EUROCONTROL

ESARR 2

repfaq.doc

SRC\WORK PROGRAMME\safety occurrence reporting\internal notes

FREQUENTLY ASKED QUESTIONS ON ESARR 2

14 December 2000

EUROCONTROL Safety Regulation Commission

ESARR 2

FREQUENTLY ASKED QUESTIONS

1. Applicability of ESARR 2
2. Liability and Legal aspects
3. Scope
4. Severity Classification-GM1-ESARR 2
5. International context
6. Implementation
7. Detailed questions

1. APPLICABILITY OF ESARR 2

1.1. Are National Regulators Obliged To Apply ESARR 2?

- In accordance with the EUROCONTROL Revised Convention, **ESARR 2 will have to be implemented and enforced by the EUROCONTROL Member States (Decision 80 of the EUROCONTROL Commission).** The other ECAC States non-member of EUROCONTROL are encouraged to implement ESARR 2 to ensure a proper harmonisation in the area.

- Each Member State will have to identify the actions needed to fulfil this international commitment, depending on their legislative framework.

- **ATM Safety Regulators will normally play a key role in the process to adopt ESARR 2 at a national level**. In addition, other national authorities may need to reconsider their complete safety regulatory framework in the light of ESARR 2 (e.g., aircraft safety regulators, Accident Investigation Bureaux, Ministry of Defence etc..). As such the answer to the question is YES:- the National regulators are obliged to apply ESARR 2 but they are NOT the only ones.

- **ESARR 2 shall in particular apply to all providers of ATM services** that fall under the jurisdiction of the national ATM safety regulatory body. Providers will have to implement the requirement within their organisations.

- Depending on national legislative arrangement, some member States may agree that EUROCONTROL Decision directly apply nationally. Others may need to incorporate ESARR 2 within their national legislation.

2. LIABILITY and LEGAL ASPECTS

2.1. How Do Regulators Arrive At A Conclusion Whether Or Not A Safety Occurrence Was Due To Gross Negligence Or Criminal Offence? Who Is Responsible When It Is A Criminal Offence: The Police Or The Regulator?

- The national judicial system may not always be involved in the aftermath of all safety occurrences in ATM. When the national judicial system is involved, it generally represents the authority in charge of investigating the legal responsibilities of those involved in the occurrence and in prosecuting those legally responsible.

- The technical investigation, either carried out by the safety regulator, the ATM service provider or other bodies responsible for the investigation of ATM safety occurrences, does not aim at allocating legal responsibilities. The technical reporting and investigation scheme required by ESARR 2 only aims at safety improvement: it includes the identification of the reasons why the occurrence took place as well as the development of remedial actions in order to prevent re-occurrences. EUROCONTROL is consistent with ICAO who requires that the sole purpose of accident investigation be accident prevention.

- The technical investigation may conclude that the occurrence was due to gross negligence. These are conclusions drawn by the investigating team, which should preferable include peers, and based on evidence collected as well as on their professional judgement. It would be advisable to document systematically in each organisation the actions to be taken when gross negligence has been recognised. In order to properly conclude on these matters, elements such as a competence assessment programme could be put in place. On the basis of the conclusions developed by the investigation team, a regulatory and/or management decision has to be taken by the regulator and/or service provider in question.

- ESSAR 2 does not provide for the characteristics or criteria by which such conclusions can be drawn or regulatory/management actions have to be adopted. It is up to each State and national organisations to develop safety regulatory requirement(s) and/or specific safety management principle(s) in this regard.

2.2. How to establish clear boundaries between gross negligence/criminal offences and other causes? ATCO views may differ from the views of investigators.

- The EUROCONTROL Agency is developing some guidance in that area. The main objective will be to develop guidance on how to implement a blame free environment, but still with responsibilities.

- There would be a need to define what 'punishment' would mean in each environment, for clarity.

- The purpose of punishment is to prevent an individual (or group of) from making dangerous acts against others. It does not address the root causes that were at the origin the dangerous acts. Each ATM Organisations should have laid down procedures (or reference to national laws) for discriminating deliberate criminal offences and gross negligence i.e. those acts that are liable to punishment from unintentional errors which should not lead to disciplinary measures.

- These procedures should state clearly that unintentional errors will not form a basement for punishment.
  Note that punishment should be somewhat defined to avoid any further mis-understanding e. g. withdrawing a licence pending the results of an investigation may or may be seen as a punishment.

- However the transition from violations to criminal offences may contain some element of grey area. This is the role of the management to monitor these grey areas in a pro-active way. As an example, routine violations should be monitored, any sign picked-up as they will soon become the norm (i.e. transparent to those who commit them). Should a problem arise that falls under the grey area category, ATM Organisations should have agreed laid procedures on how the decision making process (punishment/no punishment) works.

