

## Performance Review Commission



# Legal Constraints to Non-punitive ATM Safety Occurrence Reporting in Europe

# Report

Outcome of a Survey conducted by  
the Performance Review Unit in 2001-2002

December 2002

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PERFORMANCE REVIEW COMMISSION



# REPORT

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## EXECUTIVE SUMMARY

The EUROCONTROL Performance Review Unit, on behalf of the Performance Review Commission, conducted this survey in 2001-2002 in order to investigate legal constraints to Penalty-free ATM Safety Occurrence Reporting in Europe.

Its objectives were to focus not only on legal constraints, but also on potential shortfalls in the national safety regulations that would not support "non-punitive" reporting in ATM. A secondary aim of the survey was to explore any other factors, such as management culture, that might inhibit staff from reporting ATM safety occurrences for fear of being blamed or punished.

The survey comprised two phases: (1) a questionnaire addressed to service providers, safety regulators, accident investigation boards where applicable and Air Traffic Controllers' organisations and then (2) follow-up interviews with a sample of respondents, to complement the questionnaires.

A guarantee was given by the PRU to all participants that information provided would be published only in a dis-identified format, except with prior approval. As a result, the survey contains open and frank assessments of safety occurrence reporting as perceived by the people in the front-line.

From the analysis of the information received, the following key messages have emerged:

1. In many States, there are significant legal constraints to non-punitive ATM safety occurrence reporting. As a result, many staff feel inhibited to report. This is particularly the case where States have "Freedom of Information" legislation in place and where they have not taken steps to protect safety reports from the application of such legislation.
2. The overwhelming majority of respondents, including non-European Union States, saw EU legislative proposals as a major enabler to implement non-punitive reporting.
3. Poor communication between the "people on the ground" and the various levels of management in a number of Air Navigation Service Providers is a noteworthy finding to emerge from the analysis.
4. The poor perception of safety regulators was another striking finding to emerge. Safety regulators were perceived in many States to be weak, with an ill-defined role, often no ATM expertise, funding constraints and with possible conflicts of interest.

The PRU is working closely with the Safety Regulation Unit as well as with the EUROCONTROL Agency to see how best to remedy the shortcomings and deficiencies highlighted in the safety survey.

This report will be submitted to the EUROCONTROL Provisional Council, and through the Provisional Council to the Permanent Commission, for further action.



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# 1 INTRODUCTION

## 1.1 IMPORTANCE OF SAFETY REPORTING

- 1.1.1 All safety occurrence-reporting systems strive to achieve 100% safety occurrence awareness. However, this requires 100% occurrence detection and 100% reporting rate. This, in turn, depends upon Air Traffic Controllers (ATCOs), pilots and other interested parties having confidence in the safety occurrence reporting system existing in their State.
- 1.1.2 To maintain the confidence of interested parties, safety occurrence reporting systems should contain the following elements: protection of confidentiality of the reporter, dis-identification of voluntary reports, non-punitive provisions. It must be emphasised that non-punitive does not mean that persons responsible for safety occurrences escape liability, for example, for unlawful actions, misbehaviour, gross negligence or violations. However, what reports of safety occurrences are seeking is a "just culture" where honest mistakes (i.e. minor, routine mistakes that are slips or lapses) are analysed, lessons drawn and disseminated, without sanctioning the involved personnel.
- 1.1.3 The term "fair" or "just" should be used<sup>1</sup> to describe in what spirit laws should be applied with regard to safety. On the one hand, this must ensure that Safety Management Systems operate well, in particular reporting systems and their potential to improve safety. On the other hand, protection of the public against intentional misbehaviour or criminal acts through the application of justice must be ensured.

## 1.2 RATIONALE FOR SAFETY SURVEY

- 1.2.1 A number of States have introduced "non-punitive" reporting for safety incidents. However, in view of different legal safeguards and regulations put in place by each State, the protection of such reports varies and so do the legal consequences relating to such reporting. The PRC therefore considers the "non-punitive" reporting of safety incidents to be a major issue that could have implications for maintenance and/or improvement of safety standards.

## 1.3 PROCESS

- 1.3.1 The PRU asked the Safety Regulation Unit (SRU) and EUROCONTROL's Safety, Quality Management and Standardisation Unit (SQS) to provide information about processes relating to incident recording, analysis, publication, feedback from experience gained, legal impediments to non-punitive reporting, and key risk areas.
- 1.3.2 It emerged that there was a lack of information on legal constraints to non-punitive reporting. Therefore, the PRU developed a questionnaire, in consultation with the SRU and the SQS, to fill this information gap.

- 1.3.3 The questionnaire (see Annex 1) was sent, in autumn 2001, to all EUROCONTROL member States that have an ANSP. They were 28 in number. It was also sent to three ATCO international organisations: IFATCA (International Federation of Air Traffic Controllers' Associations), ATCEUC (Air Traffic Controllers' European Union Co-ordination) and IPMS (Institute of Professionals, Managers and Specialists). The list of those who replied is given in Annex 2.
- 1.3.4 Each State was invited to have the questionnaire completed by its ANSP, the safety regulator and, where applicable, the Aircraft Accident Investigation Board (AAIB). Replies were received from 25 States. Many States provided a composite reply, which contained the views of some or all of the aforementioned parties.
- 1.3.5 Each ATCO international organisation was invited to have the questionnaire completed by as many national Member Organisations as possible. Two out of the three ATCO international organisations replied.
- 1.3.6 The questionnaires were augmented with interviews conducted with a representative sample of respondents: ten States plus Maastricht UAC. Many States organised a joint interview, where the service provider, the safety regulator and sometimes the AAIB were all present, while others organised separate interviews. ATCOs were always interviewed in a separate meeting, without the presence of any management member.
- 1.3.7 A written summary of each interview was sent to the interviewees for their confirmation, on behalf of their organisations, of the validity of the information gathered.
- 1.3.8 The PRU would like to take this opportunity to thank everyone involved for their completion of the questionnaires and/or participation in interviews.
- 1.3.9 This report is the result of the above process. It has also received input from the Legal Service of the EUROCONTROL Agency and the Safety Regulation Unit. However, the interpretation of the information gathered and the corresponding conclusions reflect solely the views of the PRC.
- 1.3.10 Chapter 2 describes the legal aspects of safety occurrence reporting, Chapter 3 concerns Safety regulation. Chapter 4 deals with safety occurrence reporting systems. Chapter 5 highlights legislative actions at European level and Chapter 6 gives recommendations.
- 1.3.11 The number given in the top-left corner of each figure relates to the question in the questionnaire in Annex 1.

## NOTES FOR CHAPTER 1

- 1 This should not be seen only as a semantics argument. In adopting this recommendation States would clarify for themselves, their employees or regulatees and the public the whole purpose and limits of the non-punitiveness.

## 2 LEGAL ASPECTS OF SAFETY OCCURRENCE REPORTING

### 2.1 INTRODUCTION

2.1.1 The main legal aspects of safety occurrence reporting are twofold:

- safety reporting and personal data protection;
- use of safety data, in particular that arising from the technical investigation.

2.1.2 As already stated in paragraph 1.1.2, it is of paramount importance that any safety occurrence reporting system is trusted by all interested parties. In particular, reporters need to feel that they will not be penalised through public exposure within or outside their organisation for reporting routine, unintentional (honest) mistakes.

2.1.3 Within the EU States, Directive 95/46 of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, deals with the matter of private data protection. More on the applicability of this to safety reporting can be found in chapter 6 below.

2.1.4 Equally important, and often more sensitive, is the use to which the safety data gathered during the reporting and investigation processes is put. This is a particular concern for many ATC personnel in Europe, as this information may be used against them in either civil or criminal proceedings. In such a situation, a fair and open safety occurrence report or a technical investigation can be used against the reporting parties in Court.

2.1.5 Some States have addressed this conflict by offering protection to parties reporting honest mistakes. At the same time, persons who are found not to have reported an honest mistake are liable to face disciplinary action.

### 2.2 PROTECTION OF SAFETY AND PERSONAL DATA

2.2.1 A number of States have legislation that directly or indirectly inhibits the development of safety occurrence reporting in aviation. The most often-cited example is "Freedom of Information" legislation.

2.2.2 Freedom of Information legislation, to access information under government control, has been enacted in the majority of States surveyed (see Figure 1). Under such legislation, it may be possible to obtain sensitive information from public bodies such as sensitive safety data relating to an accident or incident.

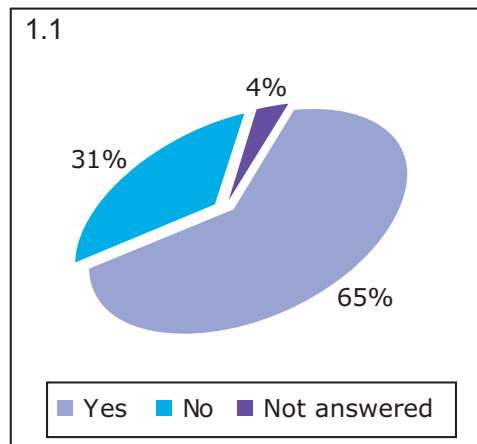


Figure 1: "Freedom of Information" legislation

2.2.3 In particular, "Freedom of Information" legislation has been invoked in a safety-reporting context. Journalists and lawyers have requested access to safety data arising from a technical investigation. Consequently, some States have amended their Freedom of Information Act to enable such sensitive information to be protected from universal access. In one State, a Court ruled that the civil aviation authority (CAA) was obliged to divulge certain information, but not, however to give the occurrence data from which that information was derived.

2.2.4 In a number of responding States, the national law protects to a certain extent the disclosure of the names of a person submitting a safety occurrence report in ATM and of the person(s) to whom the report relates. It seems, however, that half of the responding States have not adopted any provisions which prevent the disclosure of those having reported such information.

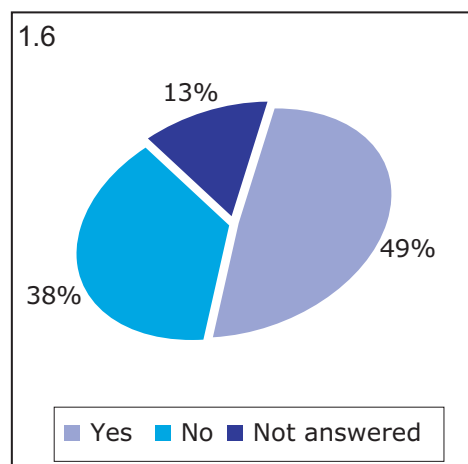


Figure 2: Disclosure of a reporter's name

2.2.5 In that connection, it is noteworthy that some States protect the names of persons involved in incidents, but not in accidents. The Directive 94/56 concerning investigation of civil aviation accidents and incidents only protects the anonymity of persons involved in an incident (Article 8). Such protection is not foreseen for persons involved in an accident.

2.2.6 Moreover, national laws often do not provide any clarification on:

- 1) the relation between the investigation and the judicial authorities,
- 2) the responsibility of the individuals or entities involved in an accident or an incident,
- 3) the protection, immunity and disclosure of the name of those reporting a safety occurrence.

