

European Communities

EUROPEAN PARLIAMENT

Working Documents

1983 - 1984

16 March 1984

DOCUMENT 1-1551/83

Report

drawn up on behalf of the Committee on Transport

on the safety of air transport in Europe

Rapporteur: Mr C. RIPA DI MEANA

PE 86.425/fin.
Or. Fr.

The European Parliament,

- at its sitting of 16 June 1982, referred the motion for a resolution tabled by Mr DE PASQUALE and others pursuant to Rule 47 of the Rules of Procedure (Doc. 1-364/82) to the Committee on Transport as the committee responsible and to the Committee on the Environment, Public Health and Consumer Protection for its opinion;
- at its sitting of 11 April 1983, referred the motion for a resolution tabled by Mr MOORHOUSE and others pursuant to Rule 47 of the Rules of Procedure (Doc. 1-21/83) to the Committee on Transport as the committee responsible;
- at its sitting of 10 October 1983, referred the motion for a resolution tabled by Mr SEEFELD and others pursuant to Rule 47 of the Rules of Procedure (Doc. 1-734/83) to the Committee on Transport as the committee responsible and to the Political Affairs Committee for its opinion;
- at its sitting of 27 October 1983, referred the motion for a resolution tabled by Mr ANTONIOZZI pursuant to Rule 47 of the Rules of Procedure (Doc. 1-674/83) to the Committee on Transport as the committee responsible and to the Political Affairs Committee for its opinion;
- at its sitting of 16 November 1983, referred the motion for a resolution tabled by Mr EPHREMIDIS and others pursuant to Rule 47 of the Rules of Procedure (Doc. 1-973/83) to the Committee on Transport as the committee responsible.

At its meeting of 26 January 1983 the committee decided to draw up a report and appointed Mr Carlo RIPA di MEANA rapporteur.

The draft report was considered at the meetings of 26 May 1983, 1 December 1983, 24 January 1984, 28 February 1984 and at the last meeting the motion for a resolution as a whole was adopted unanimously with one abstention.

The following took part in the vote : Mr Seefeld, chairman; Dame Shelagh Roberts, Mr Carossino, vice-chairmen; Mr Ripa di Meana, rapporteur; Mr Albers, Mr Karl Fuchs (deputizing for Mr Baudis), Lord Harmar-Nicholls, Mr Janssen Van Raay (deputizing for Mr Vandewiele), Mr Key, Mr Klinkenborg, Mr Loo (deputizing for Mr Gabert), Mr Martin, Mr Moorhouse, Mr Moreland (deputizing for Mr Cottrell), Mr Nikolaou (deputizing for Mr Lagakos), Mr Veronesi (deputizing for Mr Cardia).

The Political Affairs Committee and the Committee on the Environment, Public Health and Consumer Protection decided not to draw up opinions.

The report was tabled on 8 March 1984.

The deadline for tabling amendments to this report will be indicated in the draft agenda for the part-session at which it will be debated.

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The Committee on Transport hereby submits to the European Parliament the following motion for a resolution together with explanatory statement

MOTION FOR A RESOLUTION

on the safety of air transport in Europe

The European Parliament,

- having regard to the motion for a resolution tabled by Mr DE PASQUALE and others pursuant to Rule 47 of the Rules of Procedure on the safety of air transport in the zone between the islands of Ponza and Ustica (Doc. 1-364/82),
 - having regard to the motion for a resolution tabled by Mr MOORHOUSE and others pursuant to Rule 47 of the Rules of Procedure on Community accession to the EUROCONTROL Convention (Doc. 1-21/83),
 - having regard to the motion for a resolution tabled by Mr ANTONIOZZI pursuant to Rule 47 of the Rules of Procedure on the brutal shooting down of a South Korean airliner by the Soviet airforce (Doc. 1-674/83),
 - having regard to the motion for a resolution tabled by Mr SEEFELD and others pursuant to Rule 47 of the Rules of Procedure on measures following the shooting down of a South Korean airliner (Doc. 1-734/83),
 - having regard to the motion for a resolution tabled by Mr EPHREMIDIS and others pursuant to Rule 47 of the Rules of Procedure on the safety of civilian flights during military exercises (Doc. 1-973/83),
 - having regard to the report by Mr NOE on the promotion of efficient air traffic management and control (Doc. 106/79),
 - having regard to the report by Mr JUNOT on safety measures in aircraft (Doc. 1-788/82),
 - having regard to the ICAO resolution of 16 September 1983 on the shooting down of the Korean Air Lines Boeing 747 on 1 September 1983,
 - having regard to the report of the Committee on Transport (Doc. 1-1551/83),
- A. whereas the safety levels for air transport in Europe are already high,
- B. whereas it is vital not only to preserve but also to improve safety levels given the prospect of an increase in air traffic,
- C. whereas the economic difficulties besetting the Member States might lead to budgetary restrictions affecting air transport facilities, equipment and infrastructures,

- D. whereas these economic difficulties might also lead to attempts by some airlines to achieve excessively high productivity likely to have an adverse effect on the safety of air transport,
 - E. whereas the safety of air transport depends on a large number of factors (technical, regulatory, and human) which need to be considered in their totality,
 - F. concerned at the frequent interference between civil and military air traffic,
 - G. aware of the existence of a body of standards laid down by the international organizations, and at the same time anxious that they should be implemented scrupulously,
1. Is convinced that the European Community must act, using all the means at its disposal and which it would be able to mobilize in the interests of increased safety of air transport in Europe, working in close cooperation with the International Civil Aviation Organization (ICAO) and the relevant international organizations and associations;

With regard to the facilities, equipment and infrastructures needed for air transport

2. Notes, first of all, the substantial and alarming differences between the European Community countries as regards the facilities and equipment for air traffic control and hopes, as regards the applicant countries, that the major investment efforts made over the last two years, notably by Spain, will continue at the same rate and on schedule;
3. Is concerned at the potential danger inherent in poor radar cover of certain airspace zones, particularly in southern Europe (Adriatic Sea, Tyrrhenian Sea and Aegean Sea) and approach conditions at some airports and calls for particular attention to be given to ground radar;
4. Considers that all the Member States of the European Community must be equipped with facilities of an equally high technological level and that the best and most economical means of achieving this, as far as air traffic control is concerned, is for all Member States to accede to the EUROCONTROL Convention;
5. Takes the view that, in accordance with the above, the Member States of the European Community must encourage the use of equipment and facilities of a standardized design, preferably European;

6. Supports the grouping of airlines, such as the ATLAS and KSSU Groups with a view to the maintenance of their aircraft and hopes that this type of initiative, which increases safety, will become generalized;
7. Hopes that wherever possible, all commercial and private aircraft will be equipped with the most modern and most effective communication devices such as transmitters enabling the aircraft to be identified and its precise location plotted (transponders);
8. Draws attention to the problems occasioned by interference with radio communications between aircraft and ground control centres from certain radio, TV and CB radio transmissions, a problem which is particularly acute in some European Community countries, and calls for this aspect to be examined in conjunction with the European Conference on Posts and Telecommunications;
9. Considers that more precise systems should be defined and prescribed within the ICAO for communications between aircraft and air traffic controllers;
10. Calls for great attention to be paid to meteorological problems : the quality and promptness of the information provided, development of equipment able to give warnings of phenomena such as wind shear, clear air turbulence, air vortices and optical illusions, as also problems associated with specific and local phenomena such as bird ingestion (in particular by providing an information system to keep airports informed about mass movements of migratory birds);
11. Considers that a more energetic approach must be taken towards the development of the concept of 'passive safety' in air transport i.e. those elements likely to reduce the scale and consequences of accidents;
12. Refers, in the context of 'passive safety' measures in aircraft, to the proposals set out in its resolution (Doc. 1-788/82) of 17 December 1982 : review of safety standards with regard to the inflammability and toxicity of materials used for the internal fittings of aircraft, the design, construction and fixing of seats, the design and resistance of seat belts, the closing of overhead lockers, mechanisms and conditions for rescue operations;
13. Is concerned at the appearance on the aircraft maintenance market of counterfeit spare parts which have been proved to jeopardize safety, in particular by the complaint made to GATT in July 1983 by the European Communities;

with regard to air traffic management and control

14. Is keenly aware of the problems arising from the simultaneous use of European airspace by civil and military aircraft;
15. Considers that better management of our airspace in favour of civil aviation would make it possible to simplify flight paths, reduce flight time, cut fuel costs, and thereby cut air fares;
16. Draws the attention of the Member States to the very real dangers caused by the occasionally untimely passage of military aircraft from various Member States of the European Community or third countries during manoeuvres and exercises (notably in the case of aircraft flying to and from aircraft carriers cruising in international waters), in particular those carried out in the Mediterranean area, but also, apparently, in North-West Europe;
17. Believes that there should be greater coordination between civil and military authorities, between airlines, between the management of civil airlines and the General Staffs of the armed forces, as also between civil and military pilots, making possible, inter alia, the use by military pilots of civilian frequencies in cases of emergency;
18. Notes that communications between the different regional air traffic control centres are effected by means of elementary procedures which may prove faulty, whereas a technologically more advanced and more reliable automatic link-up system could be introduced such as the automatic data links in use on the Maastricht-London/London-Maastricht route;
19. Commends the work of the European Air Navigation Planning Group (EANPG), an ICAO working party on medium-and long-term planning of air traffic flow;
20. Welcomes the recent decision taken by the EUROCONTROL standing committee concerning an increase in the operational powers of that body to cover all en-route traffic above the northern part of the Federal Republic of Germany, the Netherlands, Belgium and Luxembourg;
21. Calls urgently on the competent authorities of these four countries to implement this decision of 15 November 1983 as quickly as possible and calls on its committee responsible, in consultation with the appropriate committees of the national parliaments, to monitor carefully the strict

observance of the undertakings entered into in respect of the Maastricht EUROCONTROL air traffic control centre;

