible growth of 700% approaching 2050. Within this context, it said, it is no surprise that the potential environmental consequences of such growth have been a source of some political concern.

The environmental impacts of aircraft fall broadly into two categories: the effects on the health and quality of life of people living near airports, mainly in terms of noise and local pollution as well as associated effects such as increased road traffic and congestion; and the less easily quantifiable effects of exhaust emissions released at high altitude. The consultation paper, which led to adoption of a formal strategy in late 1999, reviewed the situation in six clearly defined areas, and for each one listed a range of policy options relating specifically to air transport and the environment. The following options were mentioned in the report.

The Commission's consultation paper on aviation and the environment

Binding technical emission standards
- The EC should consider ICAO as the only appropriate body for setting certification standards and follow its standard.
- As a matter of priority the EC should seek ways for a more effective representation of its interests within ICAO.
- The EC should actively participate in the forthcoming work on stringent noise certification rules, with a clear position on rules for their introduction at regional (European) level.
- The EC should develop genuine European standards in fields where progress required for meeting agreed goals cannot be achieved at the international level.
- The EC should consider complementary European standards in particular fields where their implementation could help to "trade" the environmental capacity at an individual airport against more stringent European standards on noise.

Economic instruments
- Proposals on kerosene taxation should be adopted, depending on the results of studies (see below).
- The Commission should initiate studies on aviation-related charges and levies as a possible alternative to kerosene taxation.
- Priority to be given to reaching a consensus in ICAO on the introduction of taxes/charges or trading mechanisms targeting the environmental impact of aviation.
- The Commission should initiate an an analysis of the practical feasibility of creating a Community framework for trading emission rights in the aviation field and make proposals.

Regulatory measures
- The Commission should establish interpretative guidelines which clarify the meaning of existing rules targeting the environmental impact of air transport - the scope of Articles 8 and 9 of Council Regulation 2408/92 (air services) and its interrelationship with Regulation 95/93 (slots) will have to be explained (Chapter Three).
- The Commission should present proposals to allow for effective interventions for environmental reasons without unduly compromising internal market requirements.

Local environmental measures
- The EC should consider the establishment of a common noise measurement index; a methodology for noise calculation; guidance on what should be a suitable target, and envisage a harmonised basis for noise measurement; a voluntary target-setting system; and a system for exchanging information.
- The EC should envisage common rules on operating restrictions - such as night flight bans - to prevent their introduction distorting competition between airports, and proper consultation on the imposition of such restrictions.
- The EC should ensure that eligibility criteria for support from Community instruments includes the existence of proper land-use rules.

Research and development
- Research should continue on the actual impact of aircraft emissions on the environment, so as to establish prioritised emissions targets.
- Work on the feasibility of technological development to reduce emissions should be continued.
- Shorter term research projects should be pursued to minimise current environmental impacts.

Environmental agreements
- The Commission should, in close cooperation with industry, examine options for voluntary environmental agreements.
- The Commission should examine possibilities for better informing consumers of the environmental performance of alternative air travel options.

In late November 1999, the Commission brought forward a more formal strategy paper on the subject entitled "Air transport and the environment: Towards meeting the challenges of

Towards meeting the challenges of sustainable development

Aviation and environment - action plan summary

Improving technical standards and related rules

Noise	More stringent international standards/rules for transition	By 2001*
Gaseous emissions		
NOx	More stringent international rules	By 2001*
CO2 etc	Reductions according to Kyoto Protocol	2001 review*
Landing and take-off	Proposal for equivalent charge	By 2001*
Emission methods	To be improved in cooperation with SBSTA and CAEP	By 2001*
Operational measures	Improve ATM efficiency (Communication)	End-1999

Strengthening market incentives

Economic incentives		
Aviation charges	Proposal for aviation charge	By early 2001
Emission trading	Explore benefits/risks	By 2001
Carbon offsets	Explore benefits/risks	By 2001
Encouraging industry		
EMAS	Encourage airlines/airports to register (new Regulation)	Mid-2000
Voluntary agreements	Suggest agreements on emissions reductions (launch talks)	Early 2000

Assisting airports

Noise classification	Proposal for Community framework on noise classification	By 2000
Noise measurement	Proposal for common noise measurement index	By 2001
Land use	Guidance on best practices for land-use decisions (report)	By 2001
Operating rules	Framework for procedures, best practices etc. (report)	By 2001
Noise	Possible EC system for identifying noise-sensitive airports (report)	By 2001
Other modes	Work towards more effective air/rail intermodality	Ongoing

Advancing technological improvement

R&D	Fifth and Sixth Framework Programmes	Ongoing
Monitoring	Develop inventories of statistics/indicators	2000-02

NB: SBSTA - Subsidiary Body for Scientific and Technical Advice; CAEP - ICAO Committee on Aviation Environmental Protection; EMAS - Community eco-management and audit scheme; * i.e. by the 33rd ICAO Assembly

Source: COM/99/640

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sustainable development". The basic message of the paper was that the Commission intended "to adopt an integrated approach with a view to comprehensive action and will no longer confine itself to setting technical standards". Apart from an introduction and a short conclusion, the Communication was divided into four parts, each containing a list of target actions which had evolved out of the options contained in the earlier paper (see box).