2.2.7 It emerged from the survey that, in the majority of States, the appropriate authority for the administration of justice (i.e., the competent judicial or administrative authorities) has access to ATM related accident or serious incident information collated during a technical investigation (see Figure 3). Furthermore, the judicial authorities have full powers to conduct their own investigation at any stage of the technical investigation and to collect any relevant information. Such information is usually obtained from the entity conducting the technical investigation.

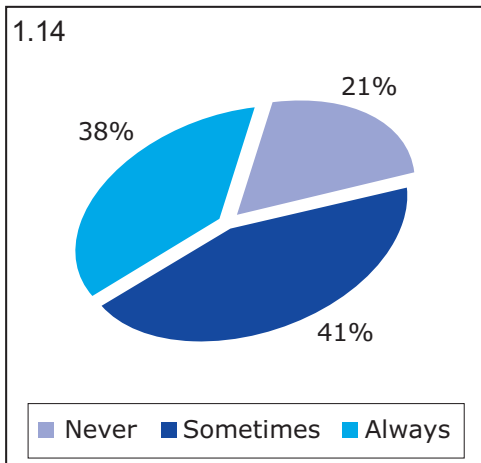


Figure 3: Access to accident/serious incident data

2.2.8 Moreover, the competent judicial or administrative authorities have, in the overwhelming majority of States, access to ATM related non-serious incident information collated during a technical investigation, see Figure 4.

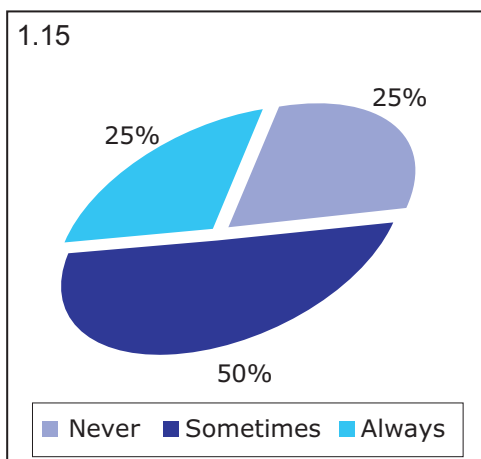


Figure 4: Access to non-serious incident data

## 2.3 ICAO ANNEX 13

2.3.1 Annex 13 to the ICAO Convention on International Civil Aviation states that “States should establish formal incident reporting systems to facilitate collection of information on actual or potential safety deficiencies” (Chapter 7, paragraph 7.3).

2.3.2 In most cases, the standards and recommended practices contained in ICAO Annex 13 have been incorporated into national law (see Figure 5).

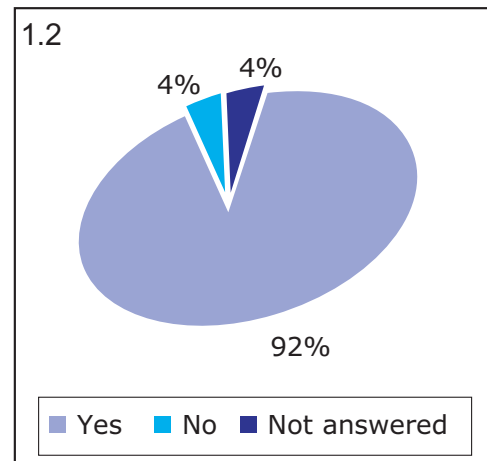


Figure 5: ICAO Annex 13 - part of national law

2.3.3 Moreover, the majority of States have incorporated ICAO Annex 13 into national law by means of Act of Parliament or equivalent legal instrument (see Figure 6). This avoids potential conflict with existing national legislation.

2.3.4 It should be noted that a minority of States has not formally adopted Annex 13, but apply it in practice.

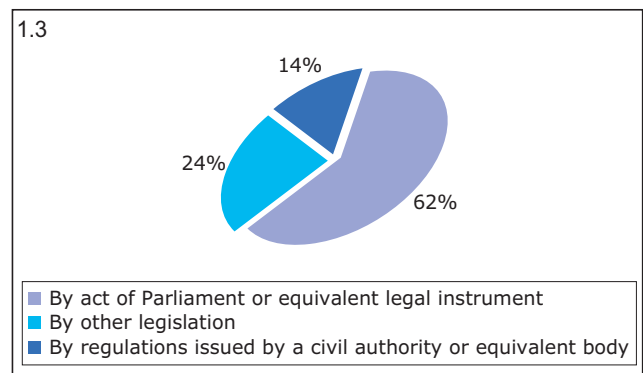


Figure 6: Implementation of ICAO Annex 13

2.3.5 The Standards contained in paragraphs 5.12 and 5.12.1 of Annex 13 give specific and detailed directions regarding the use and protection of data arising from a safety occurrence investigation.

Paragraph 5.12 states “The State conducting the investigation of an accident or incident shall not make the following records available for purposes other than accident or incident investigation, unless the appropriate authority for the administration of justice outweighs the adverse domestic and international impact such action may have on that or any future investigations:

- a) all statements taken from persons by the investigation authorities in the course of their investigation;
- b) all communications between persons having been involved in the operation of the aircraft;
- c) medial or private information regarding persons involved in the accident or incident;
- d) cockpit voice recordings and transcripts from such recordings; and
- e) opinions expressed in the analysis of information, including flight recorder information".

Paragraph 5.12.1 of Annex 13 states that "These records shall be included in the final report or its appendices only when pertinent to the analysis of the accident or incident. Parts of the records not relevant to the analysis shall not be disclosed".

2.3.6 One third of the respondents indicated that the disclosure procedures contained in paragraph 5.12 did not form part of national law (see Figure 7).

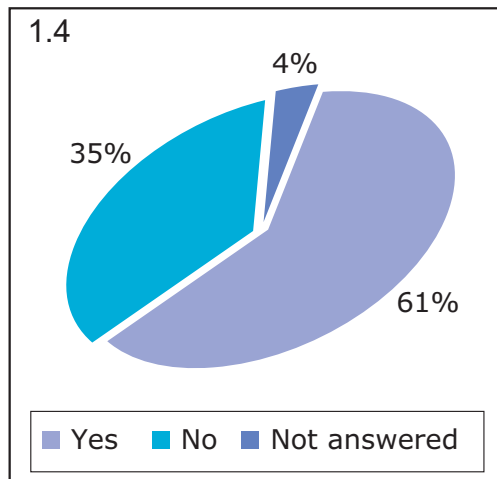


Figure 7: Section 5.12 as part of national law

2.3.7 Half of those States have not filed any difference with ICAO (see Figure 8) despite the obligation to do so laid down in Article 38 of the Chicago Convention.

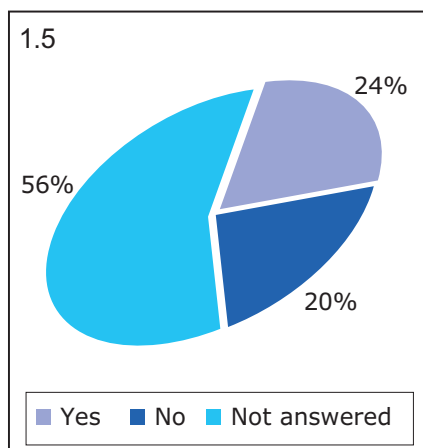


Figure 8: Filing of differences with ICAO re. 5.12

2.3.8 It can, therefore, be concluded that States are not always fulfilling their commitments with regard to international standards.

2.3.9 It should be noted that paragraph 5.12 can to a certain extent be inconsistent with Freedom of Information legislation provisions. This may provide an explanation as to why 35% of States have not introduced 5.12 in their national legislation.

## 2.4 NON-PUNITIVE LEGISLATION

2.4.1 The overwhelming majority of respondents considered that their State's national safety regulations in the area of "Reporting and assessment of safety occurrences in ATM" did not explicitly mandate the implementation of a non-punitive environment (see Figure 9).

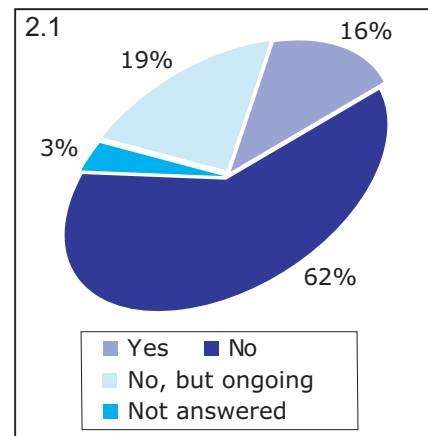


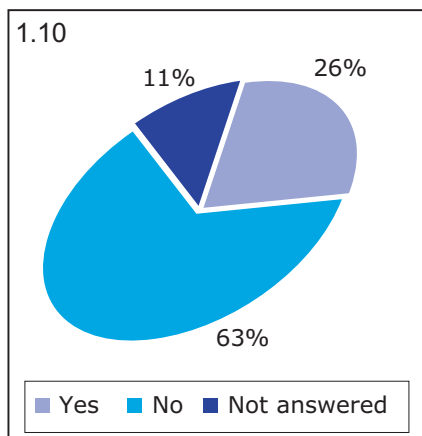
Figure 9: Implementation of a non-punitive environment

2.4.2 The SRC document "Publication and confidentiality policy" (Ref. GM2-ESARR 2) published in 1999 mentions that (page 8) "Subject to the laws applicable in States, Service Providers should endeavour to provide a non punitive policy in relation to occurrence reporting".

2.4.3 On 1 January 2001, which is the most recent date for which figures have been made available, some 24 out of the then 30 EUROCONTROL Member States had implemented ESARR2 (Phase 1). The low level of "yes" responses (16%) to question 2.1 would indicate therefore that this recommendation has not been followed by many States.

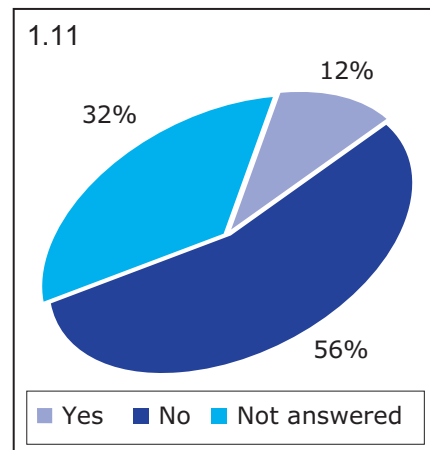
2.4.4 There is also legislation that could not or should not be changed, such as the "endangering the life of other persons" offence, often found in States' Criminal laws. It is important that the interpretation and application of such legislation is balanced against safety improvements. This requires education and understanding of safety management from the general public as well as the willingness to leave honest mistakes unpunished. Any stance taken by one State to apply such a provision could also have an effect on other professions (e.g. the medical profession).