22. Invites the Member States meeting in the Council to consider the possibility of amending the EUROCONTROL Convention to enable that organization to assume the responsibilities of a European air traffic agency in association with neighbouring third countries and invites any Member States which have not yet acceded to the EUROCONTROL Convention to do so soon and calls on all Member States to entrust their en-route air traffic control operations to EUROCONTROL;
23. Reiterates its profound indignation at the brutal destruction of a South Korean airliner by a Soviet military aircraft which resulted in the deaths of 269 civilians, providing a tragic illustration of the way in which the safety of air transport can be jeopardized in frontier regions by military action;
24. Expresses the wish that ICAO submit as soon as possible proposals for standards and recommendations to prevent the recurrence of this type of accident in particular by improving the monitoring of civilian aircraft flying along border routes and means of alerting an aircraft which deviates from its flight path;

With regard to human and social factors

25. Expresses the wish that air controllers be given better training facilities (for basic and in-service training) which are identical in all the countries of the European Community (particularly through exchange schemes between Member States and EUROCONTROL training programmes) particularly in view of the constant and rapid development of technical processes;
26. Has doubts about conditions under which some countries issue private pilot's licences and wonders whether there should not be stricter controls over recognition and closer scrutiny of the conditions under which those pilots are trained;
27. Calls on the Commission in this connection to submit to it a proposal for a directive on the mutual recognition of the various categories of pilot's licences;
28. Believes that despite the efforts of ICAO and IATA, the various existing aircraft incident information and notification systems are inadequate;

29. Calls on the Member States meeting in the Council to formulate, as soon as possible and in the context of the general policy on air transport, an overall concept of air transport safety, taking account of all its implications;
30. Calls on the Member States to harmonize their standards and practices vis-à-vis the Chicago Convention on international civil aviation;
31. Considers it essential for the European Community to be granted observer status at ICAO;
32. Takes the view that Directive 80/1266/EEC on future cooperation and mutual assistance between the Member States in the field of air accident investigation should be strengthened by introducing an information compilation and notification system on all accidents and incidents involving civil aircraft over 2,250 kg, and including those involving military aircraft;
33. Believes that it should be made easier for the European Community to finance infrastructures and equipment which would guarantee identical air traffic safety conditions in the various Member States;
34. Calls on the Commission to initiate a dialogue with the Safety Committee of the AEA (Association of European Airlines) and calls on the governments to actively support the work of that committee;
35. Invites the Commission to draw up a series of proposals to enable the ideas set out in this resolution to be implemented;
36. Instructs its President to forward this resolution to the Council and the Commission of the European Communities and asks the Commission to forward it to ICAO and to ECAC.

EXPLANATORY STATEMENTGENERAL INTRODUCTIONI - THE FORM OF THE REPORT

1. This report originated with a motion for a resolution by Mr de PASQUALE and others on the safety of air transport in the zone between the islands of Ponza and Ustica (1), which drew attention to an apparent correlation between military air exercises and various inflight incidents and possibly the July 1980 disaster to an ITAVIA flight between Bologna and Catania in which 81 passengers' lives were lost.

A second motion for a resolution to the same effect was subsequently tabled by Mr EPHREMIDIS and others on civil aviation safety during military exercises in Greece (2).

2. Although these motions for resolutions were very specific, they cannot limit the scope of this report which covers air transport safety as a whole.

While the report was being drawn up events showed that air transport safety could be brutally threatened in other ways, as in the shooting down by the Soviet military authorities of the Korean Airlines Boeing 747 with the loss of 269 lives, on which motions for resolutions were tabled by Mr ANTONIOZZI (3) and Mr SEEFELD and others (4), and the two accidents in two weeks at Madrid.

3. For many reasons, but primarily the sudden and catastrophic nature of air disasters, even though the latter are rare events, air transport safety is a sensitive matter to the public.

(1) Doc. 1-364/82
(2) Doc. 1-973/83
(3) Doc. 1-674/83
(4) Doc. 1-734/83

4. Parliament has yet to consider the problem as a whole. Mr NOE's major report (1) dealt primarily with the ATC aspects of air transport, while Mr JUNOT's recent report was a brilliant piece of work but confined to the design and fitting out of aircraft.
5. Your rapporteur would like to take a general approach to air transport safety covering all its implications. To that end, distinctions will be made between:
 - industrial aspects (equipment, infrastructure)
 - regulatory aspects (air transport procedures and rules)
 - human aspects (flight crews and ground staff).
6. The problem of terrorist acts and piracy, while not underestimated as it is a serious threat to air safety, will not be considered here as they are the result of willful and deliberate actions which have no causal relation with air transport.
7. Geographically the report will of course cover the territory of the European Community, but the international nature of air transport requires it also to consider various other European countries, such as Switzerland, Austria, Sweden, Norway and Yugoslavia, and of course Spain and Portugal with a view to enlargement.

II - PROCEDURE FOLLOWED

8. The technical nature of this report should not conceal the fact that assessment of many aspects is still a very subjective matter. Your rapporteur felt obliged to take more active steps to supplement the data, studies and reports available to him, as follows:
 - by a questionnaire (2) sent to all European air transport undertakings, associations of international European undertakings, pilots' and air traffic controllers' unions, and relevant international organizations (Eurocontrol, ICAO, the ECAC), whose replies have in general provided a wealth of information;

(1) Doc. 49/78

(2) Annex II

- by asking the civil and military aviation authorities in the Member States of the European Community for information on near misses, which revealed the reluctance of most Member States to provide this type of information, a matter to which we shall return;
 - by interviews with representatives of airline pilots' and air traffic controllers' associations and of aviation undertakings and authorities in certain Member States.
9. The mass of data that has been collected has made possible first of all a concept of air transport safety in Europe, an analysis of the circumstances producing accidents, the factors jeopardizing safety and finally the recommendations resulting from our work, especially those applicable within the European Community.

PART ONE: CIRCUMSTANCES OF ACCIDENTS AND INCIDENTS

I - A CONCEPT OF AIR TRANSPORT SAFETY IN EUROPE

10. Although three major air accidents occurred in less than three months, between September and December 1983, it is indisputable that, whether measured by distance covered or passengers carried, air travel is one of the safest modes of transport. On average, between 800 and 1000 lives are lost each year throughout the world.
11. In the western world the safety figures are even higher as, over the long term, the number of accidents has fallen to 1 per million flights as opposed to 3 for the rest of the world.
12. Air transport is a field in which national and international standards and rules, especially under the aegis of the International Civil Aviation Organization (ICAO), are highly detailed, comprehensive and generally observed.
13. These three things had to be said to place this report in its context. It does not seek sensationalism, but ways of improving or at least maintaining the present high level of safety in air transport.

14. Substantial improvements in air transport safety can still be made, by action on the frequency and the consequences of accidents. Most accidents (75%) do in fact occur in the vicinity of airports and some of them are survivable. On the evidence of recent disasters, the fact that there have been some survivors has tended to show that there could have been more even if the accident itself could not have been prevented.

The figures for near misses alone show the scope for improving air traffic safety by reducing their number.

15. Before we think of improving it, we must maintain the present safety level. It is threatened by a number of factors. First of all, the increase in air traffic may indirectly jeopardize safety. The economic crisis might also persuade certain governments to reduce appropriations for investment in improving air traffic control. There is also a danger that the deteriorating economic climate, in conjunction with more or less rigorous deregulation policies might also lead some charter companies or regional air transport undertakings to adopt austerity measures which might jeopardize flight safety. Your rapporteur is referring in particular to reports that pilots, particularly in the USA, had recently been required to perform administrative and book-keeping work in addition to their specific duties (1). For the moment this does not seem to affect the Member States of the European Community, but vigilance is required to ensure better working conditions for pilots.

16. Geography provides a further argument, if one is needed, for a European approach to air safety. Europe is in fact a massive and unusual concentration of population and cities - over 200 of which have an airport which results in particularly dense air traffic, with many passengers carried and a mass of connections. This situation is further complicated by the patchwork of European States with different levels of development, different rules and separate civil and military airspace, together with military systems acting with NATO.

(1) The French newspaper LIBERATION of 13 October 1983, in an article on the competition between American airline companies, quoted in particular the following statement by a NEW YORK AIR pilot : 'I earn half the pay of my Continental colleagues and when I am not flying, I do office work. But at least I have a job.'

11 - GENERAL REFLECTIONS ON THE CIRCUMSTANCES OF AIR ACCIDENTS AND INCIDENTS

17. Accidents and incidents involving aircraft of weights over 2,250 kg are listed in the ADREP data bank of the International Civil Aviation Organization (ICAO), which now contains reports on some 10,000 occurrences notified to it by governments.
18. ICAO classifies the circumstances of accidents and incidents by phase of operation, 30 of which cover 96% of occurrences, which we have consolidated to show percentages worldwide.