3. SCOPE

3.1. Why Do Accidents And Serious Incidents Need To Be Reported According To ESARR 2? Are They Already Reported By The Accident Investigation Board To ICAO, According To Annex 13. ?

- Indeed, ICAO Annex 13 requires States to notify accidents and serious incidents.

- However, ICAO does not require serious incidents to be investigated (ESSAR 2 does)

- ICAO Annex 13 does not require States to investigate accidents/serious incidents in a manner which enables one to identify ATM direct contributions to accidents as well as the indirect ATM contributions to accidents;- this may have led to some instances where accidents with ATM indirect contribution was not identified as such, preventing the ATM community from learning systematically of ATM precursors to accidents.

- Again, ICAO Annex 13 does not require Accident investigators to use a specific ATM terminology when classifying the ATM causes and developing safety recommendations. In order to facilitate the exchange of ATM safety information and identify areas for safety improvement across the aviation community, EUROCONTROL is advocating the use of a standard ATM taxonomy in the investigation/analysis/measurement/monitoring of safety occurrences in ATM.

- ESARR 2 is clearly promoting a proactive and standard approach to safety measurement and improvement across the aviation community and particularly to ATM.

3.2. Why Does ESARR 2 Requires Data From Non-ATM Related Accidents And Incidents (VFR)?

- VFR traffic is not considered as being outside the scope of SRC Terms of Reference. ATM deals with both VFR and IFR as airspace management (with airspace design) is part of ATM.

- Safety occurrences in ATM may involve near collisions or even collisions between an IFR and a VFR aircraft. Airspace design for example, is seen as one potential cause to safety occurrences in ATM. The same statement is valid for the ATS airspace classification.

- The collection of those specific occurrences involving VFR traffic and their related causes might reveal for example wrong classification of the ATS airspace or a lack of requirements in the area of airborne equipment for General Aviation or VFR.

3.3. ESARR 2, Attachment A, Para A- 1.3: Does "ATM Specific Occurrences" Apply To Only Those Occurrences, Which Are Not Reported According To A-1.1 Or A-1.2? Or Is It The Intention That e.g. An Accident Caused By A Failure Of The ATM Shall Be Reported Both As An Accident A-1.1 And As An ATM-Specific Occurrence (A-1.3)?

- Attachment A, para A-1.3: the ATM specific occurrences to be reported/notified and investigated at national level are only those which are not reported according to A-1.1 or A-1.2.

- This implies that ESARR 2 does not require that at national level, the severity/causes of the ATM related causes involved in the chain of events leading to the incidents/accidents are to be assessed. Obviously , such assessment is to be promoted as part of an effective safety management tool.

- Obviously, when an accident or incident is being reported, ATM events/causes involved in the chain of events have every chance to be de facto identified and thus investigated. Associated remedial actions will be developed.

- When reporting annual statistics to EUROCONTROL (requirement § 5.2) , and in order to avoid ambiguities, it has to be understood that only those 'ATM specific occurrences' which have not caused accident/incidents have to be reported under that category (section C - in the Annual Summary template). Those 'ATM specific occurrences', which caused accident/incidents will be collected as part of the list of causes to accidents/incidents (section D - in the Annual Summary

template).

Note: This will be clarified in future editions of ESARR 2, associated Guidance Material and Annual Summary Template.

3.4 ESARR 2 may be interpreted in a such way that the parties responsible for investigating reported occurrences are afraid to be swamped by data. If the public is invited to report occurrences, this may indeed happen.

- ESARR 2 ‘s intent is to foster the reporting of occurrences, whatever the source of information. Past cases have demonstrated that some serious incidents were only brought to the attention of the investigating party by the public.

- Today’s situation in Europe is more suffering from a lack of reliable safety data than from a too large set of data.

- It should be recognised that whether or not ESARR 2 exists, the public and third party will continue to report safety occurrences they’ve witnessed or perceived.

- It is also recognised that of all reported occurrences, only a part of them are worth investigating. Professional judgement as well as recognised criteria will be key to that prioritisation of resources (severity, risk of re-occurrence, potential for lessons learned etc..).

- The EUROCONTROL Agency is finalising a guidance material capturing some good working practices, which can be used in incident reporting and investigation. In particular, the guidance will specify that, based on professional judgement, and provided the justification is documented, an occurrence may not be investigated in detail, or may not be investigated at all. Anytime in the investigation process, a decision can be made to close the investigation, provided this decision and its rationale are documented.

3.5 In some States, there may be parallel investigating bodies (e.g: the Air Traffic provider, the ATM regulator, the Accident Investigation Bureau, the AIRPROX Commission etc..) and their work may have to increase if more occurrences have to be reported and investigated.