- 2.4.5 Some States have taken initiatives to develop an internal common understanding of how the laws are applied, considering also safety management. This is a praiseworthy initiative.
- 2.4.6 However, there is a constant threat that, following a major accident, public pressure to punish the persons responsible can become more important than understanding the causes and correction of problems. The media has a key role to play in this regard.
- 2.4.7 For example, under Swiss law the CAA is obliged to report any occurrence considered as a concrete endangerment of life in public transport to the prosecutor. ATCOs in that State feel that they are therefore under constant threat of criminal proceedings if they report an occurrence. Consequently, there is a strong reluctance to report safety occurrences; this results in a lack of visibility of potential problems.
- 2.4.8 It was found that few ANSPs have undertaken an "education" exercise to inform the media on safety issues, in an endeavour to ensure responsible press coverage. This was a fundamental factor in the successful implementation of the new reporting system in Denmark, in 2001.
- 2.4.9 As can be seen from Figure 10 below, in the majority of the responding States, national law does not provide immunity for persons<sup>1</sup> reporting safety occurrences. It appears however that informal systems where "procedural" restraint is applied for persons reporting safety occurrences have been introduced by some States.



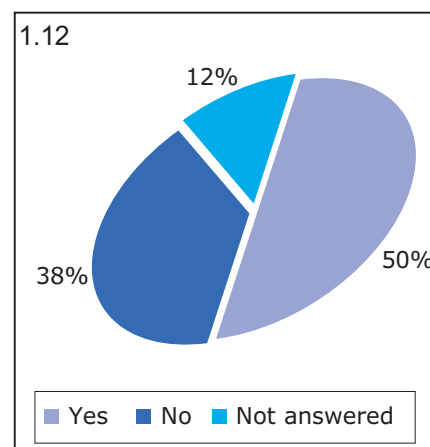
**Figure 10: Partial or total immunity from prosecution**

- 2.4.10 In the large majority of responding States, ATM staff directly or indirectly involved in an accident or even in an incident may be held liable under certain or all circumstances. The circumstances resulting in liability either under civil or criminal law may vary from unintentional breach of the law to negligence<sup>2</sup>. This indicates that in some States the potential liability of ATM staff is not delineated clearly enough.
- 2.4.11 This may also explain the growing concern ATCOs have with the introduction of legal proceedings following safety incidents.



**Figure 11: Specific defences**

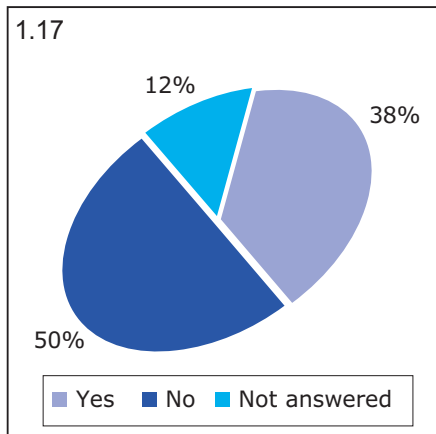
- 2.4.12 Although the majority of States do not provide minimum legal protection for safety occurrence reporting<sup>3</sup>, of the 63% who replied "no" in Figure 10, 12% have specific defences in their legislation (see Figure 11).
- 2.4.13 In particular, half of the respondents have included provisions in national law for the protection of individuals involved in a safety occurrence or, having reported a safety occurrence, against the misuse of reported information, as is illustrated in Figure 12.



**Figure 12: Protection against misuse of information**

## 2.5 POSSIBLE IMPROVEMENTS TO NATIONAL LAW

- 2.5.1 A majority of respondents do not consider that the current provisions in national law are satisfactory with regard to safety reporting in ATM.
- 2.5.2 However, the implementation of ESARR 2 should help to improve clarity and remedy the principal deficiencies that exist today.
- 2.5.3 At least one State emphasised that the protection of confidentiality in reporting schemes is always more critical in voluntary systems than in mandatory reporting schemes.



**Figure 13: Adequacy of national law provisions for safety reporting**

2.5.4 Several States positively referred to the safety occurrence reporting system applied in Denmark. Denmark has implemented a mandatory safety occurrence reporting system where, under certain conditions and with the exception of certain circumstances, incident reporting is without legal consequences for the person reporting. The system applies to the entire aviation community: pilots, technicians, airport staff and ATM staff.

## 2.6 CONCLUSIONS

- 2.6.1 There is a growing awareness and responsiveness to the development of ATM safety reporting at European level (EU Directives, ESARR 2). However, perception and understanding vary within States, across States and even between individuals within the same organisation. In many States, the provisions of ICAO Annex 13, Section 5.12 are not met.
- 2.6.2 International standards, (e.g. ICAO, EUROCONTROL) can often be contradictory or even incompatible with national legislation. It is the responsibility of the member States to ensure the implementation of those standards and to take the appropriate steps at the national level to reconcile any differences. Denmark presents a worthy example of such an approach.
- 2.6.3 In some States, national laws and regulations are not oriented towards a “non-punitive” and/or “blame-free” environment. It is noteworthy that, in some of these States, it was found that key individuals considered that safety standards were adequate and required no improvement.
- 2.6.4 Strict and punitive legislation, or a local culture seeking primarily the punishment of the culprit, can seriously inhibit initiatives to develop a reporting system with a good transparency of all occurrences. This will also inhibit the development of a system where the lessons learned are then distributed for the benefit of the whole ATM or aviation community.
- 2.6.5 ANSPs showed a large consensus on the urgent need for changes leading to a non-punitive environment. Similarly, changes are needed for the protection of

data and evidence collected during a technical investigation from being used in a prosecution.

- 2.6.6 The responses received confirmed that individuals’ names are not protected when their disclosure is required in the context of judicial inquiries. This may explain the growing concern of ATCOs with regard to potential legal proceedings following incidents.
- 2.6.7 In the vast majority of the responding States, the appropriate authority for the administration of justice in the State (i.e. the competent judicial or administrative authorities) has access to ATM related accident or serious incident information collected during a technical investigation. This is also true in the case of information collected during a technical investigation relating to a non-serious ATM incident.

## 2.7 RECOMMENDATIONS

- 2.7.1 States should implement or adapt their legislation to protect the personal and safety data and restrain it from public access, in accordance to ICAO Annex 13. This is particularly important in States having enacted Freedom of Information Acts and where service providers and/or accident/incident investigation boards fall under the scope of such Acts.
- 2.7.2 States should implement or adapt national legislation towards a non-punitive environment for safety occurrence reporting in aviation, as called for by ICAO Annex 13, EC’s High Level Group and EUROCONTROL’s ESARR 2.

### NOTES FOR CHAPTER 2

- 1 This report has only considered the notion of immunity with respect to the individual reporting. It has not addressed the matter of sovereign immunity, which could be an issue with regard to the liability of States and their ANSPs.
- 2 The intention of this report is not to address in detail the different liability regimes applicable. It is rather to reveal whether or not individuals reporting in the context of safety occurrence reporting could potentially be held liable, without providing an assessment of specific liability regimes of law.
- 3 A distinction ought to be made between those reporting a safety occurrence in which they were involved from those reporting a safety occurrence in which they were not involved. It is not always clear if the immunity referred to above is granted in both cases.



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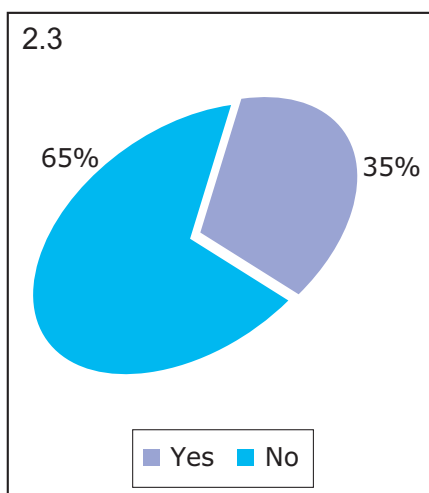
## 3 SAFETY REGULATION

### 3.1 INTRODUCTION

- 3.1.1 The description of the main legislative aspects, dealt with in the previous chapter, are of importance when dealing with safety regulation.
- 3.1.2 The current status of national safety regulations and the role of safety regulators are discussed below. It must be said that ATM safety regulation is fairly new in many States and the concept is not entirely well defined or understood in many European States.

### 3.2 NATIONAL SAFETY REGULATIONS

- 3.2.1 Some 65% of respondents do not consider that the provisions of their State's safety regulations are satisfactory with regard to safety reporting in ATM, see Figure 14.



**Figure 14: Adequacy of safety reporting regulations**

- 3.2.2 It was a widely held view that safety regulations should contain safeguards against the use of investigation information for judicial inquiries. The safeguards should also apply to investigation staff and personnel involved in an accident/incident.
- 3.2.3 In a few States, concerns were expressed with respect to the different types of regulations that can interfere with safety regulation. In particular, economic regulation was thought to have the potential to be used as an inhibitor for some forward-looking, more radical safety regulations, where the implementation of such measures would generate additional costs for the ANSP. Airspace regulation also has the potential to create conflicts with safety regulation.
- 3.2.4 This is the reason why it is considered that regulators in general should not be part of any of the ANSPs activities, (e.g. airspace design), nor should they take over any of the service provision functions (e.g. AIS). The only way to ensure complete independence and separation of the regulator from service provision is to have the safety regulator to oversee

and approve all safety-related matters in the activity of the ANSP. This guarantees the objectivity of safety regulation and any quality assessment of the service provision.

### 3.3 PRO-ACTIVE SAFETY REGULATION

- 3.3.1 In the light of the foregoing it is clear that the implementation of non-punitive reporting systems in ECAC States is a difficult and lengthy process. It is therefore suggested to avoid relying solely on this safety management tool to ensure and improve safety.
  - 3.3.2 Several States highlighted some pro-active measures that could be taken to optimise safety occurrence reporting systems. These measures included audits, proficiency checks, confidential, anonymous questionnaires. Such proactive measures offer two significant advantages:
    - a) they can be implemented fairly quickly,
    - b) they do not need a safety occurrence before they produce results.
  - 3.3.3 Audits should be encouraged and proficiency checks implemented as per ESARR5 as soon as possible. The ICAO USOAP, which will be implemented in coming years, should help to ensure that proper regulatory processes are in place, In the meantime, safety regulators can implement their own audit mechanisms.
  - 3.3.4 During the interviews it was found that proficiency checks serve to reassure ATCOs that they are performing at the highest possible level of safety. Moreover, such checks helped to foster confidence in the professionalism of their colleagues. It is interesting to note that in some of the States where such checks do not exist, ATCOs did not reject the idea of introducing proficiency checks. However, it was emphasised by the ATCOs consulted that proficiency checks should not become onerous, or be used against them.
- ### 3.4 SAFETY REGULATORS
- 3.4.1 Many respondents (ANSPs, ATCOs) expressed the view that safety regulators were weak, with an ill-defined role, lacking in the requisite ATM expertise and constrained by funding limitations. This view also emerged from interviews with a number of safety regulators.
  - 3.4.2 A particular difficulty is that there can be conflicts of interest between the safety regulator and the ANSP. For instance, in some States licensed and active ATCOs perform incident investigations for the regulator, while they are employed by the very ANSP under examination. Although ATCOs consider such an arrangement as a guarantee for a thorough understanding of all aspects of the matter, the independence of the system can be questioned.
  - 3.4.3 Another potentially complicated situation is where the regulator is providing some type of air navigation



services (e.g. AIS) or participates in some service provision related activities, alongside the ANSP. In such situations there is no guarantee that such activities are independently audited or that the regulations that govern them are objectively developed.