%

Aircraft standing or taxiing	8
Take-off	20
Climb	5
Cruise	14
Descent	4
Approach	23
Landing	22
Various	4

Source: ICAO ADREP System 18.7.83

This table is most significant as it shows that the critical phases are take-off and above all landing, while contrary to popular belief, occurrences during cruise flight are relatively infrequent.

19. Occurrences are rarely due to one factor alone, but to a chain of events. It is then very difficult to identify the crucial factor if indeed there is one.
20. In this line of inquiry, ICAO's ADREP System provides a good deal of useful information. The computer printouts we have received classify occurrences in four main categories:

Personnel factors	2862
Aircraft system factors	1042
Weather factors	652
Aerodrome/airways factors	250

The most frequent causes of occurrences related to personnel were 'pilot failed to follow procedures or instructions', 'pilot, inadequate pre-flight preparation or planning', 'maintenance personnel: inadequate maintenance and/or inspection'.

As regards the aircraft itself, engines and landing gear were the most frequent causes quoted.

In respect of airports, the state of runways (patches of oil, ice, snow), various obstructions and inadequate lighting were the most frequent causes quoted.

Finally among weather factors, the most frequent were 'turbulence in cloud, low cloud base, fog'.

1. At all events, the circumstances capable of causing accidents or incidents for each category are listed in such great detail that none (whether by chance or by design) shows up in the ICAO figures as being genuinely crucial.

In general, the human factor seems to be undoubtedly the most important. However this statement must be qualified, as it is in fact always possible to blame human error even in the extreme case of bad aircraft design. In the case of the cargo hold closures on the first generation DC 10s, should we blame the mechanism or the man who designed it?

2. Furthermore, in view of the variety of possible causes, each of those involved, air traffic controllers, pilots, manufacturers, and the public authorities, all tend to try to put the 'responsibility' on the other or others; this gives rise to widely varying assessments of safety aspects which could be improved.

III - NEAR MISSES

23. Of those incidents which can turn into much more serious occurrences, near misses are particularly interesting.

First of all because in themselves they reveal many aspects of flight safety relating both to equipment (airborne and on the ground), flight procedures and personnel (pilots and controllers).

An analysis of near misses is also precisely what is called for in two of the motions for resolutions on which this report is based, by Mr de PASQUALE and Mr EPHREMIDIS.

Finally, this category of incident is more frequent in some countries of the European Community than others, and is a subject on which the public is given very little information.

24. Knowledge of near misses comes mainly from information passed on by pilots to air transport undertakings and/or the civil and military authorities. IATA is undoubtedly the most consistent source, collecting and analysing near misses through its members. ICAO does not deal with many of these incidents (as a state must first have carried out an enquiry into them) and only fairly recently, since 1980.

25. IATA classes the risk involved in near misses as follows:

- A. Grave risk
- B. Possible risk
- C. No risk
- D. Indeterminate risk

IATA lists 140 near misses in the Member States of the Community in 1982, broken down as follows: (1.10.82-30.9.83)

BELGIUM	5
DENMARK	4
GERMANY	40
GREECE	19
FRANCE	31
IRELAND	1
ITALY	13
LUXEMBOURG	0
NETHERLANDS	6
UNITED KINGDOM	<u>21</u>
	<u>140</u>

Germany heads the list, followed by France, the United Kingdom, Greece and Italy. Outside the European Community we note that there were 35 near misses in Spain and 2 in Portugal.

26. The trend over the last five years is particularly significant.

EEC COUNTRIES	1977	1978	1979	1980	1981
BELGIUM	14	9	4	5	2
DENMARK	4	4	3	1	1
GERMANY	82	70	60	56	51
GREECE	11	10	10	5	17
FRANCE	63	68	54	31	25
IRELAND	0	0	0	0	1
ITALY	15	14	10	12	18
LUXEMBOURG	0	0	0	0	0
NETHERLANDS	8	8	7	8	13
UNITED KINGDOM	35	39	36	29	32
TOTAL EEC	232	222	184	147	160
SPAIN	54	66	46	34	25
PORTUGAL	5	8	12	8	0

The general trend is downward in every country apart from Italy, where there is little change, and Greece. The figures for Germany, Belgium and Spain show particularly marked decreases.

27. The actual degree of risk varies widely from country to country, using the A, B, C and D categories mentioned in paragraph 25.

EEC COUNTRIES (1)	A	B	C	D
FRANCE	11	14	2	4
GERMANY	4	23	13	-
GREECE	4	11	4	-
ITALY	2	9	1	1
NETHERLANDS	1	4	1	-
UNITED KINGDOM	3	4	11	3
EEC TOTAL	25	65	32	8
=====				
SPAIN	15	18	0	2
PORTUGAL	-	1	-	1

Source: IATA 1982

In some countries, France and Spain in particular, there are especially high numbers of serious risks.

28. The type of aircraft involved in near misses, military, commercial, private and others, is also a consideration.

EEC COUNTRIES	Military aircraft	Civil aircraft	General Aviation	Others
FRANCE	4	18	8	1
GERMANY	15	2	16	7
GREECE	6	13	-	-
ITALY	6	2	4	1
NETHERLANDS	2	1	3	-
UNITED KINGDOM	9	8	2	2
EEC TOTAL	42	44	33	11
=====				
SPAIN	8	17	10	-
PORTUGAL	0	1	1	-

Source: IATA August 1982

(1) figures for other EEC countries not available

The most significant factor to emerge from the table is undoubtedly the involvement of military aircrafts in over 30% of near misses listed by IATA, to which we should also add the significant proportion of "others". The proportion is also much higher in Germany and Italy. This factor is all the more worth mentioning out as civil airspace is very restricted, as we shall be seeing later, and more near misses with commercial or general aviation aircraft flying in this airspace might have been expected.

There can be several causes of near misses, and we have broken them down by category and country, also for 1982.

	F	D	Gr	It	NL	UK	EEC TOTAL
error by civil air traffic controller	11	6	9	4	1	7	38
error by military air traffic controller		1				1	2
interference between instrument flight and visual flight(IFR/VFR)	5	13	1		3	1	23
error by civil pilot	6	1	4	1		2	14
error by military pilot		10	2	4	1	1	18
error by general aviation pilot	2	11		2		1	16
coordination military/civil air traffic	1	1		1	1	3	7
coordination civil/military air traffic			2			1	3
other causes and not specified	9	2	2	3		3	19

Source : IATA 1982

The most frequent causes seem to be errors by civil air traffic control, interference between visual flight and instrument flight, and errors by military pilots, general aviation pilots and civil aviation pilots.

From the nature of the information it has been impossible to make correlations between types of aircraft involved, which could have been very interesting.

Over and above these impressive and indeed disturbing figures, various conversations and the juxtaposition of certain statistical sources lead us to believe that the figure of 140 near misses over the Member States in the European Community in 1982 ought perhaps to be doubled or trebled, in view of the information in the next paragraph.

31. First of all, IATA only records incidents involving the airline companies which are IATA members; secondly, these figures only cover incidents which have been declared voluntarily by pilots, i.e. they are not part of any compulsory procedure. Incidents between general aviation aircraft or between general aviation and military aircraft, are not included. The differences can thus be considerable.
32. In fact, for 1982 IATA records 13 near misses in Italy while the Italian authorities, via the independent agency for flight assistance to general air traffic lists 52 near misses, 15 or so with unidentified aircraft. Comparisons between the figures produced in Germany by IATA and those of the Federal Air Traffic Control Agency (BFS) are also revealing :

	1977	1978	1979	1980	1981
IATA figures	82	70	60	56	51
BFS figures	156	139	107	50	43

Note the paradox that while the government figures for 1977 are twice those of IATA, in 1980 and 1981 they are actually lower. Similar examples are to be found in the other Member States. What is the explanation ? Is it simply a question of different statistical methods ? Is there an attempt to minimize certain incidents ? Which ones and why ?

Your rapporteur would have liked to give answers to these questions, but the only 'neutral' organization likely to provide this type of information, the EUROCONTROL Directorate General, did not provide the details I had requested in writing, believing that the questions in the questionnaire contained subjective elements.

Uncertainty is definitely undesirable in this sphere. Scrupulous recording of near misses and the publication of results (at national and Community level) are the only way to destroy the myths, which is so necessary, and to find remedies and thus reduce the extent of the problem.

33. It is already clear that safety in the air involves men, machines and procedures. Of course in a report of this nature it is impossible to make an exhaustive analysis of all the factors involved; your rapporteur has therefore chosen a number of facets to each main aspect, which seem to him the most relevant and sensitive as regards safety.

PART TWO : THE AVIATION SAFETY FACTORS CONSIDERED

I - AVIATION EQUIPMENT AND INFRASTRUCTURES

A. Aircraft

(a) Design and internal arrangement; passive safety in aircraft

34. As stated above, safety levels may be raised by reducing the number of dead or injured in accidents, thus limiting their consequences, by developing the idea of 'passive safety' in air transport (1).
35. The Committee on Transport recently considered this problem in the report drawn up by Mr JUNOT on safety measures in aircraft (2) in which it is stated that the causes of death and injury in survivable accidents might be divided into four categories :
- (a) fire and its consequences, i.e. burns or intoxication;
 - (b) difficulties in evacuating passengers;
 - (c) transformation of baggage or other objects in the passenger cabin into projectiles;
 - d) insufficient strength of equipment inside the passenger cabin (seats, seat belts, various other equipment).
36. Unfortunately these situations, especially fire, occur only too frequently; we would mention the 1973 accident to a VARIG (Brazil) aircraft which made a forced landing at Paris, the fire in the Saudi Arabian Airlines L-101 in 1980 and recently the fire in an Air Canada DC9 which killed 23 of the 41 passengers although the aircraft remained structurally intact (the pilot having miraculously managed to land).
37. Extensive research work carried out by the National Transportation Safety Board and the Federal Aviation Administration (FAA) in the United States, and by international organizations (IATA, ICAO) in Europe, have revealed that there is room for substantial improvement in present aircraft design.

