Pursuant to Article 38 paragraph (2) of the Aviation Act ("Official Gazette of the Republic of Macedonia" No. 14/06, 27/07. 103/08 and 67/100, the Director General of the Civil Aviation Agency enacted the present

NATIONAL AVIATION SAFETY PROGRAMME

CHAPTER 1 GENERAL

1. Foreword

Aviation is a mutually dependable system of all participants at international and national level and they are all internationally responsible for it. The Civil Aviation Agency has a regulatory responsibility to the aviation safety in the Republic of Macedonia and international responsibility to the aviation community. Our mission is to regulate activities in the field of air transport in the Republic of Macedonia in order to provide safe, secure, regular, efficient, economically and environmentally feasible national civil aviation in accordance with international standards and recommended practices of ICAO, and harmonized and integrated with the ECAC, JAA, EUROCONTROL and European Union (EASA) system, in the interest of all participants and particularly directed towards passenger protection. The new ICAO Standards place responsibility on the ICAO Contracting States to have State Safety Program (SSP). The Civil Aviation Agency welcomes this ambitious plan and for that purpose examines its legislation, regulation, policies and process. As a driving force for aviation development in the Republic of Macedonia, the Civil Aviation Agency regards aviation safety as its number one priority and set its policies and processes in a new, modern approach. This SSP is meant to provide a clear picture of the aviation regulatory structure, organization and policies and a link with our partners on international level, i.e. with ICAO, EUROCONTROL, EASA and the European Commission, for the purpose of providing aviation safety. With the implementation of the National Aviation Safety Programme, the Civil Aviation Agency of the Republic of Macedonia is expected to set the highest standards in air transport of the Republic of Macedonia. It is clear that most essential elements of the aviation safety framework have been already established but our intention is to set the highest safety standards and raise the safety level in order to minimize the risk and ensure mobility of citizens. The harmonization of national aviation legislation with the EU aviation law and the cooperation with the European Aviation Safety Agency (EASA) as well as the European Commission through the implementation of the European Common Aviation Area Agreement and the Working Arrangement with the EASA is underway. We have done a lot, but there are still issues that need improvement that we plan to work on. Improvement of the regional cooperation and promotion of leadership in the region with active participation and cooperation with the international aviation organizations ICAO, ECAC, EUROCONTROL, JAA and EASA, as well as the improvement of the international reputation of the Republic of Macedonia are our huge challenges. The Civil Aviation Agency of the Republic of Macedonia intends to provide safe and efficient air transport fully integrated in the European transport network that would contribute to the overall progress of the Republic of Macedonia.
## 2. Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AIB</td>
<td>Accidents Investigation Branch</td>
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<td>ADREP</td>
<td>ICAO Accident/Incident Data Report</td>
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<td>AGNA</td>
<td>EASA Advisory Group of National Authorities</td>
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<td>AIC</td>
<td>Aeronautical Information Circular</td>
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<td>AIP</td>
<td>Aeronautical Information Publication</td>
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<td>ALARP</td>
<td>As Low As Reasonably Practicable</td>
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<td>AloS</td>
<td>Acceptable Level of Safety</td>
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<td>ANSP</td>
<td>Air Navigation Service Provider</td>
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<td>ATM</td>
<td>Air Traffic Management</td>
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<td>CAA</td>
<td>Civil Aviation Agency</td>
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<td>CAP</td>
<td>CAA Civil Aviation Publication</td>
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<td>CFIT</td>
<td>Controlled Flight into Terrain</td>
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<td>CI</td>
<td>CAA International</td>
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<td>CR</td>
<td>Common Requirement</td>
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<td>CSP</td>
<td>EASA Community Safety Programme</td>
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<td>EASA</td>
<td>European Aviation Safety Agency</td>
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<td>EC</td>
<td>European Commission</td>
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<td>ECAC</td>
<td>European Civil Aviation Conference</td>
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<td>ECCAIRS</td>
<td>European Co-ordination Centre for Accident and Incident Reporting Systems</td>
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<td>ER</td>
<td>Essential Requirements</td>
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<td>ESARR</td>
<td>Eurocontrol Safety Regulatory Requirement</td>
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<td>ESSI</td>
<td>European Strategic Safety Initiative</td>
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<td>EU</td>
<td>European Union</td>
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<td>Eurocontrol</td>
<td>European Organisation for the Safety of Air Navigation</td>
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<td>FDM</td>
<td>Flight Data Management</td>
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<td>GA</td>
<td>General Aviation</td>
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<td>GASIL</td>
<td>General Aviation Safety Information Leaflet</td>
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<td>GNSS</td>
<td>Global Navigation Satellite System</td>
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<td>ICAO</td>
<td>International Civil Aviation Organisation</td>
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<td>IR</td>
<td>Implementing Rule</td>
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<td>JAA</td>
<td>Joint Aviation Authorities</td>
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<td>MoD</td>
<td>Ministry of Defence</td>
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<td>MOR</td>
<td>Mandatory Occurrence Report</td>
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<td>MORS</td>
<td>CAA Mandatory Occurrence Reporting Scheme</td>
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<td>NATS</td>
<td>National Air Traffic Services</td>
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<td>SAFA</td>
<td>Safety Assessment of Foreign Aircraft</td>
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<td>SAR</td>
<td>Search and Rescue</td>
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<td>SARPs</td>
<td>ICAO Standards and Recommended Practices</td>
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<td>SES</td>
<td>Single European Sky</td>
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<td>SMS</td>
<td>Safety Management System</td>
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<td>SRC</td>
<td>Eurocontrol Safety Regulation Commission</td>
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<td>SRG</td>
<td>Safety Regulation Group</td>
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<td>SRMP</td>
<td>Safety Risk Management Process</td>
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<td>SRMS</td>
<td>Safety Regulatory Management System</td>
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3. IMPLEMENTATION AND REVIEW OF THE NATIONAL AVIATION SAFETY PROGRAMME

The validity period of this Programme is 5 (five) years with a projection for the next 5 years. The National Aviation Safety Programme will be revised and updated twice a year during the first 5 years of its implementation. After that, the Programme will be revised and updated once a year. The Civil Aviation Agency shall coordinate the revision and the updating process of the Programme. The CAA staff need to possess the necessary knowledge and qualifications for the proper monitoring of the SSP implementation.

CHAPTER 2 INTRODUCTION

1. In establishing the States’ requirements for the management of safety, ICAO differentiates between safety programmes and safety management systems (SMS) as follows:

   • A safety programme is an integrated set of regulations and activities aimed at improving safety.

   • A safety management system (SMS) is an organized approach to managing of safety, including the necessary organizational structures, accountabilities, policies and procedures.

2. The ICAO Standards and Recommended Practices (SARPs) (the following Annexes to the Convention on International Civil Aviation: Annex 6 — Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, and Part III — International Operations — Helicopters; Annex 11 — Air Traffic Services; and Annex 14 — Aerodromes) require that States establish a safety programme in order to achieve an acceptable level of safety in aviation operations. The acceptable level of safety shall be established by the State(s) concerned. While the concept of safety programmes and SMS is restricted to Annexes 6, 11 and 14 at present, it is possible that the concept will be expanded to include additional operational Annexes in the future.

3. This National Aviation Safety Programme is broad in scope, and it includes many safety activities aimed at fulfilling the programme’s objectives. It embraces regulations and directives for the conduct of safe operations from the perspective of aircraft operators and those providing air traffic services (ATS), airport services and aircraft maintenance. This National Aviation Safety programme includes provisions for such diverse activities as incident reporting, safety investigations, safety audits and safety promotion. To implement such safety activities in an integrated manner requires a coherent SMS.
4. Therefore, in accordance with the provisions of Annexes 6, 11 and 14, the Civil Aviation Agency has required individual operators, maintenance organizations, ATS providers and certified aerodrome operators to implement the SMS adopted by the CAA.

As a minimum, such SMS shall:

a) identify safety hazards;
b) ensure that remedial actions necessary to mitigate the risks/hazards are implemented; and

5. ICAO requires that the concept of ALoS to be established by the States concerned and to complement the current approach to safety management based on the regulatory compliance with the performance based approach. In Europe there are two activities regarding the Safety program and ALoS. EUROCONTROL has produced the European Safety Programme (ESP) and as a member state of EUROCONTROL, the CAA of the Republic of Macedonia actively participates in this programme. Secondly, EASA is developing the Community Safety Programme (CSP) and the CAA of the Republic of Macedonia will be more formally involved with the Working Arrangement signed with EASA. The requirement for the present National Safety Programme stems from the ICAO requirement and the CAA of the Republic of Macedonia has developed it by using the guidance material and with regard to the ICAO documents.

6. The establishment of acceptable level of safety for the Safety Programme does not replace the legal, regulatory, or other established requirements, nor does it relieve States from their obligations regarding the Convention on International Civil Aviation (Doc 7300) and its related provisions. Likewise, establishing acceptable level(s) of safety for the SMS does not relieve any operators/service providers from their obligations under the relevant national regulations, and those arising from the Convention on International Civil Aviation (Doc 7300).

CHAPTER 3 AVIATION SAFETY OVERSIGHT

1. Introduction

1.1 The purpose of this Chapter is to create a clear picture of the aviation safety regulatory framework of the Republic of Macedonia as an ICAO member state. In addition, it explains the relationship between the state bodies and the legislative i.e. regulatory context.

1.2 The Republic of Macedonia, as the signatory to the Chicago Convention, is responsible for the implementation of ICAO SARPs affecting flight operations, airspace and navigation services, as well as the aerodromes within its competence. Generally, these responsibilities include both regulatory functions (licensing, certification, etc.) and safety oversight functions to ensure compliance with the regulatory requirements vested in the Civil Aviation Agency.