NOISE ABATEMENT AND CONTROL MEASURES

Historically, the Community's priority in terms of aviation and the environment has been the control of noise around airports. Under Annex 16, Volume I part II of the Chicago Convention, ICAO sets aircraft noise certification standards within successive Chapters. Community legislation began in 1980 with a Directive preventing any further non-noise certificated transport aircraft from being added to the civil air registers of Member States and required the removal of such aircraft already on the lists by 1986 (or 1988 for a small number of aircraft). An amendment, agreed by the Council in 1983, prevented foreign registered non-noise certificated aircraft landing in the Community from 1988-89.

Phasing out Chapter II aircraft by 2002

In December 1989, the Council agreed a Directive to stop the addition to the Member States' registers of any aircraft that did not meet the most stringent Chapter III standard. This was supplemented in March 1992 by a further law to phase out all the Chapter II aircraft by April 2002. Although the development of Community law in this regard was designed to promote investment in new less noisy aircraft, specifically designed to Chapter III standards, a system of modifying Chapter II aircraft (by fitting them with acoustic devices known as hushkits) to meet Chapter III standards was developed in the US. Such hushkitted aircraft, however, are considerably noisier than aircraft built to Chapter III specifications. In the US (unlike in Europe), a large amount of freight is transported by air, and, consequently, the cheaper option of hushkitting existing aircraft has proved an attractive option for cargo carriers which do not have to worry as much about their public image as passenger carriers. Moreover, the use of hushkits has been exaggerated by the characteristics of the US Chapter II phase-out rules.

The hushkits problem

In recent years, the Commission has been concerned that some of these noisier modified aeroplanes might find their way onto the registers of EU Member States, thereby reducing the benefits of the Chapter II phase-out. The threat intensified in the wake of full liberalisation of the EU's aviation market, with a number of new airlines being created, particularly budget carriers which, operating under severe financial pressures, might use the US market as a source of cheap second-hand aircraft. Consequently, the Commission put forward a proposal, in March 1998, to prohibit the

addition of hushkitted aircraft to Member States' registers after April 1999, and to prevent, from 2002, the operation in the EU of third country aircraft not registered before April 1999.

Recertificated Chapter II aircraft ban tempered by US lobbying

The Member States were very keen on the proposal and within a few months had reached agreement on both aspects of the proposal, although, on the suggestion of the UK, it was widened to apply to all recertificated aircraft (i.e. those with hushkits and those with re-engineered engines). They also agreed to switch the new law from a Directive (requiring transposition in the Member States) to a Regulation (directly applicable) to ensure a more rapid implementation. However, during late 1998 and early 1999, there was intense lobbying by the US against the proposed restrictions. The lobbying, which was partly carried out in the media and involved threats of trade retaliation (the banning of Concorde from US airports, for example), resulted in the Member States taking the highly unusual step of delaying final adoption of the Regulation from March to April. Moreover, the Council decided, in deference to the US arguments, to postpone implementation of the Regulation by a year.

Aeroplanes registered in the EU* (1998)		
ICAO Annex 16 classification	**Number of aircraft**	**% of total**
Chapter I [1]	2	0.1
Chapter II [2]	224	8.4
Chapter III	2,448	91.5

* not including 13 Concorde
[1] phased out in 1988; [2] to be phased out by 2002
Source: Transport DG

Thus, under the terms of the Regulation, the non-addition rule banning new registrations of recertificated aircraft within the EU will become effective in April 2000 (rather than in April 1999 as in the Common Position). Operation of such aircraft from Community airports will be banned from April 2002, unless they have been entered on a Member State's register prior to April 2000, and have actually operated into EU between April 1995 and 2000.

A summary of the Council's reasoning was given in a joint statement by the Council and the Commission at the time. "*The Council and the Commission welcome the priority given by the US to the ICAO work on noise standardisation. They note with satisfaction the willingness recently expressed by the US to develop expeditiously, within ICAO and in close cooperation with the EC, the next generation of noise standard that would answer the long term needs of citizens who live near to airports. The EC committed itself to work, in close cooperation with the US and other partners, on a new ICAO noise standard as a priority. This work should include, in addition to a next-generation noise standard, the development of phase-out measures for the noisiest categories within Chapter III . . . The Council, in adopting the Regulation, decided, in this exceptional case and without creating a precedent, taking due account of the views of the EP, to postpone the date of application of the Regulation by one year in order to facilitate the continuation and the conclusion of the consultations with the US.*"

The European Parliament supported the Commission's original proposal with an Opinion in September 1998. It did, though, call for night time restrictions on the use of all such aircraft (i.e. those already allowed to fly in EU). In early 1999, it accepted the Council's Common Position. But, later in the year, in a Resolution on trade relations with the US, it stated that it was "deeply dissatisfied" with the way the decision to delay implementation of the Regulation had been taken by the Council, without any consultation.