- ESARR 2 does not specify the national arrangements to be put in place to report/investigate safety occurrences in ATM.

- There may be a need to revisit the national arrangements to optimise the use of the national resources involved in reporting and investigation.

- Clearly, a lack of resources in this area has been identified in a number of States and remedial actions need to be taken if we want to ensure that reports are being investigated, and produce quality outputs.

3.6 Are ACAS reports considered as ATM related incidents?

- ESARR 2 is very careful not to mix up the TYPE/NUMBER OF REPORT with the TYPE/NUMBER OF actual INCIDENT.

- One knows or is made aware about a POTENTIAL incident/safety Occurrence by different means: human reports (ACAS, AIRPROX) and/or automatic alerts/alarms (STCA, MSAW). More than one report/alert can be filed for the same occurrence.

- The Annual Summary Template, developed to capture the national annual summaries, distinguishes the number of reports/alerts from the number of occurrences/incidents. Indeed, reported occurrences, when investigated, may prove not to have been an incident (a file AIRPROX may lead to the conclusion there was no loss of separation minima for example).

- ESARR 2 clearly differentiates the Report (e.g. AIRPROX) from the incident itself (i.e. loss of separation minima)

- ACAS reports are an enabling means to detect potential incidents. There are not considered as INCIDENTS per se.

3.7 What do we mean by ATM related occurrences? Can an accident due to an engine failure be considered as an ATM related occurrence? Can an occurrence where the only ATM involvement was to react to an accident in a non optimised way be considered as ATM-related? Can a VFR collision with the ground be considered as an ATM-related occurrence?

- Only occurrences where ATM has been identified as one (or many) of the causes in the chain of events leading to the occurrences are considered as ATM related occurrences.

- For EUROCONTROL to assess the ratio of safety occurrences having had an ATM contribution (direct/indirect) the total number of occurrences have also to be reported in the AST.

- The definition of ATM is here important when assessing ATM contribution to occurrences.

- The investigation of some occurrences, such as accidents due to engine failure, even if no ATM related cause could be identified, may still enable to identify if ATM helped or did not help to reduce the risk of the occurrences. Lessons learned in that regard may be documented in the final report and may contribute to the overall safety improvement of aviation.

- The investigation of some occurrences, such as accidents where ATM was only involved when handling the emergency situation, are not considered as ATM related, and not reported as such to EUROCONTROL. However, the investigation of such occurrences may still enable to identify if ATM helped or did not help to reduce the risk of the occurrences. ATM would not be seen as responsible but lessons learned in that regard may be documented in the final report and may contribute to the overall safety improvement of aviation.

- The investigation of a VFR colliding with the ground might lead to the conclusion that one cause was a lack of service to VFR in that airspace, not being provided for purely commercial/financial reasons. **If** the investigation concludes that this is one of the causes, then the accident is an ATM related accident. If the investigation concludes differently, then the State will classify it as non ATM related.

- Obviously, the fact that an occurrence is classified as ATM related or not **only relies upon the analysis/investigation of the occurrence itself as performed at national level, and the outcome of it**.

- The annual summary reports from States to EUROCONTROL is mainly there to identify ATM safety levels and trends at European level. Complementary mechanisms are being put in place to collect and identify in greater detail specific risk areas in aviation and the potential for ATM contribution to overall safety improvements.

3.8 What do we mean by ATM specific occurrences? Dos this also include loss of a VOR? Breakdown of radar display?

- ESARR 2 aims at initiating a collection and analysis of breadown in the ground part of the ATM System, which would otherwise have been left unnoticed, should not incident nor accident have been reported .

- ESARR 2 draws a line between what's to be reported as an ATM specific occurrence and what is identified only when contributing to an accident, incident or ATM specific occurrences (i.e as a cause):-
  1. Today, with the current version of ESARR 2, only those occurrences, which happen at the level of the **service** or at the level of the **function,** have to be reported as ATM specific occurrences.
  2. Occurrences such as failure of a specific VOR used for en route purposes do not need to be reported as per ESARR 2 if the provision of the navigation function is not jeopardised. A failure of the unique VOR used for a STAR for example may need to be reported if the overall navigation function is jeopardised.
  3. Occurrences at the equipment or individual level do not need to be reported if they have not impacted the provision of the services nor the functions listed in ESARR 2.

3.9 Why is "Runway incursion" not included in ESARR 2 but is included in HEIDI?

- ESARR 2 aims at identifying and differentiating two types of runway incursions, those where there was an actual risk of collision and those where no risk of collision existed. Adding these two categories equals identifying the total number of runway incusrions.