1.3 Each State is obligated to make provisions for the safety of the aviation system within its jurisdiction. However, each State is but one component of the larger global aviation system. In this context, the Republic of Macedonia also has a responsibility for meeting the requirements of the larger international system.
1.4 Air transport in the Republic of Macedonia is in fact completely international in its nature, with the two airports in the country being only approximately 150 km apart. The air transport is currently comprised mostly of family visits, tourism and business travel – most of which are also international. The cargo transportation is a minimal part of the air transport business. Expanding the current and future logistic zones could bring significant investment advantages to the region and contribute to the air transport development. There is one designated ANSP, a hundred percent owned by the Government and there is no airline owned by the State. No fatal accident has occurred in the last 15 years in the public air transportation sector.

1.5 Although the Republic of Macedonia has achieved a significant traffic increase, it still fails to keep pace with the related tendencies in the neighbouring countries. The main difficulty for the Macedonian airspace comes from the over-flight restrictions of the Kosovo airspace, making the airlines to avoid flying in this area. This situation affects the Republic of Macedonia, as its airspace is directly connected to that over Kosovo.

1.6 Air Traffic over the Republic of Macedonia and the Balkans in general. The current airspace partition of the Balkans completely matches the state borders in the area. Air navigation assistance within each of these air spaces separately is the responsibility of each State, and thus, they have to maintain mutual coordination to manage all flights over the area. This means that within an area framework of 728,000 km$^2$ there are 11 different air spaces, which can be observed in the map below.

![Image of airspaces in South Eastern Europe](Source: Eurocontrol)

**Figure 1.** The Airspaces in South Eastern Europe
2. General - the Republic of Macedonia as a member state of the international aviation community

2.1 The Republic of Macedonia has accepted the Chicago Convention of ICAO in 1993, became a Member State of the European Civil Aviation Conference (ECAAC) in 1997, accepted the EUROCONTROL Convention in 1998 and became a candidate-member of the European Joint Aviation Authorities in 1999.

2.2 The EU recommended in November 2005 to the European Commission for the Republic of Macedonia to become a candidate Member State. In June 2006, the Republic of Macedonia signed the ECAA (European Common Aviation Area) Agreement with the European Community, which was ratified in February 2007 by the National Parliament.

2.3 The Republic of Macedonia became a full member of the European Joint Aviation Authorities at JAAC/JAAB meeting on 3 December 2008.

2.4 On 6 July 2009 on the plenary session in Strasbourg, the CAA of the Republic of Macedonia signed a Working Arrangement with the European Aviation Safety Agency.

2.5. From March 1 until March 3, 2011, the Civil Aviation Agency in co-operation with the European Commission and ICAO hosted a Workshop on aviation safety and performances. The workshop is a part of the Project for implementation of the ISIS Programme on the Implementation of the Single European Sky in the South East Europe, supported by the EU aimed to accomplishment of the highest standards in the aeronautical industry. The conclusions arising from the Workshop are also incorporated in the present National Aviation Safety Programme.

3. National Safety Regulatory Framework

3.1 General

3.1.1 The responsibility for the national safety regulatory framework rests, in principle, on the Civil Aviation Agency (CAA). However, there are several bodies in the Republic of Macedonia that are involved in the aviation safety, directly or indirectly. The civil aviation framework emanates from the Constitutional Act and is composed of national Laws and by-laws. The National Parliament is responsible for adoption of primary legislation and ratification of international agreements and Conventions. The Aviation Act (Official Gazette of the Republic of Macedonia 14/06; 24/07; 103/08 and 67/10) provides for the CAA with its powers, the legal basis to facilitate implementation and requires establishment of a National Supervisory Authority (NSA) within the CAA. Furthermore, it provides the legal basis for the separation of the regulatory and the service provision functions, as well for the certification and continuous oversight of ANSPs, airlines and airports by the CAA.

3.1.2 The Republic of Macedonia holds significant responsibility for establishing an environment conducive to safe and efficient aviation activities. The system approach to the State’s aviation safety programme encompasses all organizational levels, disciplines and system life-cycle phases. In order to fulfil its diverse safety responsibilities effectively, the
Republic of Macedonia has created this National Aviation Safety Programme for the purpose of integrating its multidisciplinary safety.

3.1.3 Aviation safety oversight responsibilities in the Republic of Macedonia are vested in the Civil Aviation Agency. However, the European Commission (EC) and the European Aviation Safety Agency (EASA) are increasingly playing a significant role. Figure 2 attempts to portray this relationship.

3.1.4 The organization of the national aviation sector in terms of the aviation safety is consisted of the following institutions: The figure below portrays the inter-relations related to the institutional framework of the aviation safety.

![Diagram of the institutional framework related to the aviation safety of the Republic of Macedonia](image_url)
3.2 Responsibilities of the Ministry of Transport and Communications

3.2.1 The responsibilities of the Ministry of Transport and Communications (MoT) are defined in accordance with the Aviation Act (Official Gazette of the Republic of Macedonia 14/06; 24/07; 103/08 and 67/10); The Ministry of Transport and Communications is responsible to:

- establish a national strategy on aviation improvement,
- implement the Government policy in terms of aviation,
- implement the Government policy in terms of granting concessions in the field of aviation,
- propose laws in the field of aviation, propose and enact bylaws,
- perform other duties in accordance with the national regulations.

3.3 Responsibilities of the Civil Aviation Agency

3.3.1 The CAA was established in 1995 as a part of the Ministry of Transport. With the new Aviation Act, the status of the Civil Aviation Administration as a body within the Ministry of Transport, was changed into an independent authority outside of the Ministry of Transport under the name “Civil Aviation Agency”. However, the Aviation Act of 2006 stipulates in Article 7 thereof that the independent CAA holds a legal identity of its own. This was achieved by 8 February 2007. The modifications of the Aviation Act from 2010 provide for transformation of the CAA into an independent regulatory body with full political, financial and functional independence from any other state authority, legal person or trading company engaged in aviation activities.

3.3.2 The CAA regulates and oversees all aviation activities. The CAA is established in accordance with the Aviation Act, which also defines its responsibilities. In particular, the CAA is responsible for the supervision of the implementation of the provisions of the Aviation Act and the regulations enacted there under. The CAA also supports the drafting of laws and enacting of bylaws related to the applicable international aviation standards, recommended practices and legislation of the EU, ICAO, ECAC, JAA/EASA and EUROCONTROL. The formal consultation and approval with respect to rulemaking is the responsibility of the Governmental body “Legislation Secretariat”. In its capacity of a regulator of the national aviation sector, the Agency operates as an independent state body, self-financed by income obtained from air navigation charges, as well as for the issue of licenses, permissions, authorizations, and other fees established by the Tariff Regulation of the Agency.

3.3.3. Based on such a broad spectrum of competencies, the CAA holds the following responsibilities:

a) establishment and implementation of the rules, regulations and procedures for safe and efficient aviation:

1) personnel licensing;
2) procedures for obtaining and renewing:
   — operating certificates (AOC and Operating Licence);
   — airworthiness certificates; and
   — airport certificates.
3) implementation of a safety oversight system for the entire civil aviation sector, by means of surveillance, inspections and safety audits;
b) carrying out enforcement actions, as necessary;
c) monitoring of the technological developments and best industry practices with a view to improving the State’s aviation system performance;
d) maintaining a system of aviation records, including licences and certificates, infractions, and reported accidents and incidents;
e) conducting of analyses of safety trends, including accident/incident data, and service difficulty reports;
and
f) promoting safety through the dissemination of specific safety materials, conducting safety seminars etc.

3.3.4 In the past, the CAA was both a regulator and a service provider with a limited functional separation. It was formally separated on July 1, 2009 into a Regulatory and a Service Provision part. Now, the CAA is consisted of different departments and units involved in the regulatory issues. In particular, the CAA is responsible for conducting the main regulating functions provided for in ICAO Doc. 9734, i.e. drafting of acts, surveillance and issue of licences, certificates, authorisations and permissions. Furthermore, the regulatory and service provision functions have been effectively separated within the CAA as required by the Aviation Act. In addition, the CAA has been formally established as a National Supervisory Authority responsible for the performance of the NSA functions in accordance with Regulation (EC) No. 549/2005. The CAA is empowered to take enforcement measures, in accordance with the Aviation Act and enjoys a status of a State Agency. The Aviation Act (Chapter III - Breach of Regulations, Art. 182) identifies what constitutes a breach of the provisions of the Act and the decisions to be taken in such cases.

3.4 Accident Investigation

3.4.1 In accordance with the Aviation Act, the Republic of Macedonia has delegated its responsibility for investigation of accidents and serious incidents (pursuant to Annex 13) to the Accidents and Serious Incidents Investigation Committee. This practice is meant to prevent a potential conflict of interest. The intention is to create specialized investigation agencies, independent from the regulatory authorities.

3.4.2 In accordance with the Aviation Act, for the purpose of conducting technical investigation of aviation accidents and serious incidents, the Government of the Republic of Macedonia has established the Aviation Accidents and Serious Incidents Committee, as an independent body composed of three investigators and a President. In accordance with the Aviation Act, the investigators will be nominated by the Government of the Republic of Macedonia. The Committee may engage other specialists in the particular area of expertise or foreign investigating bodies.

3.5 Search and Rescue (SAR)

3.5.1 Pursuant to Article 171 of the Aviation Act (Official Gazette of RM, No. 14/06, 24/07, 103/08 and 67/10), the Civil Aviation Agency is responsible for the organization and coordination of a system capable to provide around the clock Search and Rescue (SAR) services in the whole territory of the Republic of Macedonia (Search and Rescue Skopje Region).
3.5.2 In general, the Regulation on the requirements and manner of provision of search and rescue of aircraft (Official Gazette of RM, No. 88/01) governs the responsibilities and organization of the entities engaged in the SAR system.

3.5.3 The Search and Rescue Manual, No. 03 – 2387/2 governs in detail the requirements, mode of participation, mutual communication, management and procedures used in the SAR operations.