(1) The term passive safety used in the automobile sector (as opposed to active safety, i.e. accident prevention) although unfamiliar in aviation, seems a good rendering of a requirement of aircraft design.

(2) Doc. 1-788/82, p. 14

38. On this point your rapporteur would emphasize his full support for the resolution adopted by the European Parliament on safety measures in aircraft (1), in particular paragraph 1 which calls for a review of safety standards with regard to :

- inflammability and toxicity of materials used for the fitting out of the inside of aircraft,
- design, construction and fixing of seats,
- the design and strength of seat belts,
- closing of overhead lockers,
- explicit instructions on the outside for all professional voluntary rescue workers concerning the mechanisms for opening doors and emergency exits,
- quantity and size of objects allowed in the passenger cabin.

(b) Maintenance of aircraft

- the general rules

39. The great complexity of aircraft makes the quality and frequency of maintenance vital to safety. Maintenance is such a complex and costly matter that airlines in Europe have formed groups : the ATLAS consortium comprising Air France, Alitalia, Iberia, Lufthansa and Sabena, while the KSSU Group comprises KLM, SAS, Swissair and UTA. These are the principal European groups handling maintenance for their members and outside customers (private carriers, business aviation). The wealth of experience accumulated by these groups guarantees the quality of their maintenance.

- the deficiencies

40. On consideration, maintenance seems to be a minor problem in the case of the European national airlines. The same cannot be said of a number of charter companies using old or inadequately maintained aircraft. Recent disasters have raised the question of whether the financial situation of certain European companies has caused them to reduce their maintenance spending (2). Such cases seem to be even more common outside Europe. This raises the problem of whether such aircraft should be allowed into Europe, as the adoption of especially strict rules in Europe, and standards

(1) OJ No. C 13/246, 17.1.83

(2) Le Figaro, 15.9.82 reporting on the accident to a DC 10 at Malaga in which 59 people died.

higher than those applied in other parts of the world might lead to deflections of trade towards other countries.

- the counterfeiting scandal

41. To conclude on the matter of maintenance, your rapporteur would mention a specific problem, the counterfeiting of aircraft and helicopter parts. In July 1983 the European Community approached the GATT in an attempt to stamp out this practice. In its complaint it states (1) 'Some of the more serious cases in which counterfeiting has been found to have compounded the risk of using sub-standard products include :

- 5.1 Counterfeit aircraft brakes manufactured from soft rather than hardened steel.
- 5.2 Counterfeit aircraft bolts which broke after installation on a new aircraft and where it was concluded after investigation that there existed a "clear and present danger of a disastrous crash caused by bogus bolts".
- 5.3 Counterfeit fire detection and control systems for aircraft engines.
- 5.4 Counterfeit helicopter parts which are believed to have been the cause of several accidents and have involved the helicopter company in litigation.'

If this information had not been the subject of an official Community statement and had not been checked with the Commission, your rapporteur would have treated it with the utmost caution as it seems so outrageous; I am having a file drawn up on this subject. Thorough investigations must be undertaken both as regards sanctions and measures taken.

(1) Printed in EUROPE/DOCUMENTS, special bulletin issued by Agence Europe No. 1269, 25 July 1983, p. 3

B. Air traffic control equipment

(a) General Considerations

42. The regulation of air traffic begins with a flight plan drawn up by the pilot. In flight the aircraft is in communication with air traffic controllers on the ground. Radio links are supplemented by radar surveillance, which is vital in airport approach zones (1). There is primary radar, the original form of electromagnetic detection, which shows bearing and distance from the transmitter on a screen (2) and secondary radar which requires the active participation of the aircraft by means of a transponder; according to the type of transponder - mode A (aircraft identification and position) or mode C (with height indication) secondary radar gives far more accurate information.

43. The superiority of secondary radar is more apparent than real, as it shows only aircraft equipped with transponders. We should also mention satellite radar (the Canadian MSAT system or the European PROSAT programme), which may hold the future for air traffic control.

(b) Radar cover in Europe

44. Before considering this point, we need to consider whether the quality of radar cover should be regarded as a safety factor. ICAO representatives consider the question to be misleading. Higher or lower quality radar systems could only affect the capacity of the airlines. As regards air traffic control, radar does allow smaller horizontal and vertical intervals between aircraft than does radio contact, and in the crowded airspace over Europe this is absolutely vital.

(1) This is true over Europe, but for example over parts of Africa radio contact alone is used and there is no radar cover at all

(2) 3-D radar does exist, which shows the height of the aircraft but, it being possible to determine the height of aircraft by other means, cost reasons limit its application to military systems

45. However, other information at our disposal leads us to believe that the variety of checks possible with radar, and especially secondary radar, added to other forms of identification, are an extra safety factor.
46. Radar cover in the central area of Europe would appear to be completely satisfactory. The Maastricht EUROCONTROL Centre is the most advanced in the world. The high technical quality of the installations should not however blind us to certain facts, such as the frequency of near misses in German airspace.

There is however more room for criticism in the more outlying regions of southern Europe. Within the European Community, there are weak points in Italy along the Adriatic coast and in much of the southern Tyrrhenian area (south of Naples, Sicily, Sardinia). However, in the course of visits to the Italian authorities, your rapporteur has been able to ascertain that progress is being made, in particular with the installation of an MRT (multi radar tracking) system. In Greece, the air traffic control system requires a great deal of modernization, for controlling aircraft both en route and at airport approaches. The EIB has already begun to help finance radar systems in Greece.

47. The radar cover over the Iberian peninsula should be mentioned. In the opinion which it drew up in 1982 on the enlargement of the European Community to include Spain and Portugal our committee had criticized their air traffic control (1).

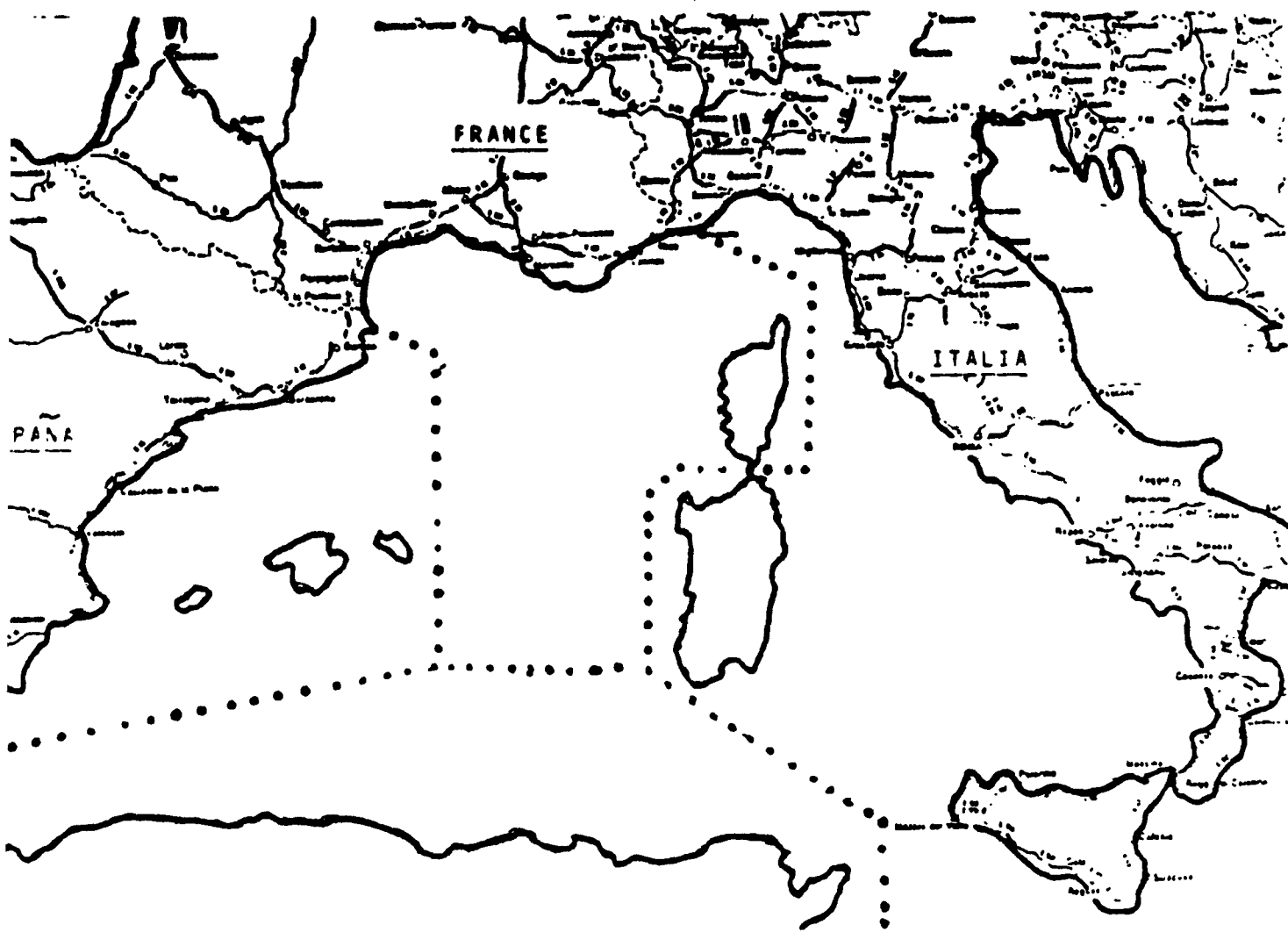
Your rapporteur, who also drew up that opinion, has found that the situation has improved considerably in this respect, particularly in Spain. An extensive programme, the SACTA plan, covering modernization of the installations up to 1987, will provide Spain in due course with one of the most modern and most complete radar covers.