- ESARR 2 used terms and definitions developed by HEIDI as off September 1999. Since, HEIDI has slightly modified its structure.

- The population of ESARR 2 required statistics can still be carried out by combining the data classified under "runway incursion" and under another qualifier: 'avoiding action : YES/NO'.

- Should confusion exist, ESARR 2 could be modified to include in addition the term/definition "runway incursion" .

3.10 What about collision with the ground with no ATM contribution identified.

- This accident will have to be reported and investigated at national level.

- This accident will have to be reported to EUROCONTROL, counted under the appropriate category of accidents, but not counted in the number of accidents where an ATM contribution (direct or indirect) has been identified.

4. SEVERITY CLASSIFICATION- GM1-ESARR 2

4.1 Schemes Of Occurrences (Pages 10 And 12) Should These Matrices Not Be Included In ESARR 4?

- The SRC agreed to develop safety objectives and requirements that can be measured or audited.

- Therefore the severity classification scheme used in ESARR 4 to assess **a priori** the severity of effects of hazards on aircraft operation is consistent with the severity classification scheme used to assess a **posteriori** the actual severity of incidents in ATM in ESARR 2.

- The risk classification scheme developed in ESARR 4 will include quantified targets in terms of ATM contribution to accidents and incidents etc.. ESARR 4 does not apportion/budget these risk objectives across the ATM System in order to allow for some flexibility in meeting the intent of ESARR 4. However the risk matrix in page 10 of GM1-ESARR 4 is consistent in intent and structure with that of ESARR 4 as it enables to monitor the actual risks in the ATM System, hence to demonstrate over time that the quantitative risk objectives of ESARR 4 are being met.

- This consistency will enable one to monitor achieved safety levels in ATM against ATM safety minimum objectives and to monitor the actual key risk areas in ATM against those ATM hazards which had been anticipated when assessing the safety impact of proposed change(s) to the ATM System.

- The severity classification schemes in ESARR 2 is to be used when analysing ATM related occurrences, after they took place :-

    - One that allows the classification of occurrences according to the severity of their effect on the safe operations of aircraft and occupants; it enables to determine the actual level of risk that existed for aircraft and occupants (Refer to Attachment A); and
    - One that allows the classification of occurrences according to the severity of their effect on the ability to provide safe Air Traffic Management Services (Refer to Attachment B).

4.2. Severity Classification Scheme For Safety Occurrences In ATM
ATM Specific Occurrences (Page 16)
Does This Severity Scheme Not Relate Only To The Performance Of Engineering Systems Instead Of To Human Performance? This Scheme Addresses The Inability Of Systems, It Does Not Address Their Incorrect Application. Is It Not Necessary To Have A Parallel Scheme Or A Breakdown To Include The 'Human' Level?

- Indeed, the current definitions and examples only seem to cover the ATM infrastructure. This is however not the intent.

- There is therefore a need in the area of “ATM specific occurrences”, in a revised version of the document, to develop further the definitions and examples to cover better the procedural and human elements of the ATM System.

- Examples could include for example, for severity AA: -

    1. disease in a centre affecting all ATCOs at the same time or an Air Traffic Control room being suddenly filled in with smoke/dense gas.
    2. the introduction of new separation minima and related procedures based on ADS, which have not been assessed properly and which, only by calculation, are known to lead to separation infringements.

- Examples could include for example, for severity A: -

    3. An ATCO giving wrong clearance to aircraft in his sector on purpose.

4.3. The Risk Classification Scheme Is Based On The Severity Of Occurrences. How Do You Know The Severity Of An Occurrence Without Analysis?

- There may be two steps in the assessment of the severity of an occurrence, the second one being required by ESARR 2:-

    1. When an occurrence is notified, there may be the possibility to carry out, in some cases, a preliminary assessment of the severity based on the factual data collected, in order to determine if any immediate remedial action is required, if ICAO should be notified of the occurrence as per Annex 13 or not, if the independent Accident Investigator Body is to investigate the incident, and also to make a judgement on the allocation of resources that will be provided to the analysis itself.
    2. Then, at the end of the analysis/investigation process, there is a requirement to determine the actual severity of the occurrence, based on the results of the analysis (reconstruction of the occurrence and identification of causes) . This is generally done by a specific independent Commission at national level.

4.4. Severity Classification Scheme For Safety Occurrences In ATM Scheme Of Occurrences (Page 10) Could You Please Provide More Guidance On How To Use This Table?