3.5.4 The Search and Rescue Manual has been developed in accordance with the applicable ICAO Standards and Recommended Practices prescribed in ICAO documents and the Convention on International Civil Aviation, as well as:

- ICAO Annex 12;
- ICAO Annex 11, Chapter 5;
- ICAO Doc. 9731, and
- ICAO Doc. 7030.

3.5.5 The Search and Rescue Department within the Safety and Security of Air Navigation Unit is responsible for performing of the national and international SAR responsibilities in the field of civil aviation.

3.5.6 It is worth mentioning that the Search and Rescue Department as a part of the Rescue Co-ordination Centre is also responsible for initiation, coordination and termination of any SAR operation, as well as, for planning of SAR units, their deployment and coordination.

3.5.7 Furthermore, the Search and Rescue Department is also engaged in certain administrative issues, such as implementation of the national and international SAR regulations, development and analyses of final SAR reports, regulations and procedures as well as their implementation for the purpose of upgrading the SAR System.

3.6 Military Aviation

3.6.1 The flexible use of air space (FUA) of Level 1 is partially completed by means of the joint civil-military process that addresses the applicable FUA strategic requirements. The Establishment of a civil-military Committee in accordance with the Aviation Act is a task to be accomplished in the first half of 2011, by definition of the competencies of the Committee in the national regulations related to the management and use of air space.

3.6.2 All airspace users' requirements are addressed at tactical level. By means of transposition of EU regulation 2150/2005 into the national legal system that is scheduled to be completed in mid 2011, a pre-tactical Level 2 will be accomplished (ASM Level 2). For this purpose, within the AN Service Provider there will be established a unit for management of the air space, competent for the air space management on a daily basis.

3.6.3 FUA level 3 is fully implemented, and the Civil ATS units are responsible for managing both military and civil air traffic.
3.6.4 The safety management process has been established to conduct all safety assessment activities before the introduction of any changes to the operations of the FUA and it is managed as a safety assessment of Civil ATS system and procedures. There are no specific FUA co-ordination procedures due to the fact that the civil and military traffic is controlled by the civil ATS units.

3.7 European Common Aviation Area, the Air Navigation Service Provider and regulation of safety

3.7.1 In June 2006, the Republic of Macedonia signed the ECAA (European Common Aviation Area) Agreement with the European Community, which was ratified in February 2007 by the National Parliament.

Article 13 of the ECAA Agreement, provides that the Contracting Parties:

- shall co-operate in the field of ATM with a view to extending the SES to the ECAA in order to enhance the existing safety standards and overall efficiency of GAT standards in Europe, and to optimise capacity and minimise delays,

- shall, within the limits of their respective competences and at the earliest opportunity, take the necessary measures to adjust their ATM institutional structures to the SES, in particular by designating or establishing a National Supervisory Authority (NSA), at least functionally independent from ANSP.

3.7.2 The ECAA Agreement identifies transitional periods applicable for each Contracting State for the purpose of facilitating the implementation of the relevant EC legislation. The transitional periods do not provide specific dates of completion. The European Commission audits the ECAA agreement signatories and reports on the State’s progress. Protocol V of the Agreement specifies the arrangements applicable to the Republic of Macedonia. It provides for two transitional periods. The first transitional period will be completed when a number of conditions are met and this is verified by an EC assessment. These conditions include establishment of the NSA, separation between ATS service provision and NSA functions, and implementation of the applicable EC Directives on accident investigation and occurrence reporting. The second transitional period starts with the completion of the first period and ends when the Republic of Macedonia implements all the EC legislation included at Annex 1 of the Agreement, and the implementation is verified by an EC assessment. Annex 1 includes inter alia, the four Regulations of the European Council and Parliament (i.e. Regulation (EC) Nos. 549/2004, 550/2004, 551/2004 and 552/2004), the Common Requirements (Commission Regulation (EC) No. 2096/2005) and the FUA Regulation (Commission Regulation (EC) No. 2150/2005).

3.7.3 As regards the incorporation of other international requirements, Article 3 of the Aviation Act provides that any bylaws enacted in accordance with the Act shall be developed in accordance with the applicable international aviation standards, recommended practices and the legislation of EU, ICAO, ECAC, JAA/EASA and EUROCONTROL, including the EUROCONTROL ESARRs. These provisions are directly applicable wherever any bylaws make reference to them.

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3.7.4 In the past, the CAA was both a regulator and a service provider with limited functional separation. However, on 1 July 2009, it was formally separated into a Regulatory and a Service Provision part. The Air Navigation Service Provider M-NAV is a Joint Stock Company, with a hundred percent ownership by the Government. It is responsible for the provision of a number of services, including air traffic services (ATS), communications, navigation surveillance (CNS), meteorology (MET) and aeronautical information services (AIS). Air navigation services (ANS) are provided exclusively by the service provider designated by the Aviation Act. The Aviation Act requires that the designated service provider is established by the Government as a Joint Stock Company with only one shareholder, the State, in accordance with the Law on Trade Companies, the Establishment Act and the company’s Statute.

3.8 Airport Operator

The Public Enterprise for Airport Services – Makedonija was the operator of the Macedonian airports until mid 2001. The new Joint Stock Company for airport services "Airports of Macedonia" is a state owned company, registered in the Central Registry of the Republic of Macedonia on 22.08.2001. The concessioner TAV Macedonia Ltd. has undertaken the operation of the airports "Alexander the Great - Skopje" and "St. Paul the Apostle - Ohrid". The Concessioner TAV Macedonia Ltd. is responsible for the operation of the airports i.e. provides complete airport operations including ground handling, passenger services, parking lots for vehicles, food and beverages as well as other administrative services at the airports' terminals.

CHAPTER 4 AVIATION SAFETY POLICY AND OBJECTIVES IN THE REPUBLIC OF MACEDONIA

1. Legislation and policies related to the aviation safety of the Republic of Macedonia

1.1 The objectives of ICAO, as defined in Article 44 of the Chicago Convention, include the requirement to "ensure a safe and orderly development of international civil aviation throughout the world; to meet the needs of the peoples of the world for safe, regular, efficient and economical air transport; and to promote safety of flight in international air navigation". Therefore, the need for promotion of safety one of the fundamental objectives of ICAO and is reflected in most of the ICAO Annexes. The ICAO provisions call for States to establish safety programmes, in order to achieve an acceptable level of safety. They require that the acceptable level of safety is accomplished by the States.

1.2 The National Strategy for upgrading the aviation of the Republic of Macedonia establishes that " An important strategic goal for the Republic of Macedonia is to become a full member of JAA before the commencement of the second transitional period, and of EASA before the implementation of the ECAA Agreement”. The Republic of Macedonia needs to make efforts for development of stable and efficient CAA structure, by implementation of all the standards of JAA/EASA, EU, ICAO, ECAC and Eurocontrol. The CAA needs to implement the highest safety and security standards, in order to improve air transport functions and comply
with the EU standards. Observing the high safety and security standards could help in attracting foreign airlines.

1.3 The vision for the future of aviation in the Republic of Macedonia which is a part of the National Strategy is to have a modern, safe, and reliable system capable of fulfilling the growing needs of the country, while upholding the standards of environmental sustainability and financial responsibility.

1.4 Safety will continue to be of prime importance to the entire aviation sector. The Macedonian air transport industry shows good results, with accident rates kept low despite the rapid rise of traffic levels over the last decade. However, the Government, the CAA and the industry are committed to ensure that the present high safety standards are maintained, to identify any potential threats and to seek for appropriate improvements. This commitment reflects the Macedonian policy to maintain the aviation safety regardless of any rise of traffic levels in future.

1.5 The Civil Aviation Agency’s Safety and Management Strategy reflects our commitment to safety as a core value and therefore this institution invests in a strategy based on a strong aviation safety culture. This plan establishes a System Safety approach that ensures personnel, property, and public protection from the risk of aircraft mishaps. Our philosophy may be reduced to the following phrase: “Any accident is preventable”.

1.6 The ultimate goal of the National Aviation Safety Program is “Zero Mishaps”, but that alone does not define the safety program. It is meant to reduce the severity and likelihood of risk, which is inherent in all human activities, to lower, acceptable levels. Safety means elimination of those conditions that can cause death, injury, occupational illness, or damage to or loss of equipment or property, or harm to the environment.

1.7 System Safety is a group of interacting, interrelated, or interdependent elements forming a complex whole, and in this case, the Macedonian aviation is that complex whole. Using analytical techniques to identify system flaws and conditions that if left unchanged could lead to undesirable events. Once identified, these potential accidents/incidents must be communicated to the stakeholders with adequate counter measures put in place to prevent an accident.

1.8 The CAA priorities, as defined in its Business Plan, include the strategic objective 'to strengthen the safety and security of transport'. The primary legislation is the Aviation Act. The Aviation Act (Official Gazette of the Republic of Macedonia 14/06; 24/07, 103/08 and 67/10) provides the CAA with its powers, the legal basis to facilitate ESARR implementation and requires an establishment of a National Supervisory Authority (NSA) within the CAA.

1.9 However, there is no express statutory obligation for the CAA to achieve a high standard of safety. The majority of safety oversight responsibilities rest with the CAA’s Safety and Security Unit. The International and Legal Affairs Unit is in charge with the rulemaking process, documented by the CAA paper "Guidance material on the internal procedures for conducting the duties and responsibilities related to the aeronautical standards and regulations". This material provides explanations of all the requirements (Part 1) and provides guidance/interpretations (Part 2). It was approved by the Director General of the CAA and establishes procedures for transposition of international regulations and standards into the
national legislative framework (Procedure 1). Furthermore, Article 2 of the document describes the methodology of drafting regulations and amendments thereto (i.e. by transposing articles from a regulation, by reference, or by reference and verbatim translation of an international regulation or standard in an annex to a draft regulation). Furthermore, the CAA Guidance material provides in Article 9 thereto for the manner of transposition of EU regulations.