In terms of capital investment the sums involved increased almost sixfold between 1981 and 1983.

The SACTA plan is certainly very ambitious and the determination of its promoters is remarkable, but it requires a considerable financial effort which will intensify over the next few years. We must therefore hope that the necessary resources will be allocated to this plan and that it can benefit from EIB loans.

(1) Doc. T-658/82

48. We have made reference above to the compartmentalization of European air-space. That part located above the Mediterranean, between Italy and Spain is divided in a somewhat irrational manner, as the following diagram shows :



LIMITS OF FRENCH, SPANISH AND ITALIAN AIRSPACE

One can understand that this situation between France, Italy and Spain has arisen for historical reasons. Nevertheless, without calling in question the territorial sovereignty of each of these three countries, greater coherence of the air traffic control in this area and increased safety could be achieved.

49. Mention must be made of the lack of compatibility between the various systems in use. For example, details of aircraft are passed from one regional control centre (RCC) to another by telephone, possibly confirmed by telex. In certain areas of dense traffic this procedure may seem elementary and even subject to breakdown. However, automatic links are to be set up between the French COTRA system and Maastricht; the only computer-to-computer link being between London RCC and the Maastricht centre.

The Air Navigation Planning Group under the aegis of the ECAC (European

Civil Aviation Conference) is currently conducting long-term planning for a general link-up.

(c) Fitting of transponders in aircraft

50. Even in countries or areas where secondary radar is installed, it is not completely effective unless all aircraft are fitted with transponders. This is not the case either with military aircraft or many light aircraft.

Leaving aside the clearly insoluble problem of military aircraft, the rules governing the types of aircraft which have to be fitted with transponders in the various types of airspace are laid down nationally and vary widely from one country to the other. In the USA, the FAA rules require all aircraft flying above 3,800 m to be fitted with mode C transponders complying with strict technical standards.

51. In Europe, the general use of transponders under identical conditions in all countries of the European Community as an additional security measure should be made compulsory, especially for general aviation. On the other hand, it would also be desirable to require all aircraft to carry mode A or mode C transponders, but this would be difficult to implement as can be seen from the FAA's failure in its attempt to lower the threshold for the compulsory fitting of transponders from 3,800 to 3,000 m.

(d) The industrial stake in air traffic control equipment

52. Air traffic control equipment in general represents a huge industrial market and a challenge for Europe. European manufacturers are present in force - for example SELENIA (Italy) and THOMSON CSF (France) - producing very efficient and competitive equipment.

Without embarking on European protectionism it would be desirable as far as possible to use systems designed in the Member States of the European Community. Apart from the benefits to European industry and the strengthening of their competitive position, this would represent progress towards harmonization of air traffic control equipment.

C. Airports and airways

(a) General problems

53. As we have seen, about 75% of accidents and incidents occur on approach or landing. Safety conditions at airports therefore require close attention.

54. Until last year (1) IFALPA (International Federation of Airline Pilots Associations) produced a list of airports classified by degree of risk, taking into account their geographical location, the quality of ground equipment and the efficiency of control systems.

This list changed noticeably from year to year. At different times it included European airports such as Corfu, Athens, and Rhodes (in Greece), Bordeaux, Lille, Nantes (where fire-fighting facilities were inadequate) and Ajaccio in France, and Rimini and Palermo in Italy. This list is by no means exhaustive.

(b) Airport equipment (2)

55. Landing guidance systems, of which ILS (Instrument Landing System) is the most familiar, are fitted primarily to airports experiencing bad climatic conditions, but tend to be installed in all airports above a certain size. Some airports in southern Europe, where bad weather is normally of short duration and infrequent, give priority to other forms of investment. The mere presence of these systems is not enough : they must be kept in perfect operating condition by regular calibration.

56. There is a similar problem with runway radar. It gives a display of all aircraft or any other moving object on the runways in all weathers (fog, and at night) to prevent any collisions on the ground (3). Mention must be made here of the accident in fog on 7 December 1983 at Madrid airport. Even if there are other factors than the weather to explain this catastrophe, one cannot help but think that runway radar could perhaps have prevented the collision of the two aircraft. It also has to be acknowledged that Madrid only has 40 hours of fog a year.

57. The problem of maintenance of airport installations and equipment, in particular lights, has to be mentioned. These sometimes are inadequate, although this may seem surprising when safety is at stake.

(1) From 1983 onwards, apparently as a result of an agreement between the International Civil Airports Association and IFALPA, the latter no longer publishes this list.

(2) Other than approach radar.

(3) Roissy and Orly airports are equipped with CORAIL radar of this type.

(c) Airport rescue and emergency services

58. The quality and size of services and equipment can reduce the number of dead and injured in air disasters and have to be regarded as a further component of passive safety in air transport. Not all airports are similarly equipped; this can be confirmed by consulting the IFALPA blacklist mentioned in point 54.

Safety levels could be raised still further by setting European standards higher than the ICAO standards.

59. While ground rescue services are generally satisfactory, and a watch must be kept on this, airports located by the sea frequently lack facilities. Some airports - Rome and Naples have been mentioned - are said to have inshore rescue craft only. This situation should be checked and remedied if necessary.

(d) Specific problems

60. The location of some airports involves specific safety hazards such as bird strike and ingestion. On 18 February 1978 for example at Lyon-Satolas, a flock of birds hit the cockpit of a Boeing 747 during take-off, which was then aborted; the aircraft overran the end of the runway by 100 metres; the same thing happened to a DC 9 on 18 January 1978 at Hamburg. More seriously, on 8 July 1980 an Airbus leaving Lyon-Satolas airport ingested a large bird starting a fire, but the aircraft managed to land safely, and in October 1982 there was an accident to a Russian aircraft after ingesting crows. In Italy, this problem affects Naples airport in particular.

61. There are ways to counter this problem, but they are not always applied and not always effective. Airports could be warned of seasonal migrations.

D. Weather problems

62. As we have seen in the ICAO classification of causes of incidents and accidents, weather problems substantially affect safety and can bring momentary loss of control during flight or crashes on landing. The most frequent hazards in Europe are icing (16% of the cases quoted), fog (13%), wind in very unfavourable conditions (13%), and snow (9%).

63. The quality of weather reports would seem to be adequate, as the ICAO figures show a 75% success rate, and commercial aircraft are increasingly being equipped with systems for obtaining their own weather information. However, pilots sometimes criticize the quality of the weather information provided by air traffic controllers. The latter do in fact read out the weather bulletins which they themselves receive every half hour. A controller who has before him a weather bulletin reporting fine weather at the airport when he can see a storm approaching is not supposed to say anything. He is there to broadcast the met. report. If he says what he can see he is then responsible. A controller is always acting on his own responsibility if he reports on the situation at the time.

64. There are other phenomena which are not encountered so frequently in Europe but which by their nature are always dangerous:

- windshear: this arises when there is a break in the horizontal component of the wind, and big jets are particularly sensitive to it;
- clear air turbulence: this can be very dangerous on landing or takeoff and is undetectable by traditional methods.

These meteorological phenomena may be detected more or less effectively by equipment such as Doppler pulse radar or a laser velocimeter. Aircraft like the Boeing 747 have this equipment; the experts should be consulted to ascertain whether general installation of this equipment is necessary.

Before leaving the subject of weather-related phenomena, we should also mention optical illusions which can occur in certain places and in certain light conditions.

E. Radio interference

65. The quality of radio communications affects the safe and efficient operation of aircraft: navigational checks, exchanges of information, radio navigational and landing aids.

66. For a number of years there has been vast growth in interference with air to ground radio communication, which seems to be due to the proliferation of local radio stations, private television stations, amateur radio operators, CB radio and certain industrial equipment.

67. This is more than just a nuisance and a reduction in the quality of communications; apparently it also involves far more serious disruption preventing the use of certain navigational instruments such as ILS mentioned above, VOR (very high frequency omni range), and represents a genuine hazard, as can be seen from various statements by pilots reported in the Italian press (especially in the Milan, Bologna and Rome areas).

68. Remedies to this situation (ranging from the fitting of suppressors to reducing the power of equipment) must initially involve legislation (although Italy does have a detailed law on the matter) in cooperation with the CEPT (European Conference of Postal and Telecommunications Administrations), and then enforcement, in view of the dangers represented by such interference.