- There are three ways in which risk assessment (hence the table on page 10) may be used in occurrence reporting systems:-
    1. Firstly, a preliminary risk assessment can be performed to determine the allocation of resources to be provided for the investigation. Clearly an infrequent, low severity occurrence may not merit the resources of a high severity event. This risk assessment is being re-validated all along the investigation.
    2. Secondly, a national review of occurrences and severity/frequency may take place during subsequent stages of the occurrence investigation. This is intended to ensure that consistent criteria are applied to any risk posed by an occurrence.
    3. Thirdly, a national review of occurrences and risks may be done periodically to assess the actual level and areas of risks in the ATM System, monitor achieved levels of safety against safety objectives and identify the

ATM key risk areas.

- Different ATM providers or ATM safety regulators may refine and operate their own local classification schemes and develop quantitative targets, depending on the scope of the ATM element under consideration. The actual risk is a factor of severity and frequency (Risk= severity*frequency) :-
    1. Nationally or locally, qualitative or quantitative frequency thresholds can be determined for each class of severity to trigger or not a well resourced investigation (other criteria may be defined locally to be support this decision making);

    2. When an occurrence is notified, the investigator, by looking at previous records on similar occurrences identifies its past frequency and is in a better position to anticipate its potential for re-occurrence. Taking into account the “a priori preliminary” severity of the occurrence, the investigation team assesses the tolerability of the risk induced by such an occurrence and proposes accordingly a away forward.

    3. Typically the closer to A1 (very frequent serious incident), the more essential it is that the investigation is allocated significant resources. The closer to E5 (very rare with no safety effect events), the less essential it is that the investigation is allocated huge resources.

(*Note: In order to avoid mis-understanding, this may need to be better written in a revised version of GM1-ESARR 2*.)

4.5. Severity Classification Scheme For Safety Occurrences In ATM
Isn't It Important To Identify And Allocate Two Severity Levels To Incidents In ATM: One Reflecting The Severity Of The Incident Itself And The Second One, The Severity Of The ATM Specific Occurrence Which Impacted The Aircraft ?

- ESARR 2 requires **as a minimum** the assessment of the severity of the incidents in ATM (i.e, when the occurrence impacted aircraft).

- This does not rule out the need and the feasibility of assessing in addition the severity level of the ATM causes (.i.i ATM specific occurrences), which were involved in the incident. Indeed, in a worse case scenario, the same ATM events could have led to incidents of higher severity or even to accidents.

- These additional assessments would also allow for the appropriate resources to be dedicated to the investigation and resolution of those ATM events, which are considered as severe from a pure ATM standpoint.

- These additional assessments are today as seen as part of a safety management function within an ATM service provider organisation. They may be required by a future version of ESARR 2 should this be proposed and agreed by SRC.

4.6. GM1-ESARR 2, Attachment A And Attachment B: Is It The Intention That Classification In Accordance With Both Attachment A And B Shall Be Made For One And The Same Occurrence (If Relevant)?

See above

4.7. The definitions and examples of serious incidents are not consistent with ICAO definition of serious incidents.

- ICAO proposes both a definition for serious incidents and provide for examples of ATM related serious incidents such as AIRPROX A.

- ESARR 2 and related GM1-ESARR 2 are considered consistent with those definitions and examples.

- However, GM1-ESARR 2 proposes criteria so that the interpretation of the ICAO material is made less subjective for ATM related incidents.

- Proposed examples were developed taking into account criteria used across a number of countries and considered as generic enough to be harmonised.

- This is not to say that additional criteria can not be added to go a step further down the road in reducing the level of subjectivity when assessing the severity of an occurrence. This not to say that each class of severity is homogeneous enough. However, considering the various types of ATM related incidents (not only air proximities), the phases of flights, the characteristics of environment, of traffic, it would be difficult to have a very homogeneous set of limited severity classes. A higher degree of homogeneousity may require a higher number of classes.

- When EUROCONTROL is in a position to collate from States the typical justifications/rationale/criteria they systematically use (usually called as ‘common sense’) and track when assessing the severity of safety occurrences, EUROCONTROL will be in a position to develop means of compliance to ESARR 2 with more detailed criteria or even, ultimately to issued a more complete version of GM1-ESARR 2. The EUROCONTROL EATMP/SQS is about to initiate activities in this area.

4.8. GM1-ESARR 2, Para 1.3: Is there a firm date when the mentioned Guidance Material will be available?

- EATMP/SQS is initiating work on this Guidance Material (severity assessment) and it is anticipated that a draft document be circulated for comments to the safety Improvement Sub Group of the EATMP/Safety Group.

- It can be expected that this Guidance Material be made available in the course of 2001.