- 3.4.4 The safety regulator has a central role to play in the process of law making and its subsequent application. Moreover, a strong, independent regulator, with a well-defined role and adequate funding, is ideally placed to reassure the public regarding the gravity of any safety occurrence and the adequacy of the ATM system. There is evidence to show that the public, for the sake of safety improvement, is prepared to accept that honest mistakes go unpunished.
- 3.4.5 The role of safety regulator is both challenging (as it requires the confidence of the professionals and the public) and rewarding. However the survey reveals that the majority of regulators are not well established in terms of financial and staff resources, and that they suffer from the absence of a well-defined role. It also appears that they lack the sufficient legal tools to conduct their mission.
- 3.4.6 Furthermore, there are significant shortcomings in the relative lack of ATM expertise, which makes safety regulators overly dependent on ANSPs. This could be perceived as collusion and/or complicity with ANSP management.

### **3.5 AIRCRAFT ACCIDENT INVESTIGATION BOARDS**

- 3.5.1 A number of replies to the questionnaire, as well as a number of interviews, included the national AAIB. It was found that the function of independent safety investigation is well established in a large number of States, at least from the institutional and legal perspective.
- 3.5.2 In the vast majority of cases, these bodies are concerned with safety occurrence investigation as per ICAO Annex 13. Therefore, it was found that very few have any knowledge about the EUROCONTROL work on safety and in particular about ESARR 2. Usually the investigation and subsequent classification of events is done in accordance with ICAO provisions.
- 3.5.3 Furthermore, with only a few exceptions, the AAIBs do not have a permanent ATM expertise, being primarily aircraft-oriented. The reason for this seems to be mainly historical, as many stated that ATM-related incidents only started being reported to them in recent years.
- 3.5.4 Commendably, perhaps due to the very nature of their activity, the AAIBs are well-oriented towards a culture of information sharing, with the appropriate observance of confidentiality. A number of such bodies have their own publications and web-sites, where information about past incidents and accidents is posted, for the benefit of the whole aviation community.

### **3.6 CONCLUSIONS**

- 3.6.1 The majority of States' safety regulations are not considered to be satisfactory with regard to safety reporting in ATM.
- 3.6.2 It was a widely held view that that safety regulations should contain safeguards against the use of investigation information for judicial inquiries. The safeguards should also apply to investigation staff and involved personnel in an accident/incident.
- 3.6.3 There would appear to be potential conflicts of interest relating to safety regulation:
  - a) conflicts between Safety, Economical and Airspace regulation;
  - b) a mixing of functions and responsibilities between regulation and service provision. This can be the regulator involved in providing some services or participating in operational activities alongside the service provider.
- 3.6.4 In the vast majority of States, safety regulators are weak. Their role is often ill defined, many have little or no ATM expertise and they are subject to funding constraints. In many cases they depend in one way or another on the ANSP. This can lead to potential conflicts of interest where licensed ATCOs perform safety occurrence investigations on behalf of the safety regulator while being employed by the ANSP. This may explain why, in many States, safety regulators were not held in the highest regard.

### **3.7 RECOMMENDATIONS**

- 3.7.1 Ministers in charge of air transport should be urged to allocate the required resources and legal powers to national safety regulators. Furthermore, States should ensure that conflicts of interest within the regulatory activities are eliminated or at least minimised.
- 3.7.2 States and ANSPs should be encouraged to foster proactive safety measures such as Audits and Proficiency checks (i.e. implementation of ESARR5) as a complement to safety occurrence reporting/investigation and improvement.
- 3.7.3 Safety regulations should contain safeguards against the use of investigation information for judicial inquiries. The safeguards should also apply to investigation staff and involved personnel in an accident/incident.

## 4 SAFETY OCCURRENCE REPORTING SYSTEMS

### 4.1 INTRODUCTION

- 4.1.1 Building on the legislative and regulatory frameworks described in the preceding chapters, safety occurrence reporting systems should be developed as part of safety management systems. This chapter highlights some of the enablers and drivers for implementation and management of a reporting system and some of the inherent limitations of such systems. It also shows some of the additional findings of the survey relating to key risk areas and some solutions to the limitations.
- 4.1.2 In this context, enablers are considered as prerequisites to the implementation of any kind of reporting system, e.g. national laws must enable effective safety occurrence reporting systems to be implemented. Solutions must be developed when existing laws become barriers.
- 4.1.3 A system already implemented must be managed carefully, not least because of the high sensitivity of data being processed. In particular, systems should be designed to withstand the test of serious incidents or accidents.

### 4.2 MANAGEMENT COMMITMENT TO SAFETY

- 4.2.1 All management representatives surveyed stated their commitment to safety. However, in practice their commitment ranged from policy statements to active initiatives, including systems to be put in place, for constantly improving safety.
- 4.2.2 Many ANSPs would appear to have an ongoing conflict within management between safety concerns on the one hand, and economics and management style/culture on the other. The most important consequence of such a conflict is the allocation of resources.
- 4.2.3 Some safety managers reported that they had difficulties in explaining to their top managers what safety management is and the benefits to the company of having a good safety management system.
- 4.2.4 A very important and common inhibitor of reporting is management clustering (i.e. safety, operations, technical and financial management are isolated from each other and from ATCOs). The negative result of this is that safety is not perceived, as being everyone's common concern. ATCOs often consider that management looks after financial issues and related capacity, expecting them to cope with traffic demand whilst maintaining safety standards. Furthermore, should there be a safety occurrence, it is usually the last person on the line who has to face the consequences, as safety has to be assured at this level.

- 4.2.5 Few organisations backed their concern for safety with practical measures. More importantly, very few organisations proved to have the same concern for safety at all levels of the management hierarchy.
- 4.2.6 Some organisations still have an AIRPROX culture<sup>1</sup>, perhaps for historical reasons. It is probable that, in such organisations, there is insufficient appreciation of the limited picture this gives, as AIRPROXes are only a small part of the total range of safety occurrences or even refer to non-occurrences. It is debatable whether the continued reliance on AIRPROXes could be considered as an abusive use of ICAO provisions.
- 4.2.7 Management is responsible, together with the professional ATCO organisations, to ensure that everyone is aware of the benefits of having an open and complete reporting system, and to encourage reporting in a no-blame and non-punitive environment.

### 4.3 OPERATION OF SAFETY OCCURRENCE REPORTING SYSTEMS

#### Existence of internal procedures

- 4.3.1 A significant minority of organisations had documented procedures setting out what happens, and under which circumstances, to staff involved in safety occurrences (see Figure 15).

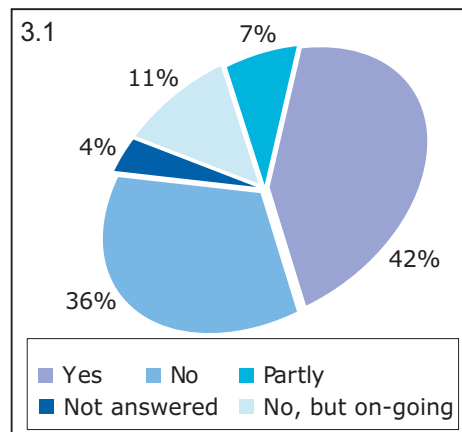


Figure 15: Internal procedures

- 4.3.2 Safety occurrence reporting can be hindered where there is a lack of documented procedures. ATCOs' faith in the system requires clear commitment from management, in writing. It is difficult to expect anyone to trust a system which is based solely on verbal assurances.

#### Access to safety reports

- 4.3.3 The assurance that data will be treated confidentially within the organisation helps to promote a culture of "open-reporting" of safety incidents.

4.3.4 This can be seen from Figure 16 which illustrates the organisations which have a document stipulating who in the organisation has access to the filed reports, related facts and conclusions, and under what circumstances.

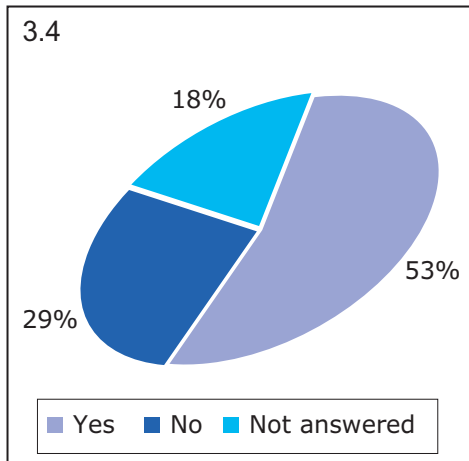


Figure 16: Access to safety reports

4.3.5 Moreover, in the majority of organisations, the measures documented are implemented in full, see Figure 17. However, it was pointed out a few times that it is the responsibility of Heads of Division (or equivalent) to implement measures and they sometimes choose other ways to mitigate hazard potentials.

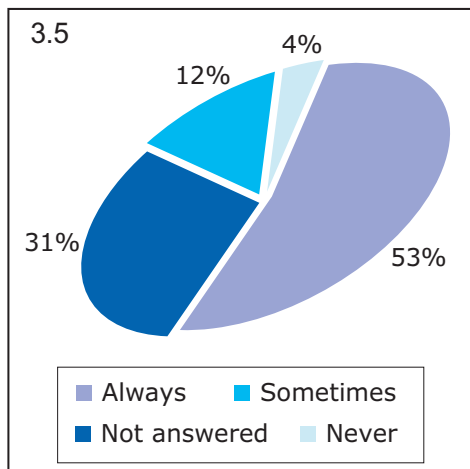


Figure 17: Observance of controlled access

### Dis-identification of safety reports

4.3.6 In the large majority of States (see Figure 18) names are removed at a certain stage from the incident report and in almost all cases from the final investigation report. Although this prerequisite for a wider dissemination of information within the aviation community is met by many States, very few take the extra step of actually using this information and making it available to other aviation professionals, whether inside or outside the organisation.

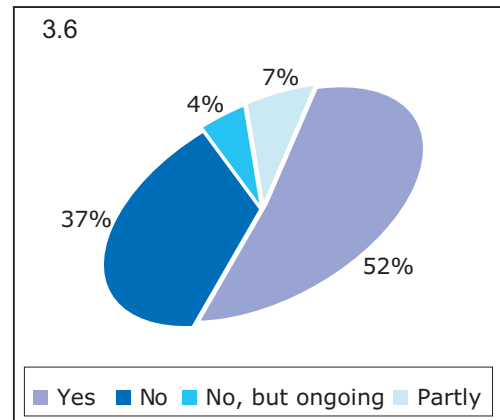


Figure 18: Existence of system of dis-identification

### Perception of internal procedures

4.3.7 A significant minority (36%) of respondents consider that their organisation's internal procedures are unsatisfactory with regard to safety reporting in ATM, see Figure 19.