II - AVIATION RULES AND PROCEDURES

69. ICAO plays a vital role in ensuring the safety, regularity and efficiency of international civil aviation. While it works to give the rules uniformity and high standards, its scope is limited by the fact that it can only propose recommendations which the States are at liberty to apply or ignore, which leads to a disjointed situation as in Western Europe.

A. Air traffic control in Europe

70. The speed of aircraft makes for an absurd situation in Europe, and all the more so in the European Community. There are no less than 17 regional control centres, naturally using different technical systems. In the United States, by way of comparison, with four times the area to cover, there are only 20 centres and the number will soon be reduced to 12.

71. The consequences of this situation are felt at several levels. Financially, as a 1978 study showed, the average cost of air traffic control services for 100 hours of flight was \$44 when provided by national control centres and \$32 by centralized control at European level (which would enable fares to be reduced). The unified system also offers efficiency (ability to handle more traffic) and increased safety. Uniform procedures and practices, to take only the most obvious case, could only facilitate air traffic, for both pilots and controllers.

72. The European Parliament's Committee on Transport has advocated the principle and expansion of Eurocontrol vigorously enough to make further argument on this point redundant here; it will confine itself to stating that unified air traffic control would be an additional safety factor for air traffic in Europe.

B. Separation of civil and military airspace

(a) General nature of the problem

73. Airspace is in fact mainly military, civil air space consisting of airways along which traffic is channelled. Putting it mildly, military use of airspace is not very economic. In all European Community countries, civil and military air traffic control are separate (1).

74. The first problem raised by the division of responsibilities between military and civil authorities relates to the capacity and handling of traffic. Europe has far from the best possible route network. It is generally agreed that if it had, there could be a 15% reduction in distances actually covered, cutting the cost of air transport. The most frequent criticism of the military authorities voiced by the airlines is the wide variation in ground and airborne equipment, and the lack of flexibility to free reserved airspace at short notice.

75. In some Community countries there is active coordination via bodies such as the Délégation à l'espace aérien (DEA) in France, which enables valuable cooperation between civil and military authorities to take place. Another point in favour of Eurocontrol is that in its centres the civil and military controllers work side by side (even if civil and military control are separate), which at least allows better mutual comprehension.

76. Reference should also be made to the problems which might arise where civil and military traffic use the same airport. It would appear that such a situation is likely to lead to accidents and/or incidents; in this connection your rapporteur would refer to a very recent incident that occurred on 18 January 1984 when, as it landed at Toulon/Hyères Airport, an Air Inter Mercury with some one hundred passengers on board almost collided with an Air Force Etendard trainer which was taxiing on the runway.

(1) In fact, since 1 January 1984 Italy has separate civil air traffic control; in the past all traffic had been handled by the military.

(b) The dangers of separating civil and military air traffic control

77. In the analysis of near misses quoted above we noted the large proportion of incidents involving military aircraft in some countries : 46% in Italy, 43% in the United Kingdom and 38% in Germany (but with a very high proportion of unidentified aircraft which are quite often military). In many countries the problem seems to be regarded as falling under military security, if we are to go by the blackout encountered in our search for detailed information.

78. The problem seems to be most acute in Germany and Italy, but in the latter country it seems to give rise to wider public debate.

There was another incident, on 26 September last, when, according to the pilot, two American F-111 fighter bombers passed a few metres away from an ALISARDA DC 9 with 84 people on board over Catania; on 23 October an ATI DC 9 taking off from Naples had a near-miss with two German F-14's on NATO manoeuvres. On 15 May 1982 a DC 9 on the Milan-Palermo run experienced a particularly serious incident.

79. This of course brings us to the explosion in flight of an ITAVIA DC 9 on 27 June 1980 mentioned in Mr DE PASQUALE's motion for a resolution. Suspicion as to the link between this disaster and military exercises remain (1). During the preparation of this document, the Ministry of Justice and the Ministry of Transport were officially asked about the conclusions reached by the investigation. The replies given on 18 and 24 November 1983 by the ministries concerned make reference to the enquiry in progress being sub judice. Your rapporteur would like to take this opportunity to make an official protest at the fact that more than three years after the destruction of an aircraft the causes have still not been made known, and one has to resort to speculation, which is certainly more dangerous as regards public opinion than the publication of the results of the enquiry.

80. The reason for these incidents and their frequency seems to lie in the especially intense military activity in the Mediterranean basin, particularly that based on aircraft carriers. The triangle between Sardinia, Sicily and Naples seems to be an especially sensitive area.

81. However, it cannot be claimed that there is a total lack of cooperation, as each exercise is preceded by consultation procedures involving the airlines affected and the military and civilian authorities.

(1) In a recent enquiry the deputy public prosecutor of Palermo acknowledged that the air corridor between Ponza and Palermo could no longer be considered safe.

82. In explanation of the many near misses, civil pilots often blame the reckless attitude of some military pilots flying supersonic aircraft, hence much faster than civil aircraft, carrying very high performance radar which they seem to think exempt them from some of the rules of air navigation.

83. The problem needs to be studied carefully to determine its exact size in the Community countries; specific ways of cutting down the frequency of these appalling occurrences should then be considered.

C. Protection of civil aviation

84. The shooting down of the Korean Airlines Boeing 747 has shown how safety in the air can be deliberately jeopardized in peacetime.

Without dwelling on the tragic circumstances of this disaster, the loss of human life involved and the moral and political judgements an act of this nature deserves, it is vital that this kind of disaster does not recur, especially during a period of international tension.

85. At its meetings of 15 and 16 September 1983, ICAO adopted a resolution (1) deciding to open an investigation into the destruction of the Boeing 747 and also decided to give the highest priority to consideration of the question of an amendment to the International Civil Aviation Convention embodying a renunciation of the use of force against civil aircraft, to be considered and adopted by the end of the first quarter of 1984.

These actions deserve our encouragement, and the Member States of the European Community should jointly support the adoption of a text with genuine impact.

(1) See Annex III

III - HUMAN FACTORS

A. The general problem

86. According to an IATA study carried out in 1975, which seems to be confirmed by all parties involved in air transport, 70% of accidents involve human error. There are several aspects to this problem. Is not the human factor frequently used to cover up for other factors (especially those involving equipment procedures)? Do we have to regard human error as inevitable to cover up mistakes by political and economic systems (as in the case of the destruction of the Korean Airlines 747)?

87. Your rapporteur believes that a large proportion of accidents and incidents may be blamed upon human failure, but that this fact should not serve as a perpetual pretext for doing nothing to solve specific problems.

88. On the other hand there would seem to be some reluctance to accept explanations which are too simple or too human for 'advanced' societies (1) (alcoholism, drug use, etc.,) bloody-mindedness arising from disputes, and ordinary fatigue. Many more accidents than one might think are due to psychological phenomena. However, in view of the vastness of the subject we shall confine ourselves to some specific aspects.

B. The undesired effects of automation

89. While major technical progress has brought high levels of safety, it has also produced negative and even undesired side-effects. For example, many accidents or incidents occur during the transition from autopilot to manual control. The more automation built into an aircraft, the more the crew's monitoring role becomes primarily one of vigilance, which at one time or another, and particularly on very long flights, tends to flag. Flight crew boredom is inevitable (2).

(1) The IATA 'Airline Guide to human factors' deals with these problems, but what is the size of its circulation?

(2) We reach the psychologically absurd situation where an automatic system is 100% reliable and the crew has to be ready to react at a second's notice.

90. The psychological framework of crews then becomes vital, and technical refinement must be accompanied by psychological research. Airlines such as ALITALIA are instilling unusual concepts into their pilots, of 'missions to be accomplished' and 'responsibility for human lives' rather than piloting aircraft, in order to sustain and increase motivation. From one point of view these laudable schemes by the airline are rather disturbing, if they are regarded as essential to safety, and tend to show the fallibility of pilots. It seems in fact that the major airlines in Europe are very aware of these problems and apply very positive policies for the safety of their passengers.

C. Flight crew size

91. Can new generation aircraft (Boeing 747 and 757, Airbus A 310) be operated completely safely by a crew of two pilots only? In this dispute between the management of certain airlines and various professional organizations your rapporteur has been given cogent arguments by both sides. One has to recognize the conflict of interest between professional solidarity and the desire to cut air crew costs.

92. It is therefore very difficult to take a black-and-white view of the problem. Where the safety of hundreds of passengers is involved, decisions must allow for the fact that human behaviour is still the decisive factor in hazardous situations(1). It would therefore seem that where there is doubt, as there is in our case, one should give priority, even at a financial cost, to the maximum degree of safety provided by three pilots in the cockpit.

D. Pilot training

93. In Western countries, modern airline pilot training is rigorous. On the other hand, the granting of especially VFR pilots' licences sometimes seems, perhaps in a restricted number of cases, to be perfunctory. The USA is the outstanding case, where it is still possible to obtain a professional pilot's licence with a relatively low number of flying hours on very basic aircraft.(2)

(1) Space ventures using the most refined equipment have shown how far human intervention is still decisive.

(2) This explains the reluctance of many countries to recognize these licences. See in particular the article on airline pilot training in INTERAVIA No. 12, December 1982.

94. For a relatively modest sum the advantages of a holiday and pilot training course may be combined with a licence (which some Member States of the Community will recognize without difficulty) at the age of 17, when a person is not even allowed to drive a car in Europe. We should therefore consider tightening up the rules.