4.9. GM1-ESARR 2, Attachment A And Attachment B:
a) These Tables Should Be Supplemented With Text Describing How To Use The Tables And What The Variables (A) Ax-Ex Are Supposed To Mean.

b) Shall This Table Be Used For The Sum Of All Occurrences Of Each Severity Class Or Shall It Be Used For The Sum Of Each Type Of Occurrence (e.g Loss Of Voice Communication, Loss Of Radar Data etc..)

a)

- Refer to the response provided to question 'Severity Classification Scheme for Safety Occurrences in ATM- Scheme of Occurrences (Page 10): Could you please provide more guidance on how to use this table?'
- New text along those lines will be proposed in future editions of GM1-ESARR 2.

b)

- The tables are to be used for the sum of each 'type' of occurrences.
- The refinement(s)/level(s) of detail of the table(s) will be developed nationally and/or locally and will depend upon the scope of the national reporting scheme and its level of detail (according to HEIDI taxonomy)

4.10. GM1-ESARR 2, Para 1.3: ATTACHMENT B, Table II -what does element mean?

- 'Element' is used in a general way: it may mean human, procedure, or equipment or part thereof.

4.11. GM1-ESARR 2, We need for additional as well as less and less subjective Severity Criteria

- Indeed, existing severity criteria in GM1-ESARR 2 were the ones considered as generic enough to be used across States. GM1-ESARR 2 is a starting point to go further down the line of ICAO definitions and examples by adding new criteria such as “level of awareness and level of control”, level of ability to recover from the hazardous situation.

- Severity assessment is still a very highly subjective assessment across States and it is highly improbable that two groups assessing the same occurrences conclude on the same severity level.

- It was not felt judicious at this stage to produce a safety regulatory document, which is too prescriptive and detailed in this area. However, the EUROCONTROL Agency has initiated work in that area to attempts at providing additional criteria, as far as possible.

(*Note:- Also refer to answer to question 4.7 above*)

4.12. GM1-ESARR 2, Attachment A: the fact that AIPRPROX 'no risk of collision' is mentioned as an example of "significant incident" may lead some people to believe that the significant incidents are not worthwhile being reported and investigated

- Indeed, this may be misleading as placing a wrong judgement on that category of incidents.
- Significant incidents should indeed be reported and investigated: their severity was only 'significant' because one was probably lucky.
- ESARR 2 intent is to avoid that only the fatal accidents or the most severe incident be given attention by the high level management. No risk of collision may only mean 'we were lucky THIS TIME'.

4.13. GM1-ESARR 2, Attachment B: Additional examples may be needed in the area of "Overload" and of "Human errors".

- Indeed, when more experience is gained, additional examples will be added.
- Overload events are also considered as very sensitive and subjective issues.

4.14. Suppose a total loss of communication (at night, without any traffic) not leading to any effect on the aircraft. Which severity scheme do you use?

- In GM1-ESARR 2, you have to use the severity classification scheme outlined in Appendix B, for ATM specific occurrences.

4.14. Suppose a total loss of communication leading to an AIPROX and concluded as a separation infringement. Which severity scheme do you use?

- In GM1-ESARR 2, you have to use the severity classification scheme outlined in Appendix A, for ATM related incidents.
- "Total loss of communication" will be identified as one cause of the incident.
- You may also want to assess the severity of the "total loss of communication" if this has been identified as one cause of the incident. You'll then use the severity classification scheme outlined in Appendix B, for ATM specific occurrences.
- ESARR 2 does not require yet to assess the severity of ATM causes to safety occurrences but this can well be a safety management activity, driving the prioritisation of safety management activities.

4.15. Suppose a total loss of communication leading to an AIPROX and concluded as a separation infringement. Which severity scheme do you use?

- In GM1-ESARR 2, you have to use the severity classification scheme outlined in Appendix A, for ATM related incidents.
- "Total loss of communication" will be identified as one cause of the incident. You may also want to assess the severity of the "total loss of communication" if this has been identified as one cause of the incident. You'll then use the severity classification scheme outlined in Appendix B, for ATM specific occurrences.
- ESARR 2 does not require yet to assess the severity of ATM causes to safety occurrences but this can well be a safety management activity, driving the prioritisation of safety management activities.

5. INTERNATIONAL CONTEXT

5.1 What is the relationship at the moment between HEIDI and ADREP 2000?

- The HEIDI taxonomy was released on 8th May 2000. Work to be carried out in co-operation with ICAO in view of incorporating HEIDI field items into ADREP2000 has been completed. The outcome is undergoing the ICAO formal approval process, 80 to 90 per cent of the HEIDI fields are candidate for incorporation. Following formal ICAO approval, updated versions of HEDI and ADREP2000 will be issued.

5.2 When identifying the causes of safety occurrences in ATM, how do we report those related to the airborne part of the ATM System?

- Any cause to a safety occurrence in ATM has to be identified and collected in the national data base, or files.