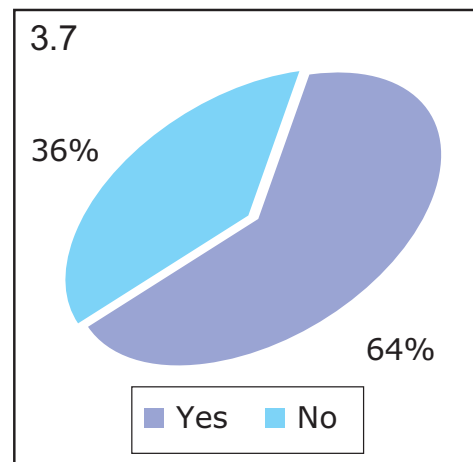


Figure 19: Adequacy of internal procedures

4.3.8 This is one of the main points of controversy between management and ATCOs. Very few managers would countenance that their safety reporting system needed to be improved, while ATCOs considered that management is slow or complacent in insofar as safety is concerned.

4.3.9 Many successful safety management systems are vulnerable to failure because they depend on the work of one or a few highly committed and effective individuals, who have earned peer recognition and who foster good interpersonal relationships. Should those individuals leave that key position, the safety management system could fall apart. To avoid this, formal procedures should be developed in order to ensure the long-term viability of the system.

## 4.4 LIMITATIONS AND POSSIBLE SOLUTIONS

### Human factors

- 4.4.1 Human reporting will always have limitations to what can be achieved. Either due to human limitations (reportable occurrences undetected by the ATOCs, e.g. a level bust that has not affected the traffic), or because the potential reporter does not feel compelled to report certain occurrences, non-reporting will exist. But far more importantly the limitations originate from human factor aspects such as "loss of face" with respect to management and/or colleagues.
- 4.4.2 In some organisations where a reporting system is in place and works well, some ATCOs wonder whether they report too much in comparison to others and whether this could make them appear as being "special cases" i.e. the number of reports per ATCOs is not known to them and reporting more than the other staff is feared.
- 4.4.3 As the main intrinsic limitation of the "perfect" system, human factors have been found to be the cause of about a third of non-reporting according to UK GATCO/Prospect.

### Automatic reporting

- 4.4.4 A potential solution to some of these limitations is an automatic safety monitoring system, such as the UK SMF (Separation Monitoring Function) or the EUROCONTROL ASMT (Automatic Safety Monitoring Tool) which ensure consistent capture of predefined events. The UK tool was supported by both management and ATCOs. They considered it to be an assurance for everyone that full transparency of the system is achieved.
- 4.4.5 It must be said that automatic reporting was one of the most controversial subjects arising out of the survey. Several respondents raised concerns that "automatic reporting" would not be as good as voluntary reporting. This was almost always found in places where there is a poor reporting culture, and the reluctance towards automatic systems was mainly based on the fear relating to the use of such data. However, where the systems have been successfully implemented, they are regarded as very beneficial by both ATCOs and management. Moreover, in organisations where there is no such system but a solid reporting culture exists, the potential implementation of such a system is not feared.

### Other reporting methods

- 4.4.6 Complementary to these tools, processes like the Confidential Human factors Incident Reporting Programme (CHIRP) in the UK offer a reporting channel that falls outside the reporting schemes managed by ANSPs. The advantages of such a process are twofold: it is a reporting scheme for safety occurrences that do not fall under the normal scheme (CHIRP focuses on the effect on safety of

actual or potential human error), and it also offers a confidential reporting channel protected from any managerial intervention.

### Training

- 4.4.7 There was general agreement that training (both ab-initio and refresher), as well as proficiency checks are at the forefront of proactive safety management. Unfortunately, a number of respondents considered that training, including special procedures and emergency training, was not entirely adequate.
- 4.4.8 Moreover, some ATCOs considered that there is not enough education about the reporting system, therefore the younger generations of ATCOs came out of school lacking knowledge and culture regarding safety occurrence reporting. This is not the case in Sweden, where ATCOs considered that the success of their reporting system is intimately related to the focus on open safety occurrence reporting education received by young ATCOs, as well as the emphasis on it during refresher training.

## 4.5 OTHER FINDINGS OF THE SURVEY

- 4.5.1 The opportunity of interviewing a significant number of ATM representatives from various organisations across Europe was also used to check other safety-related issues. The most important such issue was to check if there is a pattern of key risk areas across Europe.
- 4.5.2 A short list of the most common key risk areas would have to include the following: runway incursions, loss of air-ground radio communication, VFR and/or military flights penetrating controlled airspace, level bust (both en-route and in terminal areas), staff shortage (increased use of one-man operations). This is not an exhaustive list, but includes the most frequently and, according to the interviewees, the most serious occurrences.
- 4.5.3 A number of such key risk areas have only been highlighted by specific ANSPs, being related to their particular area. Such examples might be: communications with a specific neighbouring country, policy of a specific local airline etc.
- 4.5.4 More important is the emergence or confirmation of a number of risks perceived by a rather large number of ATCOs, managers, regulators or a combination of those. The opinions did not always concur, the most notable difference usually being between the opinion of the safety regulator and that of the corresponding ANSP. Even more worrying is a difference of opinion between ATCOs and their managers, also found in very few organisations.
- 4.5.5 Some of the key risk areas could be more common than the evidence showed. It was found that some ANSPs considered that they did not have certain key risk areas. However, on closer investigation it emerged that the ANSPs in question either did not have the means to detect, or they discounted certain occurrences.

- 4.5.6 All the above concerns expressed by various experts were handed over to the SRU for further refinement and possible development of adequate safety measures.
- 4.5.7 Notwithstanding the importance of finding or confirming these key risk areas, it should be emphasised that knowledge of European problems or of other cases, lessons learned from similar safety occurrences is almost non-existent. In the vast majority of cases, commendable knowledge of national issues was noted but there is no real pan-European communication.

## 4.6 CONCLUSIONS

- 4.6.1 While management commitment to safety is not questioned, the allocation of resources within organisations is often less than appropriate.
- 4.6.2 In many ANSPs there was a marked contrast between the management and the ATCOs' viewpoint of how well their safety system worked.
- 4.6.3 Many organisations still lack properly documented procedures backed by a clear and firm application with regards to safety occurrence reporting. This leads to uncertainties for ATC personnel, lack of trust and ultimately poor or no safety occurrence reporting.
- 4.6.4 In the vast majority of cases, the names of persons involved in safety occurrence reports are removed at a certain stage. However, in some States the names can still be easily obtained by the public or the media, thus seriously impeding any initiative to report. Equally, in a large number of States the legislation allows a very easy access of justice to names.
- 4.6.5 Should an occurrence be reported, it is often the front-end operator who is placed under scrutiny and may ultimately be blamed. This might explain why few of the proposed remedial actions targeted the improvement of operational procedures, equipment, recruitment, or training.
- 4.6.6 There is wide acceptance that safety levels can be judged from the number of safety occurrence reports. Therefore, in States or organisations where AIRPROXes or the number of safety occurrences does not match the traffic levels this is likely to indicate a less than appropriate Safety Management System.
- 4.6.7 In places where a poor reporting culture existed concerns were raised that "automatic reporting" would not be as good as voluntary reporting. However, where such systems are implemented or a good reporting culture exists, ATCOs as well as management were in general in favour of automatic reporting.
- 4.6.8 Training has the potential to create and maintain a strong safety occurrence reporting culture. However, this is underestimated by some ANSPs. Moreover, training for special cases and emergencies is overlooked by some ANSPs.
- 4.6.9 The most important key risk areas should include: runway incursions, air-ground radio communication failure, VFR and/or military flights penetrating controlled airspace, level bust (both en-route and in terminal areas), staff shortage (increased use of one-man operations).
- 4.6.10 There is virtually no cross-communication of ATM safety data and lessons learned across Europe, therefore the knowledge of safety experts and ATCOs being almost always limited to their own environment.

## 4.7 Recommendations

- 4.7.1 ANSPs should ensure a proper allocation of resources to the safety management systems, including safety occurrence reporting and analysis. Furthermore, all procedures relative to safety occurrence reporting and analysis should be properly documented and they should be observed by the organisation.
- 4.7.2 The development and implementation of ASMT-like systems should be actively fostered and their place and potential to improve safety management publicised.
- 4.7.3 ANSPs should take appropriate measures to update their training, both ab-initio and refresher, regarding the safety occurrence reporting, so as to create and foster a good reporting culture, within a non punitive environment.
- 4.7.4 EUROCONTROL possibly with ICAO, should organise annual safety meetings with the purpose of exchanging safety data and related lessons learned.

## NOTES FOR CHAPTER 4

- 1 Consider AIRPROXes as the only safety level indicator

## 5 LEGISLATIVE ACTIONS AT EUROPEAN LEVEL

### 5.1 DIRECTIVE 95/46/EC

5.1.1 A number of respondents advised that they had incorporated into national law Directive 95/46/EC of the European Parliament and of the Council dated 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data<sup>1</sup>. Essentially, this Directive requires Member States of the European Union to protect persons' fundamental rights and freedoms, in particular their right to privacy with respect to the processing of personal data.

5.1.2 Personal data is defined in EU Directive 95/46 as "any information relating to an identified or identifiable natural person" (Article 2). Under this Directive, member States must provide that this data is:

- (a) processed fairly and lawfully;
- (b) collected for specified, explicit and legitimate purposes and not further processed in a way incompatible with those purposes;
- (c) adequate, relevant and not excessive in relation to the purposes for which they are collected and/or further processed;
- (d) accurate and, where necessary, kept up to date,
- (e) kept in a form which permits identification of data subjects for not longer than is necessary for the purposes for which the data were collected or for which they are further processed. (Article 6, part).

5.1.3 States can adopt legislative measures to restrict the scope of the obligations and rights provided for in the Directive where, e.g. the prevention, investigation, detection and prosecution of criminal offences is involved (Article 13 d).

5.1.4 EU Directive 95/46/EC has not yet been implemented in all EU Member States. A few non-EU Member States have implemented legislative arrangements similar to those contained in Directive 95/46/EC.

5.1.5 The Report of the High Level Group (Single European Sky) which was published in November 2000 states that: "the following measures that are of importance should be implemented between now and 2005:

- a non-punitive safety reporting environment in order to assess compliance with an objective safety target approach.
- progressive implementation of controller assistance tools that provide a 'safety back-up' in the event of system failure or error (so called "safety net" tools).
- support to national safety authorities for the implementation of safety regulation measures.

- The HLG report goes on to recommend "the development of a safety action programme specifically dedicated to systems capacity developments".

### 5.2 DRAFT DIRECTIVE ON OCCURRENCE REPORTING

5.2.1 The European Commission has prepared a draft Directive on Occurrence reporting in Civil Aviation<sup>2</sup>. Its purpose "to contribute to the improvement of air safety by ensuring that safety critical information is reported, stored, protected and disseminated in order to facilitate its effective analysis and monitoring". It shall apply to occurrences that have taken place in the territory of the Community. It shall apply also outside the territory of the Community to occurrences involving aircraft registered in a member State or operated by an undertaking established in a member State.