1.10 The Aviation Act requires accomplishment of a 'high standard of safety', in accordance with the international requirements. Article 3 of the Aviation Act establishes that Bylaws stemming from the Act shall be developed in accordance with the applicable international aviation standards, recommended practices and the legislation of the EU, ICAO, ECAC, JAA/EASA and EUROCONTROL.

1.11 The CAA has further defines its role as 'a duty to develop a world-class aviation safety environment, in partnership with the industry and by means of continuous improvements in aviation safety as well as in partnership with EASA, across Europe'. The drive for continuous improvement is a challenging objective, especially in times of air traffic oscillations.

1.12 At European level, the Basic Regulation calls for Community action to establish common safety rules, to ensure uniform application of common rules and to establish an appropriate and comprehensive framework for the safety of third-country aircraft. Article 2(1) of the Regulation provides: 'The principal objective of this Regulation is to establish and maintain a high uniform level of civil aviation safety in Europe'.

1.13 The Single European Sky legislation defines its objectives as upgrading and reinforcement of safety, restructuring of the European airspace as a function of air traffic flow, rather than according to national borders, creating of additional capacity and increasing of the overall efficiency of the air traffic management (ATM) system.

1.14 In order to achieve a high level of safety, the CAA has developed the following strategic objectives for the aviation safety:

1.15 In accordance with the National Strategy for upgrading the civil aviation of the Republic of Macedonia, the CAA needs to implement the necessary audit procedures, in order to ensure continuous compliance with ICAO standards. Concerning the Safety Oversight Audit by ICAO, the CAA needs to define or review the procedures for:

- planning, conducting and reporting on safety oversight audits and fulfilment of the audit obligations;
- updating the auditors’ training courses;
- updating the guidance material on safety oversight-related subjects;
- analyzing the safety oversight findings and proposing solutions;
- reporting to the ICAO Council on global safety oversight issues;
• updating the training and audit programs regarding eventual changes in the Recommended Practices and the guidance material of ICAO key annexes.

Besides that, the CAA should define and revise procedures for:

• Conducting due diligence to verify the level of fulfilment of ICAO Safety Standards;

• Defining short-term modifications of existing facilities and procedures to comply with ICAO standards;

• Defining the audit procedures and certification of airport infrastructure and air navigation infrastructure, according to ICAO standards, and submitting them to the airport operator and ANSP.

• Specifying all the manuals and other documents to be presented by ANSP and airport operator for the purpose of obtaining certificates for any new facilities, equipment and infrastructure;

• Defining the by-laws specifying the safety requirements to be incorporated in the future Infrastructure Master Plans;

• Specifying new requirements for ANSP and airport operator regarding:
  - Safety Plans;
  - Infrastructure Maintenance Plans;
  - Emergency Plans.

1.16 The CAA regulates the safety of aviation in partnership with EASA, by approving and overseeing the organisations and individuals involved in Macedonian aviation and fall within its remit.

• The CAA will continue to use the risk-based approach in order to ensure that aviation complies with the European and national legislation and requirements;

• The CAA will work collaboratively with the industry in order to achieve continuous improvement of aviation safety and address the safety issues;

• Where necessary, the CAA will take any appropriate measures to ensure that safety is not compromised and that the high safety standards and its supporting infrastructure are maintained within the Macedonian airspace, with potential risks identified and appropriate mitigating actions taken;

• The safety improvement initiatives will be provided for in the CAA Safety Plan, and will be used as a tool for monitoring the progress and effectiveness.

• In order to achieve these objectives, the CAA has established comprehensive safety monitoring and planning processes to identify safety initiatives. It is also committed to complying with all ICAO provisions for safety management systems.
1.17 The CAA has a safety policy of complying with the ICAO Standards, Recommended Practices and Procedures (SARPs) wherever possible. However, where the Republic of Macedonia finds that it is impracticable or inappropriate to transpose any ICAO provisions into its legislation, it notifies ICAO to this effect or publishes the said differences in the Macedonian Aeronautical Information Publication (AIP), in accordance with Article 38 of the Chicago Convention.

2. The SSP responsibilities and accountabilities

2.1 In accordance with the SSP, the primary responsibility rests with the CAA as a specialized aviation safety regulator, performing all safety-related functions. That is why the CAA is responsible to develop the Macedonian SSP document.

2.2 The National Aviation Safety Programme is a new concept. The present document describes how the Republic of Macedonia addresses the issues raised by ICAO under its SSP. However, any organizational changes required to assure the continuing management and future accountability for the SSP have yet to be defined. Until then, the CAA will oversee the updating and the productiveness of the Macedonian SSP in terms of any other entities and will continue to develop and continuously improve the SSP.

2.3 The role and responsibilities of the EC and EASA for safety oversight are to be described in more details under a Community Safety Programme. Although many safety oversight functions will remain with the national authorities, the role and responsibilities of EASA are expanding and the Macedonian SSP will, therefore, be amended as and when required.

3. Enforcement policy

3.1 Enforcement measures

3.1.1 The CAA is empowered to take enforcement measures, both in accordance with the Aviation Act and its regulatory status. The Aviation Act (Chapter III - Breach of Regulations, Art. 182) identifies what constitutes a breach in the provisions of the Act and the decisions to be taken in such cases. In any case, penalties need to be applied.

3.2 Administrative measures

3.2.1 Almost every aspect of aviation activity is subject to an authorisation regime. Pilots, cabin crew, aircraft maintenance engineers, air traffic controllers, ADREP personnel, MET and AIS personnel are obligated to hold licences or certificates. Commercial aircraft operators and air navigation service providers must hold certificates. Public aerodromes must be licensed. Organisations which design, manufacture or maintain aircraft must be approved. Each aircraft must have a certificate of airworthiness or a permit to fly.

3.2.2 With the exception of the design organisation approvals, all these permissions are issued, to individuals and organisations in the Republic of Macedonia, by the CAA. They are all issued in accordance with legal requirements setting out the criteria which must be met for granting any such authorisation.
3.2.3 The CAA has powers to vary, suspend or revoke permission where it is no longer satisfied that the relevant criteria are met. For example, it will suspend a flight crew licence where it is no longer satisfied that the holder is fit or competent to exercise its privileges. Where it takes licence action, the CAA is obliged to offer a right of appeal.

3.3 Prosecution

3.3.1 The CAA's prosecution policy is based on the provisions of the Aviation Act. Furthermore, in such cases, the Regulators' Compliance Code needs to be taken into consideration.

3.3.2 The CAA is capable of investigating any reported event. Out of the numerous reports and complaints received by the CAA annually, none has resulted in prosecutions.

3.4 Mandatory Occurrence Reporting Scheme

3.4.1 As a signatory to the ECAA Agreement (see item 3.1.1 above), the Republic of Macedonia has undertaken to transpose Directives 94/56/EC and 2003/42/EC as a part of the first transitional period of the said Agreement.

3.4.2 The Government of the Republic of Macedonia has enacted a Regulation on the principles governing the investigation of accidents, serious incidents, incidents and occurrences affecting civil and state aircraft as well as the manner of reporting (Official Gazette of the RM No. 137/10), by transposing the requirements of Directives 94/56/EC and 2003/42/EC related to reporting and assessment of occurrences connected to ATM safety, and describing the procedures and requirements set for the said reporting.

3.4.3 In accordance with the Aviation Act and with regard to the technical investigation of aviation accidents and serious incidents, the Government of the Republic of Macedonia needs to establish an accident and serious incident investigating Committee as an independent investigating body. The establishment of the Committee needs to be completed by mid 2011.

3.4.4 The Regulation on the principles governing the investigation of accidents, serious incidents, incidents and occurrences involving civil and state aircraft as well as the manner of reporting (Official Gazette of the RM No. 137/10), provides in Article 2 thereto, that the purpose of reporting is establishing the causes of these occurrences for future prevention, instead of establishing of guilt and responsibility. In Chapter 2, the reporting persons are defined, the reporting methods, the CAA competences as well as those of the Committee. Furthermore, Chapter 3 contains provisions for investigating accidents, incidents and occurrences involving civil aircraft.

3.4.5 An AST Focal Point (AST-FP) has been nominated and appointed for the Annual Summary Template (AST) subsequently submitted in accordance with ESARR 2. The SAR Department and the AST-FP collect ATM safety data from the ANSP Safety Manager yearly in order to enable the submission of the AST to EUROCONTROL. However, the gathering of
national safety data by the AST-FP needs to be further formalised and enhanced in order to include analysis of data by the CAA and appropriate storage of occurrence information.

3.5 Prosecution and Licencing Action

3.5.1 Licensing action may not be taken in order to punish the licence holder. If the law has been broken, the offender can only be punished by the competent Court, through a court procedure. Any refusal, revocation, suspension or variation of a licence, certificate or approval may only be taken if the conduct of the person concerned does not meet the criteria for holding such a licence, certificate or authorisation.

CHAPTER 5 MACEDONIAN AVIATION SAFETY RISK MANAGEMENT

1. CAA Safety Plan and Safety Risk Management Process

1.1 One of CAA's objectives is to sustain Macedonian aviation safety performance through continuous improvements and, in partnership with EASA. The CAA has a long-term agenda for safety, and intends to develop its Safety Plan. Safety improvements can be pursued through such documents, and therefore the CAA is committed to work with its European partners to ensure that complementary safety goals are set.

1.2 The CAA will produce a formal Safety Plan by the end of 2011. The safety planning process will be both a 'bottom up' model, using a considerable expertise in the organisation in order to identify any potential risks, and a new 'top down' process, starting with the major risks, as evidenced in the data, by using Mandatory Occurrence Reports and other data sources.