E. Pilot recruitment

95. We have expressed fears about the maintenance of aircraft by certain small companies or charter companies which are in economic difficulties or simply unscrupulous. The same problem arises in connection with pilot recruitment. It is necessary to maintain a very high standard of recruitment and of qualifications for all companies, which does not always seem to be the case. Sometimes an air disaster has to occur to show that the flying staff employed, while complying with ICAO standards, would not have been employed by major companies. This is not a case of raising doubts about the small airline companies, most of which are completely honest, but recognizing that a very small minority of them may have shortcomings.

F. Air traffic controller training

96. Some European countries seem to be short of properly qualified air traffic controllers (1). Furthermore, centres having highly skilled staff have also to cope with problems of continuous training with the constant progress being made in equipment and techniques. This constitutes further evidence of the need for unified management of air traffic control which would also provide continuous training to uniform standards for all Member States of the European Community.

G. Use of a common language

97. English is the universal language of communication in international commercial aviation; although for reasons of linguistic legitimacy this might sometimes be regretted, safety makes it imperative that a single language be used.

98. A knowledge of English is therefore a vital and obvious requirement for pilots and controllers. What is forgotten is that this knowledge is sometimes limited to purely technical phraseology, which does not matter in normal circumstances but can be disastrous in unusual situations.

99. Incidents or accidents listed under 'misunderstanding of instructions' or 'incorrect information passed on' (2), may be ascribed to inadequate linguistic attainment.

(1) ~~Whether or not~~ Members of the European Community

(2) See the information in the ICAO ADREP data bank

100. The solution would seem to be very simple, but we have to be very cautious as to the actual scope for verification and above all as regards the varying assessments of the problem.

H. Impressions of safety

101. Although we are talking here about impressions rather than actual safety, your rapporteur does not wish to ignore the psychological aspect for air passengers. Although their immediate reaction is to deny fear of flying, surveys have shown that many of them still regard it as an ordeal and, despite public relations schemes, the airlines underestimate the problem.

102. Little attention is paid to conditions while passengers are waiting (before departure), such as the absence of definite information in the event of delays, and the lowering for obvious financial reasons of standards of passenger comfort in flight.

The airlines' attitude is all the more incomprehensible as it is jeopardizing the long-term future of air transport.

PART THREE : ACTION TO BE TAKEN BY THE EUROPEAN COMMUNITY

103. As a major world air transport user, but also as an aeronautical equipment manufacturer, the European Community must develop a comprehensive and vigorous policy towards the safety of air transport.

104. The various aspects of this policy have been covered in this report. It is now the responsibility of the Commission to formalize them and draw up the corresponding action programme in its second memorandum on air transport in Europe.

It would be unacceptable for the Commission to omit air transport safety if it wants to develop an air transport policy, unless it wishes to limit it to a fares policy, the short-term economic aims of which are obviously less ambitious.

105. The European Community should certainly not adopt standards and procedures which would isolate it and penalize it financially, but should develop a general concept of safety in accordance with its high safety standards.

106. This policy must also comprise an industrial aspect, promoting :

- 'passive safety' in European aircraft construction;
- European-designed air traffic control equipment and its use by the Member States.

107. To forestall the traditional argument that Community action is impossible in this area because of the international nature of civil aviation, this problem must be clearly recognized in the discussions.

108. Currently, as regards the 'passive safety' of aircraft, it is only in the USA that work is being done by the aircraft companies in conjunction with the FAA (Federal Aviation Administration), carrying out research and laying down standards which will be adopted by the intergovernmental organizations. Europe has its own leading aeronautical industry with AIRBUS Industries and its involvement in drawing up safety regulations is not only politically necessary but is a growth factor for technical progress in this area.

109. As regards air traffic control equipment, European equipment is simply not being promoted and there is no Community action designed to encourage industrial cooperation or allow a Community preference.

110. Financially it is vital that the European Community, through the Committee on Transport Infrastructure, should be able to take part in the financing of air traffic control or airport installations designed to improve air transport safety.

Of the most urgent and specific measures, the following must be taken into account.

111. The Community as such must first of all have observer status at ICAO on the same footing as the professional associations, having regard to the vital interests it represents, before assuming a status more in keeping with its role.

112. Uniformity of air navigation standards at European level through the coordination at Community level of 'differences' regarding the provisions of and annexes to the Chicago Convention, as the European Parliament stated in its resolution of 16 December 1982, should be one of the results of this involvement. The European Community must take a common attitude on the matter, as differences on matters of substance are not fundamental.

113. Improved aircraft accident investigations and data banks. The directive of 16 December 1980 (80/1266/EEC) initiated cooperation on aircraft accident investigations. This was a first step which needs to be consolidated by a comprehensive information system covering incidents and accidents occurring over the territory of the European Community or involving aircraft of undertakings in the European Community.

If it is to represent genuine progress, the system should :

- encompass all incidents and accidents by voluntary and compulsory reports, the former providing information on human factors and the latter on equipment (1);
- have access to all information held by every Member State and air transport undertakings in the European Community regarding incidents and accidents between civil and military aircraft.

114. Finally, the European Community must seek ways to help improve the coordination of air traffic control, exploring all possible avenues and in particular the reactivation of EUROCONTROL by extending it to cover all Member States and increasing its powers to return this organization to its original role and put an end to a situation which is technically, economically and politically absurd.

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The rapporteur is aware that the breadth of the subject and the rules on the maximum number of pages allowed for the explanatory statement have meant that many aspects which should have been treated at length have been dealt with briefly and expresses the hope that they will form the subject of separate reports during the next parliamentary term.

The rapporteur also wishes to thank at this time all the individuals, experts, representatives of airline companies and of pilot and air traffic control associations and those from the ministries of various countries, for the assistance they have given in the compilation of this report.

(1) As expressly requested by ICAO

MOIION FOR A RESOLUTION - Doc. 1-364/82

tabled by Mr DE PASQUALE, Mr CAROSSINO, Mr VITALE, Mr PAPAPIETRO,
Mr BONACCINI, Mr CARDIA, Mr SEGRE and Mr CERAVOLO

pursuant to Rule 47 of the Rules of Procedure

on the safety of air transport in the zone between the islands of Ponza
and Ustica

The European Parliament,

- A - Deeply concerned by the frequent reports of 'incidents' and interference in the corridors reserved for civil air traffic on the route to Palermo in the vicinity of the island of Ustica,
- B - Alarmed by the coincidence between such 'incidents' and the NATC military exercises in the region,
- C - Recalling with dismay the air disaster in which 81 passengers died and which occurred in the same zone two years ago through an explosion the causes of which have not yet been established,
- D - Convinced of the need to guarantee European citizens the highest possible level of safety in air transport,

1. Requests the Commission and the Council to do their utmost to ensure cooperation and assistance with the inquiries into the accidents which have occurred in the airspace between the islands of Ponza and Ustica, as laid down in the Council Directive of 16 December 1980, and to inform the European Parliament of the results thereof;
2. Recalls the list of priorities in the air transport sector adopted by the Council in June 1978, which provides for search, rescue and salvage operations and inquiries in the event of air crashes, and asks what measures they are arranging to adopt actually to give effect to those priorities;
3. Reaffirms the objective of the creation of a European airspace as requested by the European Parliament several times and proposed by the Commission in its 1975 action programme and strongly urges the Council to implement it as soon as possible;

4. Declares that the safety of air transport must be regarded as a central issue in Community transport policy and considers therefore that there can be no delay in drawing up measures to guarantee it, having particular regard to the problem of respect for the airspace reserved for civil aviation;
5. Instructs its President to forward this resolution to the Council and Commission of the European Communities and to the Member States of the European Community.

MOTION FOR A RESOLUTION

Doc. 1-21/83

tabled by Mr MOORHOUSE, Mr SEEFELD, Mr JANSSEN van RAAY and Mr ALBERS
pursuant to Rule 47 of the Rules of Procedure

on Community accession to the EUROCONTROL Convention

The European Parliament,

- A. having regard to the International Convention of 13 December 1960 on Cooperation for the Safety of Air Navigation (EUROCONTROL Convention) and the fact that it has been signed by seven Member States,
- B. having regard to previous resolutions on the improvement of the operation and control of air traffic (Doc. 49/78 and Doc. 106/79), but more particularly with regard to the latest reports of the Committee on Transport (Doc. 1-274/80 and Doc. 1-24/82),
- C. whereas the signatories of the EUROCONTROL Convention have repeatedly ignored the aforementioned resolutions and reports of the European Parliament,
 1. Draws the attention of the Commission to the need to simplify the regulation of air transport in the European Communities and reduce costs;
 2. Calls upon the Commission, the Council and the Governments of the Member States to negotiate accession to, to ratify and to enforce the EUROCONTROL Convention so as to permit the Community to coordinate air traffic control activities more effectively;
 3. Calls upon each of the signatories to the EUROCONTROL Convention to play a full and effective part in the activities of EUROCONTROL;
 4. Calls upon the signatories to the EUROCONTROL Convention to revoke the limitations upon EUROCONTROL's activities and powers imposed in 1982;
 5. Calls upon the Member States that have not already signed and ratified the EUROCONTROL Convention to do so as soon as possible;
 6. Instructs its President to forward this resolution to the Council, the Commission, the Governments of the Member States and the EUROCONTROL Organization.