5.2.2 The draft Directive provides that:

- (1) names or addresses of individuals shall never be recorded in the database established under the draft Directive;
- (2) member States shall ensure that employees who report incidents are not subjected to any prejudice by their employer;
- (3) that this article will apply without prejudice to national rules related to access to information by judicial authorities.

5.2.3 In its present form (November 2002) the draft Directive provides the much-needed safeguards against actions by judicial authorities, particularly for the cases where unintended, minor mistakes are reported.

5.2.4 In June 2002, the Council adopted a common position on the draft Directive. This common position was sent to the European Parliament in October 2002 for approval under the co-decision procedure. The PRC considers that the form of the Directive approved by the Parliament in October 2002 aims precisely at removing the most important barriers to an open reporting in Europe and therefore should be preserved as such in its final form.

5.2.5 One of the items mentioned in several States was the expected support which could be derived from European Union legislation. This support was called for both by EU member and non-member States. A few particular States even considered that their national legislation would only be changed to allow non-punitive reporting if a European initiative was taken first.

### 5.3 RELATED EUROCONTROL ACTION

5.3.1 The Provisional Council at its 14th Session (July 2002) requested the Agency, "in consultation with the SRC, to carry out a study of the legal frameworks as well as the criteria and conditions required to submit appropriate additional draft binding

*provisions for the minimum legal protection of individuals reporting safety occurrences in EUROCONTROL Member States for Commission approval via the Provisional Council". No timeframe was given for this report to be submitted to the Provisional Council.*

## **5.4 CONCLUSIONS**

- 5.4.1 Legislative actions at European level are seen as a major enabler at least for those States not adopting a very proactive approach to non-punitive reporting.
- 5.4.2 The PRC fully supports the draft Directive on Occurrence Reporting in Civil Aviation in its present form, as approved by the European Parliament in October 2002. The PRC further considers that should the present text of the Directive be kept entirely, the Directive will fulfil its aim of providing the much-needed minimum legal protections expected to encourage confidential safety occurrence reporting.

### **NOTES FOR CHAPTER 5**

- 1 (OJ L 281, 23.11.1995, p. 31)
- 2 COM (2000)847/final - C5-0764/2000 - 2000/0343 (COD)

## 6 RECOMMENDATIONS

- 6.1.1 States should implement or adapt their legislation to protect the personal and safety data and restrain it from public access, in accordance with ICAO Annex 13. This is particularly important in States having enacted Freedom of Information Acts and where service providers and/or accident/incident investigation boards fall under the scope of such Acts.
- 6.1.2 States should implement or adapt national legislation towards a non-punitive environment for safety occurrence reporting in aviation, as called for by ICAO Annex 13, EC's High Level Group and EUROCONTROL's ESARR 2.
- 6.1.3 Ministers in charge of air transport should be urged to allocate the required resources and legal powers to national safety regulators. Furthermore, States should ensure that conflicts of interest within the regulatory activities are eliminated or at least minimised.
- 6.1.4 States and ANSPs should be encouraged to foster proactive safety measures such as Audits and Proficiency checks (i.e. implementation of ESARR5) as a complement to safety occurrence reporting/investigation and improvement.
- 6.1.5 Safety regulations should contain safeguards against the use of investigation information for judicial inquiries. The safeguards should also apply to investigation staff and involved personnel in an accident/incident.
- 6.1.6 ANSPs should ensure a proper allocation of resources to the safety management systems, including safety occurrence reporting and analysis. Furthermore, all procedures relative to safety occurrence reporting and analysis should be properly documented and they should be observed by the organisation.
- 6.1.7 The development and implementation of ASMT-like systems should be actively fostered and their place and potential to improve safety management publicised.
- 6.1.8 ANSPs should take appropriate measures to update their training, both ab-initio and refresher, regarding the safety occurrence reporting, so as to create and foster a good reporting culture, within a non punitive environment.
- 6.1.9 EUROCONTROL possibly with ICAO, should organise annual safety meetings with the purpose of exchanging safety data and related lessons learned.



# **A N N E X E S**

ANNEX 1 - QUESTIONNAIRE

**PERFORMANCE REVIEW COMMISSION**  
**Questionnaire**

**INTRODUCTION**

As indicated in its Terms of Reference, the Performance Review Commission (PRC) is intended to present a comprehensive appraisal of European ATM performance to the Provisional Council, which includes safety.

At the PRC's request, the PRU is assembling a relevant set of information about European ATM safety. The PRU understands that these items are to a large extent already covered by activities within the SRC and the EUROCONTROL Agency and the present work is done in liaison with the respective units. The PRU has therefore asked the Safety Regulation Unit and EUROCONTROL's Safety, Quality Management and Standardisation Unit (SQS) to provide information about processes related with incident recording, analysis, publication, feedback from experience gained, about legal impediments to non-punitive reporting, and about key risk areas.

However, there appears to be a lack of information on legal impediments to non-punitive reporting. The attached questionnaire is therefore aimed at filling this information gap. It should be very much appreciated if the questionnaire would be filled in and returned to the PRU by **30 November 2001**. This date is linked to the production schedule of the PRC's next performance review report (PRR 5). In addition, the PRU intends to complement written information by site visits where needed. This questionnaire is also being submitted to ATCO professional organisations.

Note that the PRC/PRU will respect confidentiality clauses imposed on the publication of any information received.

Should you require any assistance in the completion of the questionnaire, or should you require any further information, please contact either of the following:

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## PROFILE OF PERSON CONSULTED AND THEIR ORGANISATION

Name: .....

Address : .....

Tel : + .....

Fax : + .....

Email : .....

Country: .....

Title: .....

Organisation: .....

(Please provide an organisation chart which, if possible, highlights its safety functions)

Status:       Private sector               Public sector               Commercialised sector

Number of employees:

- 0 to 50  
 50 to 500  
 500 to 1000  
 1000 to 5000  
 Above 5000

.....

Separation between service provision  
and safety regulation:

- Organisational separation  
 Functional separation  
 No separation  
 Other (Please specify )

Sector:

- Airport Authority  
 ATM service provider  
 ATM Safety Regulatory authority  
 Accident Investigation Authority  
 Others ((Please specify )

**Some parts of the questionnaire may not be relevant to your organisation  
and can be ignored**

Note

In completing the questionnaire, it may not be feasible to provide either a YES or a NO answer. Therefore, please do not hesitate to provide detailed text, if necessary.

## 1. NATIONAL LAW

### Description:

This section aims at identifying to which extent your State's national law creates a favourable environment for the reporting of safety occurrences and the disclosure of information pertinent to the investigation or analysis of those occurrences.

### DISCLOSURE OF INFORMATION

**1.1** Is there "Freedom of Information" legislation in your State?

YES  NO

**1.2** Does ICAO Annex 13 form part of your State's national law?

YES  NO

**1.3** If so, how was it implemented?

By act of parliament or equivalent legal instrument

By other legislation

Please specify:.....

By regulations issued by a civil aviation authority or equivalent body

Please provide a copy of the legislative or regulatory document (In English if available)

**1.4** Does ICAO Annex 13 Section 5.12 "Disclosure of records" form part of your State's national law?

YES  NO

**1.5** If ICAO Annex 13 Section 5.12 does not form part of your State's national law, has your State filed any differences to ICAO regarding that specific item?

YES  NO

If your answer is NO, can you please provide further details

.....

### DISCLOSURE OF PERSON'S NAME

**1.6** Does your State's national law protect the disclosure of the name of a person submitting a safety occurrence report in ATM?

YES  NO  YES, unless required to do so in the context of judicial inquiries

YES, unless the person concerned authorises disclosure  Other

If your answer is OTHER, please give details on a separate sheet of paper as required

.....

**1.7** Does your State's national law protect the disclosure of the name of a person to whom a safety occurrence report relates?

YES  NO  YES, unless required to do so in the context of judicial inquiries

YES, unless the person concerned authorises disclosure  OTHER

If your answer is OTHER, please give details on a separate sheet of paper as required

.....

## LIABILITY

**1.8** Under what circumstances might ATM staff (i.e., ATCO, ATS design and maintenance staff) be held liable in law if they've been directly or indirectly involved in an accident :

- In all circumstances  
 Under no circumstances  
 Under certain circumstances

Please provide further details

.....  
 .....

**1.9** Under what circumstances might ATM staff (i.e., ATCO, ATS design and maintenance staff) be held liable in law if they've been directly or indirectly involved in an incident:

- In all circumstances  
 Under no circumstances  
 Under certain circumstances

Please provide further details

.....  
 .....

**1.10** Does the national law provide partial or total immunity from prosecution to those reporting safety occurrences?

- YES                       NO

Please provide further details

.....

**1.11** If the answer to 1.10 is NO, does the national law provide specific defences to those reporting safety occurrences?

- YES                       NO

Please provide further details

.....

**1.12** Does the national law include provisions for the protection of individuals (involved in a safety occurrence or having reported a safety occurrence) against the misuse of related information, whether stored electronically or otherwise?

- YES                       NO

Please provide further details

.....

**PRACTICAL EFFECTS OF THE LAW**

**1.13** If you have answered "Yes" to question 1.1, are you aware of any circumstances in which the "Freedom of Information" legislation has been invoked in your State in a safety reporting context?

- YES
- NO

If your answer is YES, can you please provide details?

.....

**1.14** Based on your experience, has the appropriate authority for the administration of justice in your State, i.e., the competent judicial or administrative authorities, access to ATM related **accident** or **serious incident** information collated during a technical investigation?

- NEVER
- ALWAYS
- SOMETIMES

If your answer is ALWAYS or SOMETIMES, could you specify for which reasons and under which circumstances such access can occur ?

.....

**1.15** Based on your experience, has the appropriate authority for the administration of justice in your State, i.e., the competent judicial or administrative authorities, access to ATM related non serious **incident** information collated during a technical investigation?

- NEVER
- ALWAYS
- SOMETIMES

If your answer is ALWAYS or SOMETIMES, could you specify for which reasons and under which circumstances such access can occur ?

.....

**1.16** Are there any additional comments you would wish to make on the foregoing?

.....

**POSSIBLE IMPROVEMENTS TO NATIONAL LAW**

**1.17** Do you consider that the current provisions in the national law are satisfactory with regard to safety reporting in ATM?

- YES
- NO

If not, please provide details and/or suggestions for improvements

.....  
.....  
.....  
.....  
.....  
.....

## 2. REGULATION

### Description:

This section aims at identifying the extent to which the safety regulations in your State support a "non-punitive environment" for the reporting of safety occurrences in ATM.

### SAFETY REGULATORY REQUIREMENTS

**2.1** Do your State's national safety regulations in the area of "Reporting and Assessment of safety occurrences in ATM" explicitly mandate the implementation of a non-punitive environment?

YES  NO

If your answer is YES, could you please provide details and a copy of the regulations

.....

If your answer is NO, please provide any details which may explain why

.....

**2.2** If your answer is YES to question 2.1, to whom does this mandatory provision apply?

You may tick more than one answer.