- Adequate feed back to the airlines, aircraft manufacturer(s) and/or approval authority(ies) of the airline'(s) /aircraft manufacturer(s) is expected to take place so as to prevent re-occurrence.

6. IMPLEMENTATION

6.1 Why Is 30th March The Final Date For Reporting?

- To be able to receive national data/statistics on occurrences from the previous year and also because up to now, this was the deadline for the production of the SRC input to the yearly Performance Review Reports (produced by the PRC).

- This was also to encourage Sates to report and investigate safety occurrences in ATM in a more timely manner than presently.

6.2 How to justify the implementation of a safety improvement measure?

- At national level, there may not be enough data identifying precursors, which would justify for the installation of a new system or a new training session. It would be helpful to use past accident and incident data which are available from other units or other States, get the background information to check if the lessons learned are applicable to the local environment.

6.3 Why does the Annual Summary Template includes CFIT and not "collision with the ground"?

- All ATM related accidents have to be reported to EUROCONTROL as per section 5.2 of ESARR 2.

- The AST includes a number of categories of accidents of specific interest to the SRC as well as a broader categories including all other ATM related accidents which have not bed reported in the other categories.

- CFIT is one of the categories of accidents which can be classified as "collision with the ground" but not the only one.

- Should other categories of "collision with the ground" accidents be identified as of specific interest to the SRC, the AST would be modified accordingly.

6.4 Isn't the use of a data base to support the overall process implied by ESARR 2, HEIDI and the Annual Summary Template essential?

- Yes, when introducing the EUROCONTROL Safety Improvement and Measurement Programme to EUROCONTROL, it was made clear that a number of essential actions had to be taken, a number of tools had to used to support its implementation and to ensure that harmonised and consistent reporting schemes are implemented at national level.

- The use of a data base consistent with ESARR 2, HEIDI and the AST is key to the success of the overall programme.

- The use of a data base consistent with ESARR 2, HEIDI and the AST will significantly reduce the workload induced by a manual only activity.

6.5 Couldn't EATMP/SQS and SRC/SRU make use of the ACAS data collected in EUROCONTROL Experimental Centre ?

- EATMP and SRC are finalising a process by which EUROCONTROL will collect safety data from States in a way which suppress duplication of requests and support a most optimised way of handling the data in EUROCONTROL and providing consistent feed back to States and national Organisations.

- The safety data collected by the ACAS Team in EEC is based on a voluntary report of information. The sending of annual statistics to the SRC is binding on States as per ESARR and this official route is currently the preferred one.

6.6 Is the monitoring of the implementation of ESARR 2 going to be done under the CIP monitoring?

- Monitoring of implementation of ESARR is being today undertaken by an SRU survey.

- However, recent discussions within the SRC could lead to a monitoring of ESARR implementation in the framework of the CIP

7. DETAILED QUESTIONS

7.1. Where do you classify a TCAS within HEIDI when no other aeroplane is involved?

- This depends on the outcome of your investigation process. More data is required to respond to that question.
  Example:-
  It would look like this:
  - Type of report: TCAS
  - number aircraft involved: 1
  - (factual details on location, aircraft etc)
  - etc...(particularly *no separation loss*)

7.2. Who is the focal point for reporting to EUROCONTROL the requirements laid down in ESARR 2?

- With regard to ESARR 2 requirement for reporting annual data to EUROCONTROL (requirement 5.2):-

  1. The focal point for collecting this national data In EUROCONTROL is the Safety Regulation Unit
  2. The focal point(s) at national level depend(s) upon the national institutional arrangements. The SRU request (Annual Summary Template) is being sent to EUROCONTROL and ECAC Ministers of Transport and they are the ones to arrange for a national response to be developed and forwarded to SRU.

7.3. Where does the partial information produced by the PRC on ATM safety performance system comes from?

- The safety section of PRR1 was produced in 1999 by the SRC, based on a review of safety data publicly available as well as surveys of national data via EUROCONTROL questionnaires. These aggregated results and conclusions were provided to the PRC.

- In 2000, the PRC used in PRR 3 only part of what the SRC had produced.

- It is recognised that only partial annual information was provided because some States did not have time to complete the investigation of the safety occurrences of the previous years. The results will therefore need to be updated. (The partiality of the information was due to the fact that the PRU needs the data by April of each year in order to include them within the yearly Performance Review Report. The SRC is currently developing proposals to better interface with the PRC and to produce complete annual safety reports)

.

7.4. What Was Meant By ATM Security?

- All hazardous situations related to security, such as fire in an Air Traffic Control Centre, a bomb or sabotage. Things of that sort which have an impact on the ability to provide safe ATM services.