1.3 The Safety Risk Management Process (see Attachment 3), determines the actions available to the CAA in order to mitigate those risks. The combination of the two processes is going to result in the set of actions contained in the 20011 Safety Plan. It will also demonstrate the CAA's commitment to continually develop its processes in order to assist the improvement of safety.

1.4 The Safety Plan will include information regarding the Macedonian aviation industry's safety performance, highlighting the safety improvements to be focussed on by the CAA. This can help the identification of the risks and actions relevant to each part of the industry.

1.5 As the regulatory framework in which CAA operates is changing dramatically (considering the expansion of EASA and the Single European Sky), the CAA intends to remain focused on safety improvement.

1.6 Safety improvements cannot be delivered without the CAA's continuous engagement in all the sectors of the Macedonian aviation industry. The preparation and publication of the Safety Plan as a public document, will be a part of the CAA's determination to build on that relationship and to enable greater involvement by the industry in the development of the Safety Plan and to share the results of that partnership.
2. The CAA Safety Risk Team

2.1 To oversee aviation safety risks, the CAA plans to establish a Safety Risk Team (SRT). The SRT will provide a high-level oversight of will co-ordinate the safety risk management process. The key to the success of the SRT and the overall CAA’s risk management, will be the proactive manner of operation of the team by provision of high quality information and advices to senior management.

2.2 The task of the SRT will be to seek and review safety information and identify risk issues that are of strategic importance, ensure that appropriate action plans are identified to mitigate these risks, and propose documented safety plans to senior management for their approval. The SRT aims to assess the tolerability of aviation risks using both objective and subjective methods.

2.3 In particular, the task of the SRT shall be to:

- identify risks through utilisation of bottom-up and top-down processes;
- assess identified risks and supporting data;
- identify new and potential safety data sources and data handling methods;
- review and comment on the CAA Safety Performance Indicators paper, sponsoring further work where required;
- assess mitigating actions;
- share and co-ordinate safety information amongst the CAA Groups and Divisions;
- be briefed by internal standing groups with the aim of exploring possible new approaches or actions that may be adopted;
- constitute cross-Group and cross-Divisional groups to assess specific issues and recommend potential action plans to the SRT;
- agree and implement the methods to be used in preparing full Safety Plans and Safety Plan Updates;
- contribute to and where possible improve the National Aviation Safety Programme; and
- contribute to and where possible improve European wide Safety Risk Management.

3. Safety requirements for service providers

3.1 The status of the Safety Management System (SMS) in the Macedonian regulatory regime has been subject to substantial change. In response to the existing ICAO Standards that call
for SMS for Air Navigation Service Providers (ANSPs) and Airport Operators, the CAA now requires SMS for ANSPs and Airport Operators.

3.2 For ANSPs, Eurocontrol has established SMS requirements under Eurocontrol Safety Regulatory Requirements (ESARRs) 1, 3, 4 and 5. The majority of the contents of these ESARRs has been transposed under the Single European Sky (SES) legislation initiative, either as part of the Common Requirements (CRs) Regulation or as separate EC regulations. The aerodromes are now required to employ SMS. As for the Macedonian ANSP, although the establishment of SMS has existed for more than 5 years, the formal certification approval process needs to be established.

3.3 For airline operators and approved maintenance organisations, the ICAO Standard requires SMS since 1 January 2009. In response to this, the CAA is promoting the implementation of SMS by airline operators and maintenance organisations and is contributing towards the development of new EASA Implementing Rules, which will provide the legal basis for mandating SMS across Europe.

3.4 The full impact of SMS on regulatory oversight has yet to be fully considered. It is, therefore, important that the CAA staff with oversight responsibilities for service providers SMS have a common and clear understanding of the fundamental principles of SMS. In response, the CAA has arranged for international SMS staff training. Much of this training has been done using the ICAO Safety Management Manual and the ESARR 3 Requirements.

3.5 To assist service providers on implementation of SMS and on methods to identify operational hazards, the CAA has arranged several meetings. As this is a developing concept and the Republic of Macedonia does not wish to develop its own concept of SMS, especially to avoid problems when subject to EASA standardisation audits, much reliance is being placed on the ICAO SMS and EASA Management System documentation.

4. Approval of service provider's acceptable levels of safety

4.1 The CAA plans to establish a method for assessing the safety risk and determining a level of safety for the Republic of Macedonia. For identifying and assessing the safety risk, the CAA employs an internal safety risk management process, as detailed in Attachment 3. To determine an acceptable level of safety for the Republic of Macedonia, the CAA has developed a number of safety indicators which are used for assessing the safety performance of specific safety measures. The safety indicators are described in Attachment 2.

4.2 Until the present moment, the Republic of Macedonia has not established an acceptable level of safety that is applicable to service providers in the operation of their SMS but believes the primary objective is to achieve a continuous improvement in safety. As the Republic of Macedonia is adopting a phased approach to SMS implementation, the criteria to be used to assess safety risk and to assess risk tolerability will be established in conjunction with service providers over the next 3 years.

4.3 To do this in a systematic manner will require safety policies, safety metrics and monitoring methods to be agreed for the different aviation sectors. It will not be an easy task because the acceptable levels of safety will need to be commensurate with the complexity of individual service providers' specific operations and the resources available.
5 Macedonian implementation of SSP

5.1 ICAO has outlined the four steps that a State should take to implement an SSP and they are as follows:

**Step 1** - Conducting of a gap analysis of the SSP and develop a national legislation governing the functioning of the SSP.

The CAA carried out a gap analysis based on the draft ICAO Appendix to Doc 9859 when developing this SSP document. This analysis did not identify any areas where it is necessary for the Republic of Macedonia to draft new national legislation to govern the functioning of the SSP.

**Step 2** - Developing a training programme for the civil aviation oversight authority personnel.

The CAA has furnished its initial SMS training programme to various training organizations such as ICAO, JAA and EUROCONTROL.

A new programme is being developed that aims to provide general, specialised and continuing SMS training for CAA staff.

**Step 3** - Developing of SMS regulations for service providers and preparation of guidance material for the implementation of SMS. Much of this material will be based on the ICAO Safety Management Manual and the papers resulting from ICAO courses.

**Step 4** – Revision of the civil aviation oversight authority's enforcement policy.

The CAA’s enforcement policy has been established over time and has been designed to ensure the continuing flow and exchange of safety information with service providers. Establishing and maintaining trust with the reporting community is an essential part of this process.

6. The implementation of SMS in the Republic of Macedonia

6.1 ICAO has outlined a phased implementation of the service providers SMS. This phased approach provides service providers with a manageable series of steps to follow when implementing SMS and helps to manage the workload associated with SMS implementation. The phased approach recommended by ICAO includes the following phases:

- **Phase 1** - Planning SMS Implementation,
- **Phase 2** - Reactive safety management processes,
- **Phase 3** - Proactive and predictive safety,
- **Phase 4** - Operational safety assurance.

6.2 A phased approach to the implementation of SMS is being promoted by the CAA. This approach will recognize the timescale required to develop, implement and verify the effectiveness of an SMS, taking account the size and complexity of an organisation. The
timescale for European legislation mandating SMS for air operators and maintenance organisations has yet to be established.

7. Change Management

7.1 Aviation is in a continuous state of change, with advances in technology and a changing business and regulatory context. Regulatory staff raises issues arising in their areas of specialisation through management. This may result in measures such as:

- Review of CAA structure or skills to accommodate changing demands;
- Adjustment of regulatory oversight according to risk as assessed by the CAA;
- Research to provide objective evidence of the nature and extent of issues arising;
- Specific promotion of occurrence reporting in areas of change or concern;
- Monitoring of key safety data parameters.

7.2 As regards the issues that the CAA believes require regulatory change, EASA is informed either directly or through the Advisory Group of National Authorities (AGNA).

CHAPTER 6   MACEDONIAN AVIATION SAFETY ASSURANCE

1. Safety oversight

1.1 The CAA is focusing substantial resources on ensuring service providers implement SMS requirements. This is achieved in the form of CAA Guidance Material, workshops, inspections and audits. A multi-disciplinary auditing method is being established.

1.2 The intention of the Republic of Macedonia is to establish appropriate safety oversight mechanisms to ensure that operators and service providers maintain an acceptable level of safety in their operations. In the discharge of the State’s regulatory responsibilities, the regulatory authority may adopt either an active role, involving close supervision of the functioning of all aviation-related activities, or a passive role, whereby greater responsibility is delegated to the operators and service providers. The intention of the Republic of Macedonia is moving away from a very active role in the supervision of aviation activities. The reasons for this include the large number of inspectors required to perform this function, confusion over safety responsibilities, and the need for a large enforcement organization — factors which contradict the safety culture that modern safety management practices promote.

2. Safety data collection, analysis and exchange, and mandatory Occurrence Reporting

2.1 As a signatory to the ECAA Agreement Republic of Macedonia has undertaken to transpose Directives 94/56/EC and 2003/42/EC as part of the first transitional period of that Agreement. Furthermore, the Regulation on the principles for conducting investigation of accidents, serious incidents, incidents and occurrences involving civil and state aircraft, as
well as the manner of their reporting (Official Gazette of the RM No. 137/10) provides transposition of the above-mentioned Directives as well as ESSAR 2, and in it Article 2 provides that the reporting is aimed to establishment of the causes of accidents or incidents, instead of establishing the guilty party or the responsibility. Chapter 2 defines the persons that are in charge of reporting of accidents and incidents, the manner of reporting, the competencies of the CAA and of the Investigating Committee. Chapter 3 contains provisions for investigation of accidents, incidents and occurrences affecting civil aircraft.

2.2 However, the severity classification as per ESARR 2 is specifically addressed and the reporting and assessment system needs to be supported with additional guidance material and tools (e.g. database). The current informal interface arrangements between the CAA’s regulatory and service provision functions and the Committee for Accident and Incident Investigation need to be formalised.