ORGANISATION	YES	NO
Accident Investigation Authority	<input type="checkbox"/>	<input type="checkbox"/>
Safety Regulation Authority/Function	<input type="checkbox"/>	<input type="checkbox"/>
ATM Service providers	<input type="checkbox"/>	<input type="checkbox"/>
Airport Authorities	<input type="checkbox"/>	<input type="checkbox"/>
Military authorities	<input type="checkbox"/>	<input type="checkbox"/>
Others : please specify		

### POSSIBLE IMPROVEMENTS IN SAFETY REGULATIONS

**2.3** Do you consider that the provisions of your State's safety regulations are satisfactory with regard to safety reporting in ATM?

YES  NO

If not, please provide details and/or suggestions for improvements

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....  
 .....

### 3. SAFETY MANAGEMENT CULTURE

**Description:**

This section aims at identifying the extent to which ATM organisations have implemented internal procedures (such as "no blame culture") to encourage staff to report safety occurrences in ATM.

#### INTERNAL PROCEDURES

**3.1** Does your organisation have a document which sets out what will happen and under which circumstances to staff involved in safety occurrences in ATM?

YES                       NO

**3.2** What types of remedial actions are stipulated in this document in the event of a safety occurrence being reported (e.g., re-training, license suspension or withdrawal) ?

.....  
 .....

**3.3** When are those remedial actions triggered (e.g. negligence, wrongful act and omission, repetitive mistakes)

.....  
 .....

Is there any further information you may wish to provide?

.....

**3.4** Does your organisation have a document which stipulates who in the organisation has access to the filed reports, related facts and conclusions, and under which circumstances?

YES                       NO

If your answer is YES, please explain who has access and under which circumstances

You may tick more than one answer.

WHO	CIRCUMSTANCES
Manager of ACC/TWR/airport	
Safety manager of ATM organisation	
ACC/TWR/airport safety manager	
Nominated investigation team	
Staff involved in occurrence	
Other colleagues	
Others : please specify	

**3.5** Based on your experience, and referring to 3.1 and 3.4, are the measures documented implemented ?

NEVER                       ALWAYS                       SOMETIMES

If your answer is NO or SOMETIMES, Please explain what has prevented the implementation of promulgated measures?

.....

**3.6** Does your organisation have a reporting system which ensures the dis-identification of safety occurrence reports, to permit the cross-exchange of information between bodies who can use the reports for improving aviation safety?

YES                       NO





## ANNEX 2 - PROFILE OF RESPONDENTS

The questionnaire was sent to all EUROCONTROL States that have an ANSP:

	Questionnaire sent to:	Replied	
1	Austria	Yes	
2	Belgium	Yes	
3	Bulgaria		No
4	Croatia		No
5	Cyprus		No
6	Czech Republic	Yes	
7	Denmark	Yes	
8	Finland	Yes	
9	France	Yes	
10	FYROM	Yes	
11	Germany	Yes	
12	Greece	Yes	
13	Hungary		No
14	Ireland	Yes	
15	Italy	Yes	
16	Malta	Yes	
17	Moldova	Yes	
18	Netherlands	Yes	
19	Norway	Yes	
20	Portugal	Yes	
21	Romania	Yes	
22	Slovak Republic	Yes	
23	Slovenia	Yes	
24	Spain	Yes	
25	Suisse	Yes	
26	Sweden	Yes	
27	Turkey	Yes	
28	United Kingdom	Yes	
	Maastricht UAC	Yes	

The questionnaire was also sent to three ATCO international organisations: IFATCA (International Federation of Air Traffic Controllers' Associations), ATCEUC (Air Traffic Controllers' European Union Co-ordination) and IPMS (Institute of Professionals, Managers and Specialists).

1	<b>IFATCA</b> GATCO UK Naviair, Denmark Skycontrol, Suisse ATCO CZ Bosnia & Herzegovina	1 reply from IFATCA + 5 national replies.
2	<b>ATCEUC</b> Croatia SSKL SNCTA ENAV	5 national replies
3	<b>IPMS</b>	No reply

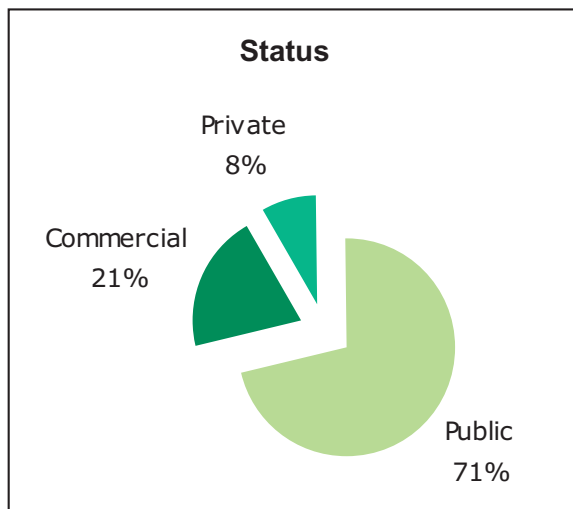


Figure A-1: Status of respondents

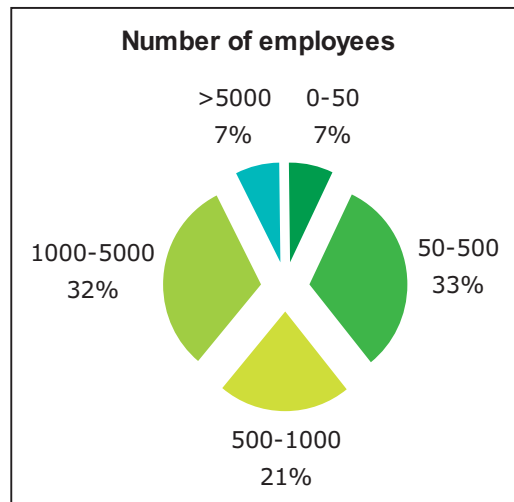


Figure A-2: Number of employees

The overwhelming majority of respondents (71%) were in the public sector. Commercial bodies comprised a significant minority (21%). See Figure A-1 above.

Figure A-2 shows the number of employees for each organisation that responded. Large and medium structures were prevalent in ANSPs, whereas regulatory bodies were of a significantly smaller size.

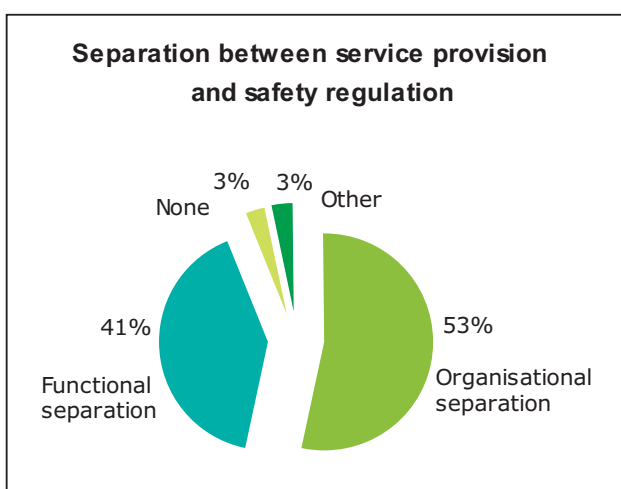


Figure A-3: Separation between service provision and safety regulation

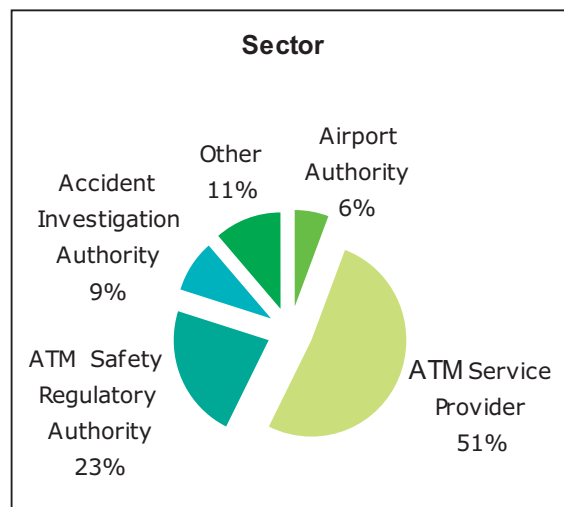


Figure A-4: Sector of activity

Two thirds of the ANSPs have implemented an organisational separation between service provision and safety regulation. One third has implemented a functional separation. No institution (but one ATCO professional association) declared that there was "no separation" between service provision and safety regulation in ATM in their State. Figure A-4 illustrates the sectors of activity of the respondents.

Professional organisations representing ATCOs provided valuable inputs. It was interesting to note that they did not always share the same opinion on specific issues with their ANSP and/or safety regulator.

## ANNEX 3 - GLOSSARY

TERM	DEFINITION
<b>AAIB</b>	Aircraft Accident Investigation Board
<b>Accident</b> (ICAO Annex 13).	An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which: <ul style="list-style-type: none"> <li>a) a person is fatally or seriously injured as a result of: <ul style="list-style-type: none"> <li>• being in the aircraft, or</li> <li>• direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or</li> <li>• direct exposure to jet blast,</li> </ul> except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or </li> <li>b) the aircraft sustains damage or structural failure which: <ul style="list-style-type: none"> <li>• adversely affects the structural strength, performance or flight characteristics of the aircraft, and</li> <li>• would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories, or for damage limited to propellers, wing tips, antennas, tyres, brakes, fairings, small dents or puncture holes in the aircraft skin;</li> </ul> </li> <li>c) the aircraft is missing or completely inaccessible.</li> </ul>
<b>AIRPROX</b>	Safety occurrence reports filed by aircraft pilots
<b>AIS</b>	Aeronautical Information Services
<b>ANSP</b>	Air Navigation Services Provider
<b>ASMT</b>	Automatic Safety Monitoring Tool
<b>ATC</b>	Air Traffic Control
<b>ATCEUC</b>	Air Traffic Controllers' European Union Co-ordination
<b>ATCO</b>	Air Traffic Control Officer
<b>ATM</b>	Air Traffic Management
<b>CAA</b>	Civil Aviation Authority
<b>CHIRP</b>	Confidential Human Incident Reporting Programme
<b>Claims</b>	Safety occurrence reports filed by pilots or air traffic controllers
<b>Commission (Permanent Commission)</b>	EUROCONTROL's highest deliberative (ministerial level) body
<b>ECAC</b>	European Civil Aviation Conference, comprising 38 European States (July 2002).
<b>ESARR</b>	EUROCONTROL Safety Regulatory Requirement
<b>ESARR 2</b>	"Reporting and analysis of safety occurrences in ATM" (Ed 2.0).
<b>Directive 94/56/EC</b>	Council Directive establishing the fundamental principles governing the investigation of civil aviation accidents and incidents (OJ L 319, 12.12.1994, p. 14).
<b>Directive 95/46/EC</b>	Directive of the European Parliament and of the Council dated 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of data (OJ L 281, 23.11.1995, p. 31).
<b>Draft Directive on Occurrence reporting in Civil Aviation</b>	European Commission draft Directive (COM (2001) 532 final) 2000/0343 (COD).