7.5. ATS Occurrence Reporting Form Is HEIDI compliant with this form?

- Yes it is fully compliant with it. Internal co-ordination between AMN, SQS and SRU took place before the form was finalised. Furthermore, after the ATS Occurrence Reporting form was released, the HEIDI taxonomy was revised to ensure total consistency.

7.6. ATS Occurrence Reporting Form
Will the ATS Occurrence Reporting Form replace ICAO's ATS Incident Report?

- This is the intent but it will be up to ICAO to decide.

7.7. GM1-ESARR 2- Attachment B , Example Table Following Table III.
Why Are The Words 'Sudden' And 'Without Warning' Left Out Of The Examples 'Serious Inability To Provide Safe ATM Service' And 'Partial Inability To Provide Safe ATM Service'.

- This scheme is recognised as the first attempt to initiate at European level, the reporting and assessment of ATM specific occurrences, even when they had luckily, not impacted aircraft operations. Very few States in Europe already do report, investigate and assess severity of those occurrences, and when they do, very few have clearly identified unambiguous and complete criteria to assess the severity of those occurrences.

- The term ‘sudden’ is used in the definition of 'Serious inability to provide safe ATM service' and 'Partial inability to provide safe ATM service'.

- The term 'without warning' is left out of all the definitions (it is only included in some examples).

- The terms ‘sudden’ and 'without warning' are not included in the examples for 'Serious inability to provide safe ATM service' or 'Partial inability to provide safe ATM service'. There are no specific reasons for this except that the example list is not extensive. It is intended that a revised version of GM1-ESARR 2 is produced at a later stage when States have gained national experience so that additional as well as more specific examples can be added at that stage.

7.8. ESARR 2, Para 8.3: Is There A Firm Date When The Mentioned Guidance Material Will Be Available?

- EATMP/SQS is continuing its work on this Guidance Material and it is expected that a draft document be circulated for comments to the safety Improvement Sub Group of the EATMP/Safety Group.

- It can be expected that this Guidance Material will be made available early 2001.

7.9. ESARR 2, Attachment A, Para A- 2: It Would Be Useful If This Paragraph Was Supplemented With A List Of Data Suitable For ATM-Specific Occurrences.

- The HEIDI Taxonomy may provide a check list of possible contextual/factual data to be collected and stored about ATM-specific occurrence.

- ESARR 2 can not be exhaustive in that regard but additions could be proposed for inclusion in future editions of ESARR 2.

7.10. ESARR 2, Incident Type 'Near Collision' Should Be Included In The Glossary (Ref: e.g. The Definition In The Heidi Taxonomy).

- The set of terms/definitions in ESARR 2 is not extensive.

- The HEIDI Taxonomy provides by default, definitions for those terms not included in ESARR 2.

- However, due to the importance of that term in ESARR 2, this addition will be proposed for inclusion in future editions of ESARR 2.

7.11 Why doe ESARR 2 and the Annual Summary Template include CFIT and not “collision with the ground”?

- All ATM related accidents have to be reported to EUROCONTROL as per section 5.2 of ESARR 2, including those collisions with the ground where ATM was a contribution.
-
- Statistics for all accidents have also to be reported.

- Appendix A of ESARR 2 and the AST include a number of categories of accidents of specific interest to the SRC as well as a broader categories including all other TM related accidents which have not been reported in the other categories.

- CFIT is one of the categories of accidents which can be classified as “collision with the ground” but not the only one.

- Other categories of “collision with the ground” accidents could be identified as of specific interest to the SRC. The AST would then be modified accordingly.

7.12. What is the relation between HEIDI and ESARR 2?

- ESARR 2 terminology is fully consistent with that of HEIDI.

- ESARR 2 includes in some instances (such as the section on ‘category of causes’) the head of chapters (or equivalent). In those cases, the sub-section (and more levels of sub-sections) can be found in HEIDI.

- ESARR 2 does not required the use of the HEIDI taxonomy but strongly recommends the use of HEIDI terms and definitions in the reporting and assessment of safety occurrences in ATM.

- When ESARR 2 was approved by EUROCONTROL, it was recognised that alone it would not be sufficient to ensure that consistent and harmonised reporting schemes are implemented. It necessitates the use of other guidance material and more specifically of the HEIDI taxonomy. However, it has to be recognised that a line has to be drawn between safety regulation and safety management activities.

7.13. What incidents are to be investigated by accident investigators?

- ESARR 2 does not require any specific national arrangements.

- ICAO Annex 13 is applicable to all accidents/incidents being investigated by the Independent body in charge of accident investigation (unless otherwise specified in Annex 13, where some requirements only relate to accidents, accidents and serious incidents).

- The EU directive published in 1994 specifies that it is up to the national Independent body in charge of accident investigation to determine what they have to investigate.