2.3 In 2004, an AST Focal Point (AST-FP) was nominated and appointed, with the Annual Summary Template (AST) subsequently submitted in accordance with ESARR 2. The SAR Department and the AST-FP have collected ATM safety data from the ANSP Safety Manager yearly to enable the submission of the AST to EUROCONTROL. However, the gathering of national safety data by the AST-FP needs to be further formalised and enhanced to include the analysis of data by the CAA and the appropriate storage of occurrence information. Practical arrangements (e.g. working agreements or procedures) are planned to be formalised with respect to the oversight of the implementation of ESARR 2 by the ANSP and certification process.

2.4 In accordance with ICAO Annex 13, paragraph 8.3 and the EU Directive which have been transposed into the Regulation on the principles for conducting investigation of accidents, serious incidents, incidents and occurrences affecting civil and state aircraft as well as the manner of their reporting (Official gazette of the RM No. 137/10), the CAA also encourages voluntary reporting of incidents under the Aviation Act which promotes a non-blame culture. The CAA’s organisation and procedures for processing, recording and disclosing reports do not differentiate between voluntary and mandatory reports.

2.5 The analysis of these data is carried-out by the aviation industry entities which are submitted to the CAA and the Accident and incident Investigation Committee. Their role is to identify any significant trends and to advise the CAA and the public of the safety performance by means of regular reports.

2.6 The CAA receives numerous requests for safety data retrievals from many sources. These data are only provided when it is established that they would be used to promote and enhance aviation safety.

2.7 Furthermore, plans are in place for CAA to provide safety occurrence information to the European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS). This EC sponsored initiative requires Member States to transfer all relevant safety-related information to a central European repository and for the information to be disseminated to interested parties. It is anticipated that safety information will be automatically transferred from the national systems to ECCAIRS. It is also probable that the ECCAIRS system to be employed by the Macedonian AAIB for the submission of accident and serious incident reports to ICAO under the ADREP Reporting requirements of ICAO Annex 13, Chapter 7.

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2.8 Mandatory Bird strike Reports

2.8.1 In accordance with ICAO Annex 14, paragraph 9.4.2, the CAA has established a process to collect and assess birdstrike reports. These reports are forwarded to ICAO for inclusion in the ICAO Bird Strike Information System (IBIS) database.

2.8.2 Under this Macedonian Bird strike Reporting System, any aircraft commander flying in Macedonian airspace who believes his aircraft has collided with one or more birds must inform the CAA, unless it has already been reported as an accident or damage occurrence. This reporting system is overseen by the airports operator.

3. Safety data driven targeting of oversight on areas of greater concern

3.1 Safety of Foreign Aircraft

3.1.1 In 1996, the European Civil Aviation Conference (ECAC) launched its Safety Assessment of Foreign Aircraft programme (SAFA) to complement ICAO audits by concentrating on actual aircraft checks at airports (ramp inspections) aimed at ensuring that relevant ICAO standards are being complied with.

3.1.2 In 2004, an EC Directive on the safety of third-country aircraft using Community airports required Member States to inspect aircraft registered outside the Community if they were suspected of non-compliance with ICAO international standards. This is implemented in the Republic of Macedonia by the working arrangement with EASA and the Aviation Act. Although not required by the Regulations, aircraft from EU Member States may be subject to ramp inspections if suspected of non-compliance with international standards. The safety oversight process takes account of the results of the ICAO Universal Safety Oversight Audit Programme (USOAP) reports, information from other SAFA ramp inspections and other recognised information.

3.1.3 The process also contains conditions for banning aircraft failing to meet international safety standards. The new Basic EASA Regulation 216/2008 now contains essential requirements for aircraft used by third country operators in the European Community and the ECAA area. EASA is developing detailed implementing rules to apply to such aircraft.

3.2 The CAA's oversight of Macedonian entities

3.2.1 The CAA's Safety and Aeronautical Standard Divisions have established their own oversight procedures and these are described in detail in the CAA's internal System.

3.2.2 As an example, the CAA's Flight Operations Division has a system for addressing identified safety-related shortcomings in AOC holders' operations. This system has two measures. For the first measure, during an audit, findings are recorded in order of priority. A Level 1 finding is made where there is a significant non-compliance with a specific requirement that lowers safety to the point where there is a serious hazard to flight safety. Such a finding will normally result in some form of regulatory action, such as suspension of an approval or prevention of an aircraft from flying.
3.2.3 In the second measure, the CAA has introduced a procedure (the 'On Notice' procedure) that is applied to an operator whose performance in terms of safety management, though currently above minimum acceptable levels, shows a trend which, unless corrected, would soon result in unacceptable safety levels. The operator is advised that they are 'On Notice', and that unless action is taken in accordance with a plan acceptable to the CAA within an agreed timescale, further regulatory action will be taken. Such action could be suspension of approvals related to identified non-conformities, or, in some cases suspension of the AOC.

3.2.4 The CAA believes that these measures, together with the existing oversight system, provide the graduated system that is necessary to ensure that operators maintain the required standards.

3.2.5 A recent development in the CAA is a regulatory compliance-monitoring audit, based largely on the existing practice. The process is intended to be a part of a new standardised CAA methodology for large organisations, while planning of programmed audits may be defined in a manner to meet the EASA, CAA and industry needs. When supported by routine product sampling, data acquired from the organisation's internal audit programmes and from external data sources, such as incidents, the programme will enable the CAA to establish that the operator consistently achieves a good level of safety management and regulatory compliance.

3.2.6 Work is underway within the CAA to identify 'key performance indicators' to improve the effectiveness of the oversight of organisations. This risk-based approach also considers credits for good demonstrable performance, minimising the need for regulatory intervention. This concept of credits could be extended to account for feedback from the organisation's own internal audits or external audits by third parties, if data are available.

CHAPTER 7  PROMOTION OF AVIATION SAFETY IN THE REPUBLIC OF MACEDONIA

1. International training, communication and dissemination of safety information

1.1 International training

1.1.1 The CAA has prepared a development and training courses programme for its staff. The individual development and training needs are assessed with any individual's employment with the CAA. The CAA also addresses the needs of its employees annually, with consideration of the opinion of the direct superiors.

1.1.2 In terms of SMS, the CAA regulatory staff has attended various SMS courses. This practice is organised in conjunction with JAA/ECAC, IANS EUROCONTROL and CARDS Project.
1.2 External communication and dissemination of safety Information

1.2.1 The CAA communicates with all aviation stakeholders in many different ways. At a high-level, safety is addressed in the CAA’s Annual Report. The CAA’s Safety Plan describes in more detail the high-level safety objectives and outlines the CAA’s work programme in order to achieve continuous safety improvement in the years to come. In addition, the CAA regulatory staff participates in various workshops, seminars and meetings for the purpose of sharing experience and coordination of activities.

CHAPTER 8 FINAL PROVISIONS

The present Programme shall enter into force on the date of its enactment, subject to previously obtained approval by the Government of the Republic of Macedonia.

Director General
Ph.D. Dejan Mojsoski
APPENDIX 1  AVIATION SAFETY REGULATORY FRAMEWORK

1. Aviation Safety Regulatory Framework of the Republic of Macedonia

1.1 Introduction

1.1.1 The Macedonian Aviation Safety regulatory framework is a combination of primary and secondary regulation prepared on the basis of international standards and recommended practices by ICAO SARPs, EUROCONTROL ESARRs, JAA-Joint Aviation Requirement, European Directives and Regulations which are transposed in the domestic law and regulations. The following section describes the current situation.

1.1.2 The Macedonian legislation in the field of aviation is divided into primary and secondary legislation. All primary legislation (laws/acts) is adopted by the National Assembly of the Republic of Macedonia. The secondary legislation (by-laws) can be adopted on three levels (governmental, ministerial and CAA). The primary legislation consists of the Aviation Act which governs public law issues, the Contract Law in Aviation which governs private law issues and the laws on ratification of international conventions or agreements which enjoy the status of laws in the Republic of Macedonia.

1.1.3 The current Aviation Act has entered into force on 1 February 2006 (Official Gazette of RM, No. 14/2006) and has been amended in 2007 (Official Gazette of RM, No. 24/2007), in 2008 (Official Gazette of RM, No. 103/2008) and in 2010 (Official Gazette of RM, No. 67/2010). It was developed based on ICAO Doc. 9734 providing for the adoption of primary aviation act in accordance with the Chicago Convention and of secondary legislation, stemming from that Act, in accordance with the Annexes of the Chicago Convention. The Macedonian Aviation Act defines which regulations should be enacted by the Government, which by the Ministry of Transport and Communications and which by the CAA. The Aviation Act also provides for the obligation that all national rules are developed in accordance with JAA/EASA requirements. It also gives the possibility for transposition of JARs into national regulations only by reference without translation into the Macedonian language.

In accordance with the Aviation Act, the majority of the Secondary legislation should be enacted by the CAA as ICAO doc. 9734 recommends.

The structure of the secondary legislation is divided into:

- regulations which prescribe requirements for certification or licensing and methods for performing certain aviation activities (adapted solely by the Government of the Republic of Macedonia),

- regulations which prescribe administrative procedures for certification including initial inspections in the certification process (adapted solely by the CAA), and
• regulations which prescribe the continuous inspection procedures applied to certified and licenced entities (adopted solely by the Ministry of Transport and communications).

The texts of all the above-mentioned levels must be approved by the Secretariat of Legislation before their publication in the Official Gazette of Republic of Macedonia.

### 1.2 Primary Aviation Legislation

1.2.1 The Aviation Act (Official Gazette of the Republic of Macedonia 14/06; 24/07; 103/08 and 67/10) provides the CAA with its powers, the legal basis to facilitate implementation and requires the establishment of a National Supervisory Authority (NSA) within the CAA. Furthermore, it provides the legal basis for the separation of the regulatory and service provision functions, as well as for the certification and continuous oversight by the CAA. The legislative framework of the Aviation Act provides for the transposition of international provisions into the Safety Regulatory Framework through:

- specific Articles in the regulation,
- reference in the regulation,
- reference in the regulation and translation in an annex to that regulation.