The one year delay, however, was not sufficient for the US, and its lobbying of Brussels continued through 1999. Although the US secretaries of state for commerce and transport did, in October, provide some assurances to de Palacio that they were in favour of opting for a new standard in ICAO before September 2001, the US appeared unwilling to make any firm commitment while the EU's the Regulation remained in place. Apart from the threats against Concorde, it also said it would bring a case against the EU in the World Trade Organisation, and use, for the first time ever, Article 84 of the Chicago Convention. The Commission, as of November 1999, was adamant it would not propose to the Council a withdrawal of the Regulation without firm commitments from the US. Moreover, any proposed change to the Regulation, including its repeal, would require a codecision by the Council with the European Parliament (since the entry into force of the Amsterdam Treaty), and the Parliament is highly unlikely to approve any changes without good reason.

SLOW EFFORTS TO TACKLE AIRCRAFT EMISSIONS AT EC LEVEL

Apart from noise pollution, aeroplanes also cause local and global atmospheric pollution, in terms of nitrogen oxide (NOx) fumes and carbon dioxide (CO_2) emissions, respectively. With the rapid rise in air traffic and an ever-increasing focus on environmental problems, the Commission has taken a

close look at how emissions could be controlled in the future. In December 1997, the Commission, frustrated by the failure of ICAO to update its anachronistic standards on NOx emissions, put forward a proposal aimed at limiting such emissions from EU aircraft. Its proposal was based on standards that had been recommended by ICAO's Committee on Aviation and Environmental Protection (CAEP) in 1995 but which had failed to find acceptance by ICAO's full council.

Council defers to ICAO over NOx emissions proposal

The proposed EU standards were aimed at an overall 16% reduction in emission limits. Because of the extra difficulties involved in reducing emissions from smaller engines, the Commission proposed different limits would apply depending on the engine thrust rating. The new limits were to apply to all new engine models (above a minimum) as of January 2000, while new engines made to existing designs would have to meet the revised standards as of January 2008.

EU accepts ICAO's new norms on NOx emissions

Shortly after the Commission's proposal, CAEP renegotiated its recommendation, weakening it slightly in order to have a better chance of acceptance by the ICAO council. The June 1998 meeting of EU transport ministers then gave tacit approval to the new recommendation and put the Commission's proposal for Community measures on hold. In short Council Conclusions, the ministers jointly agreed that progress was, in fact, being made at ICAO level and that, so long as the CAEP recommendations were accepted quickly and further measures were pursued, they would accept the ICAO approach. In fact, the revised CAEP standards were accepted at ICAO's 156th session in February 1999, and entered into force in early November the same year.

Political will but lack of action on kerosene taxation

In addition to physical controls, the Commission has also looked very closely at the use of market instruments, particularly taxation of fuels, as a potential control mechanism. This examination has taken place largely as result of its overall strategy to combat climate change (Chapter Eight). The Commission and many Member States are positively in favour of taxing aviation kerosene, and during the latter half of the 1990s, there was a clear build-up of political will for such a tax. Aviation kerosene, however, is immune from taxation on a global basis due to the commitments entered into within ICAO on the basis of Article 24 of the Chicago Convention: "*Fuel, lubricating oils, spare parts, regular equipment and aircraft stores on board an aircraft of a contracting state, on arrival in the territory of another contracting state and retained on board on leaving the territory of that state shall be exempt from customs duty, inspection fees or similar national or local duties and charges.*"

Emissions of CO_2* (g/pkm)	
Air	175
Passenger cars	125
Bus	45
Railway	65
Source: Transport DG	* EU average 1995

The Commission chose to develop policy on taxing kerosene through its work on revising the energy excise tax framework (Chapter Two), all the while recognising the importance of the international dimension. The finance ministers, however, in June 1997 agreed a Resolution (which, unusually, was not published) calling on the Commission to undertake more study of the question. "*The Council requests the Commission to provide further information on all aspects of the introduction of taxation of aircraft fuel. In particular, the Council requests the Commission to consider the environmental impact, the consequences for the competitive position and profitability of the Community air transport sector vis-a-vis world competition, the possible shift of aircraft fuelling to third countries and other Treaty-related aspects. Further consideration should also be given to the competitive position of the air transport sector in relation to other modes of transport, considering not only differences in tax treatment but also differences in the rate of cost allocation and financial support by the authorities.*"

Study on kerosene tax shows difficulty of unilateral action

Although the Council asked for this work to be done by the end of 1997, the Commission did not give it a definitive answer until its November 1999 Communication on aviation and the environment. That paper detailed the results of a study, contracted in 1998, to look at the consequences of taxing kerosene. The study looked at two options: A) a tax of Eur245/1,000 litres on all routes from the EU; and B) the same tax but on all intra-EU routes for EU carriers only. The Commission rejected option A because it would require fundamental changes to existing bilateral air service agreements and would be difficult to arrange without considerable concessions in other fields. It also rejected Option B, although legally feasible, because it would only give rise to a relatively small environmental benefit, while at the same time leading to significant competitive pressures on the European aviation industry. The Commission concluded it would stick with its current policy of seeking international agreement for a kerosene tax, but look at other ways of imposing environmental charges (see above).