MOTION FOR A RESOLUTION - Doc. 1-674/83

tabled by Mr ANTONIOZZI

pursuant to Rule 47 of the Rules of Procedure

on the brutal shooting down of a Korean airliner by the Soviet airforce

The European Parliament,

- A. deeply and sadly shocked at the senseless action of the Soviet airforce which deliberately attacked, struck and destroyed while in the air a Korean civil aircraft killing all 269 persons on board in the tragic event,
 - B. considers unacceptable the violent and inhuman procedure that led to this disaster as the consequence of an arrogant and blind political and military attitude based on violence which is peculiar to regimes devoid of liberty and democracy,
 - C. considers this unqualifiable event to be an act of provocation politically inconsistent with hopes for peace and normal relations between the peoples which the democratic countries of the West are seeking to foster through numerous initiatives,
 - D. concerned at the increasing number of uncontrollable dangers which may be brought about by the automatic initiation of certain military procedures,
1. Proposes a detailed investigation of the regulations governing international civil aviation procedures in order to prevent the recurrence of similar disasters;
 2. Calls on the Governments of the Member States of the European Community to obtain accurate information and politically viable and detailed explanations on the whole sad and brutal event;
 3. Instructs its President to forward this resolution to the European Council, the Council of Ministers, the Foreign Ministers meeting in political cooperation and the Commission.

ION FOR A RESOLUTION - Doc. 1-734/83

led by Mr SEEFELD, Mr GLINNE and Mr KLINKENBORG
behalf of the Socialist Group

suant to Rule 47 of the Rules of Procedure

measures following the shooting-down of a South Korean airliner

European Parliament,

shocked at the totally unjustifiable shooting-down of a South Korean
airliner by the Soviet Union,

noting also the many 'air misses' which are caused time and again by
uncoordinated military and civilian air traffic control,

anxious to avoid such dangers for passenger and crew in future,

Demands the stepping-up of measures to coordinate the safety of air traffic
between all states;

Calls for a review of whether the guidelines of the relevant international
organizations, such as the ICAO, are still up-to-date;

Wishes to see better coordination of the safety measures in civilian and
military air traffic;

Calls for the drawing-up by the United Nations of a convention on the
protection of civilian air traffic;

Requests the Commission, the Council and the Foreign Ministers meeting
in political cooperation to take action in this direction and to formulate
introductory proposals;

Instructs its President to forward this resolution to the Council, the
Commission and the Foreign Ministers meeting in political cooperation.

MOTION FOR A RESOLUTION - Doc. 1-973/83

tabled by Mr EPHREMIDIS, Mr ADAMOU and Mr ALAVANOS
pursuant to Rule 47 of the Rules of Procedure

on the safety of civilian flights during military exercises

The European Parliament,

- A. whereas, during the NATO 'Display Determination' exercise in the Mediterranean at the beginning of October, American warplanes repeatedly violated Greek national airspace and paralysed or seriously disrupted the Civil Aviation communications system of control centres, thus greatly hazarding the safety of civilian flights,
 - B. having regard to the repeated protests by the Greek Government, which currently holds the Presidency of the EEC, and the inadequate responses of the US Government,
 - C. whereas the aforesaid American violations constituted a danger to civilian aircraft belonging to companies in all the EEC Member States using the air corridors over the Aegean at the time,
 - D. having already shown its interest in measures to ensure the safety of civilian flights, particularly since the downing of the South Korean passenger jumbo-jet, with regard to which no one can with certainty exclude the possibility that it was being used for military purposes,
1. Protests to the US authorities at the fact that, a few weeks after the shooting-down of the South Korean jumbo-jet, they placed at risk the safety of civilian flights by European and other airlines along the international air corridors over the Aegean coming under the Athens FIR;
 2. Calls on the Member States to put forward proposals in the ICAO and other competent bodies for the safety of civilian flights during military exercises;
 3. Instructs its President to forward this resolution to the Commission, the Council, the Governments of Member States, the US Government and the ICAO.

QUESTIONNAIRE
on air traffic safety

GENERAL QUESTIONS

1. With a view to improving air traffic safety in Europe, to which actions to you attach priority in the following areas:
 - (a) material and equipment (including meteorological equipment) on the ground and on board aircraft?
 - (b) air traffic control and procedure?
 - (c) human factors: training of pilots and air traffic controllers, psychological conditions in flight, number of pilots in the cockpit, terminology employed?
2. What in your opinion might be the contributions of the European Parliament to the promotion of these actions?

SPECIFIC QUESTIONS

1. What are the principle factors in accidents or incidents which jeopardise air traffic safety?
2. What data do you possess concerning near-misses in European air space (number, circumstances) which have come to your knowledge?
3. Could you provide examples of incidents in the air or dangerous situations not deemed near-misses but which might, through an accumulation of different factors, jeopardise air traffic safety?
4. To what extent do you consider that the cohabitation of civil and military air traffic can affect air safety (please illustrate your replies if possible with specific examples)?
5. How much importance do you attach in general terms to meteorological conditions and the exactitude of information communicated to pilots?
6. Do you consider that the introduction and development of advanced technology, leading to an ever increasing degree of automation of aircraft, has undesirable side-effects, if so, what effects?

RESOLUTIONS ADOPTED BY
THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)
COUNCIL AT ITS EXTRAORDINARY SITTING OF
15 AND 16 SEPTEMBER 1983

THE COUNCIL

HAVING CONSIDERED the fact that a Korean Air Lines civil aircraft was destroyed on September 1, 1983 by Soviet military aircraft,

EXPRESSING its deepest sympathy with the families bereaved in this tragic incident,

URGING the Soviet Union to assist the bereaved families to visit the site of the incident and to return the bodies of the victims and their belongings promptly,

DEEPLY DEPLORING the destruction of an aircraft in commercial international service resulting in the loss of 269 innocent lives,

RECOGNIZING that such use of armed force against international civil aviation is incompatible with the norms governing international behaviour and elementary considerations of humanity and with the rules, Standards and Recommended Practices enshrined in the Chicago Convention and its Annexes and invokes generally recognized legal consequences,

REAFFIRMING the principle that States, when intercepting civil aircraft, should not use weapons against them,

CONCERNED that the Soviet Union has not so far acknowledged the paramount importance of the safety and lives of passengers and crew when dealing with civil aircraft intercepted in or near its territorial airspace,

EMPHASIZING that this action constitutes a grave threat to the safety of international civil aviation which makes clear the urgency of undertaking an immediate and full investigation of the said action and the need for further improvement of procedures relating to the interception of civil aircraft, with a view to ensuring that such a tragic incident does not recur, -

DIRECTS the Secretary General to institute an investigation to determine the facts and technical aspects relating to the flight and destruction of the aircraft and to provide an interim report to the Council within 30 days of the adoption of this Resolution and a complete report during the 110th Session of the Council,

URGES all parties to co-operate fully in the investigation,

FURTHER DIRECTS the Secretary General to urgently report to the Council on the status of adherence to, and implementation of, the provisions of the Chicago Convention, its Annexes and other related documents as they bear upon this incident,

DIRECTS the Air Navigation Commission urgently:

- (a) to review the provisions of the Convention, its Annexes and other related documents and consider possible amendments to prevent a recurrence of such a tragic incident;
- (b) to examine ways to improve the co-ordination of communication systems between military and civil aircraft and air traffic control services and to improve procedures in cases involving the identification and interception of civil aircraft;

INSTRUCTS the President of the Council to report this decision to the 24th Session of the Assembly of the Organization for the Assembly to take the appropriate action.

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THE COUNCIL,

CONVINCED of the need to improve the existing international rules or to adopt new rules aimed at ensuring the safety of civil aircraft;

HAVING noted C-WP/7695 submitted by France on 15 September 1983;

1.- DECIDES to instruct the Air Navigation Commission to undertake without delay the following technical tasks:

- a) - review of the conditions of implementation of the Standards contained in paragraph 2.13 of Annex 11 to the Chicago Convention and proposals for possible recommendations concerning the co-ordination between military authorities and air traffic services;
- b) - review of all the provisions contained in Attachment A to Annex 2 to the Chicago Convention concerning the interception of civil aircraft with a view to examining the feasibility of their incorporation as Standards in the body of Annex 2, particularly as far as paragraph 2.3 f) of this Attachment is concerned which recommends the frequency 121.5 MHz as the one with which interceptor aircraft should be equipped;
- c) - review of the conditions of implementation of the Standards contained in paragraph 3.3.1.1.2.1 d) of Annex 2 to the Chicago Convention and proposals for possible recommendations to be made on the basis of this text, particularly as regards the submission of flight plans when civil aircraft may need to fly over areas close to zones or routes to which reference is made in that paragraph;
- d) - study of new provisions which could be included in Attachment A to Annex 2 or in any other relevant text and which would make it possible to achieve the harmonization of procedures for the interception of civil aircraft as well as introduce further precautions for the conduct of interceptions.

2.- ASKS all Contracting States to forward to the Secretariat as soon as possible any comments they may have on paragraph 1 above.

- 3.- REQUESTS the Secretary General to give the Air Navigation Commission any assistance it may require.
- 4.- REQUESTS the Air Navigation Commission to submit to the Council a detailed report on the tasks entrusted to it by this Resolution as soon as possible and, in any case, before 16 December 1983.