1.2.2. Presently, the Republic of Macedonia is a candidate EU Member State and is still within the first transitional period of the ECAA Agreement. In accordance with Article 3 of the ECAA Agreement, the EC legislation is not directly applicable for the Republic of Macedonia and needs to be incorporated into the regulatory framework by means of national measures.

### 1.3 Secondary Aviation Regulation

1.3.1 In the CAA, a coding mechanism is used for the registration of different aviation regulations in different domains (Airworthiness, Operations, Air Navigation Services etc. e.g. Aircraft Safety Occurrences Investigation (Regulation 2.5, Official Gazette of the RM No. 137/10), and Safety Oversight (Regulation 6.1, Official Gazette 143/06).
2. AVIATION REGULATIONS CODE

PART 1 LAWS RELATED TO AVIATION

1.1 Aviation Act
("Official Gazette of RM", No. 14/06; 24/07; 103/08; 67/10; 118/10-Consolidated text);
1.1a Decision on assessment of the constitutionality of provisions referred to in Article 3 of the Aviation Act
1.1b Decision on assessment of the constitutionality of provisions referred to in line 3 paragraph 3 Article 7 of the Aviation Act
1.1c Decision on assessment of the constitutionality of provisions referred to in paragraph 1 Article 117 of the Aviation Act
1.1d Decision on assessment of the constitutionality of provisions referred to in paragraph 2 Article 46, paragraph 6 Article 53 and paragraph 6 Article 137 of the Aviation Act
1.1e Decision on assessment of the constitutionality of provisions referred to in Article 19 paragraph 3, Article 20, Article 42 paragraph 1 & 6, Article 43 paragraph 1 & 6, Article 44 paragraph 1 & 6 and Article 122 paragraph 7 of the Aviation Act
1.2 Law on Contractual and Real Right Relations in respect of Aviation transport
("Official Gazette of RM", No. 85/08);
1.3 CONVENTIONS ADOPTED BY SUCCESSION FROM FORMER YUGOSLAVIA WITH LEGAL ACTS SPECIFIED INDER ITEMS 1.6 / 1.6a
1.3a International Convention for Civil Aviation (Chicago Convention 1944),
1.3b International Air Service Transit Agreement (IATA 1944)
1.3c Convention on the International Recognition of Rights in Aircraft, signed at Geneva on 19 June 1948;
1.3d Convention on Offences and Certain Other Acts Committed on Board of Aircraft, signed at Tokyo on 14 September 1963;
1.3e Convention for the Suppression of Unlawful Acts against the Safety of Civil Aviation, signed at Montreal on 23 September 1971;
1.3f Convention for the Suppression of Unlawful Seizure of Aircraft, signed at the Hague on 16 December 1970;
1.4 Law on Ratification of the Agreement on Certain Air Services Provisions between the European Community and the Republic of Macedonia, ("Official Gazette of RM", No. 127/06);
1.5 Law on Ratification of the Multilateral Agreement between the European Community and its Member States, the Republic of Albania, Bosnia and Herzegovina, the Republic of Bulgaria, the Republic of Croatia, the Republic of Macedonia, the Republic of Iceland, the Republic of Montenegro, the Kingdom of Norway, Romania, the Republic of Serbia and the United nations Interim Administration Mission in Kosovo on the Establishment of a European Common Aviation Area, ("Official Gazette of RM", No. 27/07);
1.5a Law on Ratification of the Annex amending the Annex 1 of the Multilateral Agreement between the European Community and its Member States, the Republic of Albania, Bosnia and Herzegovina, the Republic of Bulgaria, the Republic of Croatia, the Republic of Macedonia, the Republic of Iceland, the Republic of Montenegro, the Kingdom of Norway,
Romania, the Republic of Serbia and the United nations Interim Administration Mission in Kosovo on the Establishment of a European Common Aviation Area, ("Official Gazette of RM", No. 98/09);

1.6 Constitutional Law of the Republic of Macedonia ("Official Gazette of RM", No. 52/91);

1.6a Decision for specifying the date for succession of Republic of Macedonia for the Multilateral International Agreements taken over from former Yugoslavia ("Official Gazette of RM", No. 58/07);

1.7 Act on Ratification of the Protocol consolidating the Eurocontrol International Convention relating to Co-operation for the Safety of Air Navigation of 13 December 1960, as variously amended, ("Official Gazette of RM", No. 102/00);

1.7a Decision for membership of Republic of Macedonia at EUROCONTROL, European Organization for Safety of Air Navigation ("Official Gazette of RM", No. 9/98);

1.8 Multilateral Agreement Relating to Route Charges, ("Official Gazette of RM", No. 37/98);

1.9 Law for ratification of the Multilateral Agreement on Commercial Rights of Non-Scheduled Air Services in Europe, Paris, 30.04.1956, ("Official Gazette of RM", No. 13/02);

1.9a Law for termination of the Law for ratification of the Multilateral Agreement on Commercial Rights of Non-Scheduled Air Services in Europe, ("Official Gazette of RM", No. 108/09);

1.10 Convention for the Unification of Certain Rules for International Carriage by Air, Montreal, 28 May 1999, ("Official Gazette of RM", No. 25/00);

1.11 Convention on the Marking of Plastic Explosives for the Purpose of Detection, Montreal, 1 March 1991, ("Official Gazette of RM", No. 21/98);

Last updated on 13 September 2010
PART 2  Aviation By-laws in respect of Operations

2.1 Order on obtaining consent and conditions and method in respect of anti-hail rockets launching,
("Official Gazette of SFRY", No. 32/87);

2.2 Regulation on Rules of the Air
("Official Gazette of RM", No. 126/09);

2.3 Regulation on Civil Aviation Hang-gliding
("Official Gazette of SFRY", No. 52/55);

2.4 Regulation on Parachuting
("Official Gazette of SFRY", No. 73/89 and 57/90);

2.5 Regulation on principles governing the accident, serious incidents, incident and occurrences investigation of civil and state aircraft, as well as their reporting
("Official Gazette of RM", No. 137/10);

2.6 Regulation on the rules for establishment of a list of air carriers subject to an operating ban
("Official Gazette of RM", No. 152/10);

2.7 Order on Boundary Points (regarding the aircraft overflying)
("Official Gazette of RM", No. 2/97);

2.8 Order on Airways
("Official Gazette of RM", No. 2/97);

2.9

2.10 Regulation on specialized services of aircraft operations and special requirements in respect of aircraft, aircraft equipment and other special requirements necessary for safe and regular operation,
("Official Gazette of RM", No. 159/07);

2.11 Regulation on specific requirements, manner and procedure for granting of flight approvals
("Official Gazette of RM", No. 142/10);

2.12

2.13 Regulation on Operation and Use of Hang gliders, Rigid Wings and Paragliders,
("Official Gazette of RM", No. 12/96);

2.14 Regulation on the manner and rules for flying with balloons
("Official Gazette of RM", No. 134/08);

2.15

2.16 Regulation on the manner and rules of modelling,
("Official Gazette of RM", No. 134/08);
2.17

2.18

2.19 Decision on establishing the charges applied for fulfilment of the requirements related to the safety and regularity of air navigation
("Official Gazette of RM", 78/99; 31/02; 36/02)

2.20

2.21 Regulation on organization of working time, flight time and duration of the rest time of flight crew members,
("Official Gazette of RM", No. 99/10);

2.22 Regulation on Emblem of the Civil Aviation Authority,
("Official Gazette of RM", No. 14/97);

2.23 Order on Aircraft Search and Rescue Requirements and Procedures,
("Official Gazette of RM", No. 88/01);

2.24 Regulation on method of public air transport and special requirements in respect of required staff, aircraft, equipment and other special requirements necessary for safe and regular operation,
("Official Gazette of RM", No. 134/10);

2.25 Regulation on format, contents, record-keeping and procedure for granting, renewal, extension and change of an Operating License and Air Operator Certificate,
("Official Gazette of RM", No. 85/07);
2.25a Decision on assessment of the constitutionality and legality of the provisions referred to in Article 2, Article 5, paragraph.2, 3, 4, 5, Article 6, item.7, Article 11, paragraph.3, Article 12, paragraph.2, Article 16, paragraph.2 and Article 18 paragraph 1 & 2 of the Regulation on format, contents, record-keeping and procedure for granting, renewal, extension and change of an Operating License and Air Operator Certificate, ("Official Gazette of RM", No. 85/07);

2.26 Regulation on Procedure and Rules for Operation of Ultra light Aircraft and Powered hang gliders and paragliders,
("Official Gazette of RM", No. 106/07);

2.27 Regulation on procedure, rules and special requirements for inspection and special requirements to be met by a person to carry out inspection regarding the public air transport
("Official Gazette of RM", No. 47/08; 155/10);

2.28 Regulation on the manner and procedure on returning and forced landing of aircraft approaching or flying through an area of restricted, conditionally restricted or dangerous zone
("Official Gazette of RM", No. 129/08);
2.29 Regulation on manner and conditions on launching rockets and other flying objects for scientific, sports and other purposes that could endanger flight safety ("Official Gazette of RM", No. 134/08);

2.30 Regulation on method of transport for own use (Corporate Aviation) and special requirements in respect of required aircraft, equipment and other special requirements necessary for safe and regular operation, ("Official Gazette of RM", No. 90/09);

Last updated on 10.01.2011

PART 3 BY-LAWS RELATED TO AVIATION AND OTHER QUALIFIED PERSONNEL

3.1 Regulation on training, examination, licensing and ratings of airplane pilots, ("Official Gazette of RM", No. 44/08; 39/09; 54/10);