<b>EUROCONTROL</b>	The European Organisation for the Safety of Air Navigation. There are 31 Member States: Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany Greece, Hungary, Ireland, Italy, Luxembourg, the former Yugoslav Republic of Macedonia, Malta, Moldova, Monaco, the Netherlands, Norway, Portugal, Romania, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom (situation at 31 July 2002).
<b>EU</b>	European Union

<b>ICAO</b>	International Civil Aviation Organization
<b>ICAO USOAP</b>	ICAO Universal Safety Oversight and Assessment Programme
<b>IFATCA</b>	International Federation of Air Traffic Controllers' Associations
<b>Incident</b> (ICAO Annex 13)	An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.
<b>IPMS</b>	Institute of Professionals, Managers and Specialists.

<b>Level bust</b>	Any deviation from an assigned altitude or flight level in excess of 300 feet."
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<b>OJT</b>	On the job training
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<b>MASUAC</b>	EUROCONTROL Maastricht Upper Area Control Centre
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<b>PRC</b>	Performance Review Commission
<b>PRU</b>	Performance Review Unit
<b>Provisional Council</b>	The EUROCONTROL Provisional Council is the body that adopts, and submits for the Commission's approval, all measures to be taken for the accomplishment of the Organisation's tasks. The Provisional Council also advises the Commission on issues that it deems appropriate.

<b>Serious incident</b> (ICAO Annex 13)	An incident involving circumstances indicating that an accident nearly occurred.
<b>SQS</b>	EUROCONTROL Safety, Quality Management and Standardisation Unit
<b>SRC</b>	Safety Regulation Commission

<b>UK GATCO</b>	UK Guild of Air Traffic Control Officers
<b>UK SMF</b>	Safety Monitoring Function

### ANNEX 4 - REFERENCE DOCUMENTS

ICAO Annex 13 "Aircraft Accident and Incident Investigation" (July 1994)<sup>1</sup>

Directive 94/56 of the European Parliament and of the Council of 21 November 1994 establishing the fundamental principles governing the investigation of civil aviation accidents and incidents. (OJ L 319, 12.12.1994, p. 14).

Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data. (OJ L 281, 23.11.1995, p. 31).

Draft Directive of the European Parliament and of the Council of 2002, on Occurrence Reporting in Civil Aviation.

ESARR 2 "Reporting and analysis of safety occurrences in ATM" (Ed. 2.0)

SRC DOC 8 "ECAC States' ATM Safety Regulatory Systems Overview".

Reason, James – Human Error, October 1990.

Reason, James – Managing the Risks of Organizational Accidents, December 1997.

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1

A revised annex is in the process of being approved shortly by ICAO but this does not change the contents of this report

## ANNEX 5 - METHODOLOGY

### Task activities

The work was split into several phases:

1. The development, validation and sending of the questionnaire;
2. The collection of responses to questionnaires;
3. The initial analysis of the questionnaires and preparation of an interim report;
4. The preparation of the site visits, inclusive of identification of potential interviewees, and undertaking of appointments;
5. The site visits and interviews;
6. The compilation, organisation and validation of the questionnaires and interviews data;
7. The analysis of the final data; and
8. The development of the final report with conclusions and recommendations.

### Technical approach

The approach adopted was as follows:

1. To collect the ATM community views, perceptions inputs of the legal, regulatory and cultural impediments to non-punitive and blame-free reporting in their State and organisation;
  - ◆ A questionnaire was developed and circulated for comments within the PRC and also to the EUROCONTROL Legal Service, SRU and EATMP SQS Unit;
  - ◆ When agreed, the questionnaire was sent to a broad audience from various domains within the ATM community (ANSPs, safety regulatory authorities, accident investigation authorities and ATCO organisations) in all EUROCONTROL Member States<sup>1</sup>;
  - ◆ A large number of replies to the questionnaire were received;
  - ◆ Based on the initial analysis, a list of questions was developed to support the visits and interviews;
  - ◆ A list of States/organisations which ought to be interviewed was defined, based on pre-determined criteria;
  - ◆ A number of experts from the ATM community of each visited State was interviewed;
  - ◆ Data collected during the interviews was used to validate the interpretation of the contents of related questionnaires, when necessary;
2. To analyse the information collected and to present a general view of the different perceptions across States (and institutions);
  - ◆ Refinements were made to add additional options to the list of proposed answers to some questions of the questionnaire in order to capture the intended responses provided<sup>2</sup> ;
  - ◆ If additional material (e.g. legislation, regulations etc.) was available, this was used for a better understanding of the answers provided;
  - ◆ The validity of the answers provided was checked, whenever possible, and interpretation of a limited number of questionnaires was deemed necessary;
  - ◆ All raw and factual answers were then captured in an organised manner (both qualitative and quantitative);
  - ◆ When more than one response was received from one State (e.g. ANSP and CAA), they were all compared and, with the exception of those provided by the ATCO professional association, compiled into one "national response" to form a single "picture" of the national situation; (potential differences were addressed - refer to Section 4.3);
  - ◆ An exhaustive synthesis of both quantitative and qualitative data was produced on a "per State basis" as well as on a "per answer" basis;
  - ◆ Overall results were validated.

<sup>1</sup> With the exception of Monaco and Luxembourg who do not have en-route ATM.

<sup>2</sup> In some rare instances, the answer provided to a question is neither YES nor NO. In other instances, the answer provided is both YES or NO. Further information provided as companion text to those answers helps understand the intended answer. In order to properly capture the intended answers, a benefit was seen in adding two other options to a very limited number of questions: "NO, but on going" and "Partly".

3. To identify and assess the responses provided by the ATCO associations, that responded, to see if a consensus could be identified on some points;
4. To identify and assess the common and different perceptions expressed by the institutions in a State and the national ATCO association, of the same situation, when they appeared to exist:
  - ◆ When more than one response was provided to the questionnaire by one State, the "national response" (compiled as shown above) and the ATCO organisation's response were compared in order to identify any divergence and/or convergence in responses and perceptions;
  - ◆ A selected number of queries were made to highlight divergence in perception between ATCO associations and national institutions (e.g. ANSP, and/or safety regulators);
  - ◆ When relevant, other differences were identified and analysed;
5. To draw a number of conclusions and to develop recommendations to move towards a non-punitive and blame-free safety reporting in ATM in Europe;
  - ◆ The national opinions (consensual or diverging) were analysed, and the potential rationales behind the results were assessed in order to draw conclusions and recommendations;
  - ◆ These were reviewed by the SRU and by the EUROCONTROL Legal Service.
6. To produce a report with de-identified results names of countries, organisations or persons are generally omitted if related to a specific fact, result, conclusion or recommendation, unless otherwise agreed with the PRU;

### Task documents

#### 1. Questionnaires and interviews

Questionnaires and interview check lists are used in order to capture opinions from a large range of people, organisations and States.

The questionnaire had multiple choice questions as well as questions requiring a written answer, in order to offer the opportunity for free expression. The questionnaire was also be used as a basis for each interview together with a list of additional specific questions customised for each interview.

A PRU-led team, including as necessary, a safety expert and/or a legal expert carried out the interviews.

It was decided that interviews with the ANSP, the safety regulatory authority, and ATCOs would take place during the same visit. The three parties were however interviewed separately whenever possible.

#### 2. ICAO, EU and EUROCONTROL documents

Some essential documents were used and referred to during the survey:-

- ◆ ICAO Annex 13 "Aircraft Accident and Incident Investigation" (July 1994)<sup>3</sup>
- ◆ The EU Council Directive 94/56/EC "establishing the fundamental principles governing the investigation of civil aviation accidents and incidents"
- ◆ The Draft EU Council Directive "establishing a co-ordinated system of national mandatory occurrence reporting schemes in civil aviation"
- ◆ ESARR 2 "Reporting and analysis of safety occurrences in ATM" (Ed. 2.0)
- ◆ SRC DOC 8 "ECAC States' ATM Safety Regulatory Systems Overview".

#### 3. National documents

In some cases, the response to the questionnaire was incomplete or/and referred to a specific document required for complete understanding of the response provided.

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<sup>3</sup> A revised annex is in the process of being approved shortly by ICAO but this does not change the contents of this report



The web sites of some organisations, quoted in a number of questionnaires, provided some of the legal instruments for better understanding their responses, a resource very much appreciated;

Similarly, documents provided as attachments to the questionnaires were useful in the analysis, even if translation was required and additional legal analysis needed to be carried out.

Finally, a copy of related extracts from Aeronautical Information Publications (AIP) helped to better understand some of the answers provided, and prepare the interviews.

## Assessment of replies

Interpretation and validation of replies received from States were sometimes necessary. In the rare instances where answers provided by different institutions in a given State were opposite and assessed as being equally valid, a "no answer" was counted to avoid distortion of results. Generally, one questionnaire provided complementary answers to the other questionnaire(s), therefore completing a picture of the national situation.

Focusing on the "national responses", conclusions were developed from the thrust of the dominant answers (hence situations) across Europe, complemented by some details provided by the respondents.

Insofar as the replies from ATCO professional organisations are concerned, the points which were not highly dependent on a specific national situation were assessed in order to identify the consensual views expressed by ATCO professional organisations, whatever their national origin. These would include comments, criticisms and proposed ways forward.

Differences in answers pointed to items that might warrant further investigation.

Differences between States were identified and analysed to see if they were purely individual or reflected a potential trend that could be amenable to a particular group of States in opposition to another (e.g. EU member States versus non EU member States; countries with functional separation versus countries with organisational separation).

Other variations may have reflected geographical or cultural characteristics.

A similar exercise has been carried out to identify differences between a particular community in opposition to another. Indeed, within one State, differences in opinions may appear between service provider and regulatory authority, ATCO and service provider, ATCO and safety regulatory authority.

Many of the above differences were further examined during the interviews. Whenever possible and within the confidentiality limits, the parts were informed that the PRU team noticed a potential problem within their State or organisation. The results of the above analysis are to be found in the present report.



## About the Performance Review Commission

The Performance Review Commission (PRC) was established in 1998 to advise the Governing Bodies of EUROCONTROL 91 on the development of a strong, transparent and independent performance review and target-setting system. This system addresses all aspects of air traffic management including policy and planning, safety management at and around airports and in the airspace, as well as financial and economic aspects of services rendered.

The PRC is composed of 12 independent Commissioners with considerable senior managerial and technical experience of aviation. In 2001-2002 the PRC was formed of:

Douglas Andrew

Francisco Escarti

Cornelis den Hartog

Philip Hogge                      Chairman

Ivan Hubert

Philippe Jaquard                Vice-Chairman

Gregory Nanidis

Ianko Stoimenov

Antonio Triola

Uwe Völckers

Per Wallden

Knut Walther

The Performance Review Unit (PRU) supports the PRC and operates administratively under, but independently of the EUROCONTROL Agency. Should you wish to contact any Member of the PRC please do not hesitate to do so:

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### NOTICE

**The PRC has made every effort to ensure that the information and analysis contained in this document are as accurate and complete as possible. Only information from quoted sources has been used and information relating to named parties has been checked with the parties concerned. Despite these precautions, should you find any errors or inconsistencies we would be grateful if you could please bring them to the PRU's attention.**