3.2 Regulation on training, examination, licensing and ratings of air traffic controllers, ("Official Gazette of RM", No. 86/10);

3.3 Regulation on training, examination, licensing and ratings of aviation technical personnel, ("Official Gazette of RM", No. 80/08);

3.4 Regulation on training, examination, licensing, and ratings of CNS technical personnel, ("Official Gazette of RM", No. 73/09);

3.5 Regulation on training, examination, licensing and ratings of helicopter pilots, ("Official Gazette of RM", No. 121/09);

3.6 Regulation on training, examination, licensing and ratings of flight engineers, ("Official Gazette of RM", No. 99/10);

3.7 Regulation on Requirements, Method and Procedure for establishment of medical fitness of aviation and other qualified personnel, Period of validity of medical certificates and Special requirements to be met by Aeromedical Centres and Authorised Medical Examiner to carry out medical examinations of the aviation and other qualified personnel, ("Official Gazette of RM", No. 49/08);

3.8 Regulation on training, examination, licensing and ratings of groundhandling personnel, ("Official Gazette of RM", No. 92/10);

3.9 Regulation on Form, Content, record-keeping and procedure for issuance and revocation of Aviation Inspector Official Identity Card, ("Official Gazette of RM", No. 23/09);

3.10 Regulation on training, checks and certification of proficiency of cabin crew ("Official Gazette of RM", No.129/08);

3.11 Regulation on qualification, examination and licensing of flight crew members (Applicable only to Flight Navigators) ("Official Gazette of SFY", No. 2/80, 31/80, 53/80, 43/81 and 10/85);
("Official Gazette of RM", No. 34/95, 45/99, 27/01, 35/01, 16/05, 06/06, 129/08, 121/09, 99/10);

3.12

3.13

3.14 Directive related to the charges for examination of the aviation personnel qualifications 
("Official Gazette of the RM", No. 4/94; 34/02)

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3.17

3.18 Regulation on training, examination and licensing and ratings of aviation meteorological personnel 
("Official Gazette of RM", No. 14/11);

3.19 Regulation on requirements to be met by a flight training facility or centre to conduct training of aviation personnel, (Applicable only to Balloons, Gliders, and Parachutes training) 
("Official Gazette of RM", No. 72/91; 06/06; 129/08; 121/09);

3.20 Regulation on criteria for authorization of examiners of aviation experts list, 
("Official Gazette of RM", No. 44/07; 45/09);

3.21 Regulation on training, examination, and certification of proficiency of personnel charged with duties to prepare and provide aviation information, charts, publications and flight procedures. 
("Official Gazette of RM", No. 85/07);

3.22 Regulation on training, examination, and Licensing and Ratings of Pilots of Ultra light Aircraft and Powered Hang gliders and Paragliders 
("Official Gazette of RM", No. 106/07);

3.23 Regulation on training, examination, and certification of proficiency of personnel charged with duties to protect against acts of unlawful interference, 
("Official Gazette of RM", No. 151/07);

3.24 Regulation on training, examination and certification of personnel charged with duties of traffic flow, 
("Official Gazette of RM", No. 12/08);

Last updated on 14.02.2011
PART 4 AVIATION BY-LAWS IN RESPECT OF AIRCRAFT

4.1 Regulation on specific requirements for construction and modifications of aircraft, engine, propeller and equipment, technical control of construction and development of technical and technological documentation, type certification, procedures and method for determination of aircraft airworthiness, as well as form, content, record and procedure for issuing, renewal, reissuing and modification of the production certificate, type certificate, airworthiness certificate, noise certificate and gas emissions certificate. ("Official Gazette of RM", No. 69/08; 21/2010)

4.2 Regulation on method and place of marking of the aircraft, registered in Republic of Macedonia with aircraft nationality marks, registration marks and other marks, ("Official Gazette of SFRY", No.32/87; 57/90);

4.3 Directive on maximum noise and gas emissions at take off, in-flight and landing of aircraft  "Official Gazette of RM" No. 52/94

4.4 Regulation on maximum noise and gas emissions allowed during take-off, flight and landing of aircraft  ("Official Gazette of RM", No. 119/2010);

4.5 Regulation on amateur construction of an aircraft,  ("Official Gazette of SFRY", No. 19/1982);

4.6 Regulation on technical requirements for aircraft airworthiness, aircraft engine, propeller and equipment,  ("Official Gazette of RM", No. 42/2007);
4.6a Decision on assessment of constitutionality and lawfulness of the Regulation on technical requirements for aircraft airworthiness, aircraft engine, propeller and equipment,

4.7

4.8 Regulation on the form, content, record keeping and the procedure for issuing and modification of the Certificate of Registration  ("Official Gazette of RM", No. 24/2011);

4.9 Regulation on the form, content and the manner of keeping records in the aircraft registry, and data which should be sent to the Central Registry of the Republic of Macedonia,  ("Official Gazette of RM", No. 20/2011);

4.10 Regulation on maintenance methodology and maintenance technical control of aircraft, aircraft engine, propeller and equipment, development of technical and technological documentation regarding the maintenance and special requirements in respect of required staff, equipment and other special requirements necessary for safe and regular operation, as well as form, content, record and procedure for issuing, renewal, reissuing and modification of the maintenance certificate ("Official Gazette of RM", No. 61/2009);

4.11 Regulation on requirements and control of construction and procedures for determination of ultra light and powered hang gliders and paragliders airworthiness,  ("Official Gazette of RM", No. 159/2007);
4.12 Regulation on procedure, rules and special requirements for inspection and special
requirements to be met by a person to carry out inspection regarding the aircraft, their,
production, maintenance and airworthiness
("Official Gazette of RM", No. 54/2008);

Last updated on 28.02.2011
PART 5  AVIATION BY-LAWS IN RESPECT OF AIRPORTS AND SERVICES AT THE AIRPORT (AVIATION SECURITY)

5.1 Regulation on Airport Security, ("Official Gazette of RM", No. 8/2010);

5.2 Regulation on special requirements for design and planning, construction and reconstruction of an airport, ("Official Gazette of RM", No. 143/09);

5.3 Regulation on method for use, maintenance and control of an airport manoeuvring areas, aprons, objects, installations, devices and equipment ("Official Gazette of RM", No. 151/07; 126/10);

5.4 Regulation on procedure for marking of manoeuvring areas, aprons and other areas of an airport or airfield, ("Official Gazette of RM", No. 151/07; 96/10);

5.5 Regulation on requirements for installation, construction and marking of objects, installations and facilities within an aerodrome area (zone), including the air traffic control objects and facilities as well as the objects outside an aerodrome zone, which may affect to aviation safety and requirements and procedures for cultivation of the land within an aerodrome zone and lands in the vicinity thereof, ("Official Gazette of RM", No. 130/07);

5.6 Regulation on format, contents and procedures for record keeping of an Aerodrome and Airfield Register and Evidence on Terrain (landing strips), ("Official Gazette of RM", No. 151/07);

5.7 Regulation on ground handling services at an airport, ("Official Gazette of SFRY", No. 66/87 and 57/90);

5.8 Regulation on airport fire fighting services, ("Official Gazette of RM", No. 134/10);

5.9 Regulation on airport medical services, ("Official Gazette of RM", No. 134/10);

5.10 Regulation on aviation safety requirements in respect of use of terrain and procedure and requirements for airfield maintenance, ("Official Gazette of RM", No. 151/07);

5.11 National Program for Air Transport Facilitation ("Official Gazette of RM", No. 127/08);


5.13 Order on airports operation hours,
National Aviation Safety Programme of the Republic of Macedonia

("Official Gazette of SFY", No. 43/92);

5.14 Decision on level of the CAA part of the aerodrome infrastructure revenues ("Official Gazette of RM", No. 154/09 Valid until 01.03.2010);

5.15 Decision on termination and giving in temporal possession of real estate – airfields from the Civil Aviation Agency to municipalities ("Official Gazette of RM", No. 139/08);

5.16 Decision on transformation of a Public Enterprise for Airport Services "Makedonija", into in Joint-Stock Company owned by the State. ("Official Gazette of RM", No. 35/08);

5.17 Joint-Stock Company “Airports of Macedonia” Statute, ("Official Gazette of RM", No. 35/08);

5.18 Decision on limitation to use runway at the Airport "Skopje" – Skopje, ("Official Gazette of RM", No. 50/00);

5.19 Decision on Establishment of a National Aviation Security Committee, ("Official Gazette of RM", No. 102/05);

5.20 Regulation on format, contents, record-keeping and granting, renewal, revalidation, change and transfer of a certificate of compliance with requirements for safe use of an airport or airfield, ("Official Gazette of RM", No. 85/07; 126/10);

5.21 National Aviation Security Programme of Republic of Macedonia, Gov. Adoption No. 23-3014/1 dated 31 August 2004;

5.22 Regulation on procedure, rules and special requirements for inspection and special requirements to be met by a person to carry out inspection regarding the protection against act of unlawful interference, ("Official Gazette of RM", No. 143/07);

5.23 Regulation on procedure, rules and special requirements for inspection of airports, airfield and terrains and provision of airport services and special requirements to be met by a person to carry out inspection, ("Official Gazette of RM", No. 158/07);

5.24 Decision on termination and giving in possession of real estate, ("Official Gazette of RM", No. 23/08);

5.25 National Quality Control Program of Republic of Macedonia Gov. Adoption No. 19-8569/1 dated 15.09.2008);

5.26 Decision on termination and giving in possession of real estate – concrete helicopter surface at the Alexander the Great Airport Skopje from the Civil Aviation Agency to the Ministry of Defence ("Official Gazette of RM", No. 137/08);

5.27 Decision on termination and giving in possession of real estate – hanger in
municipality Strumica from the Civil Aviation Agency to municipality Strumica ("Official Gazette of RM", No. 137/08);

5.28 Regulation on rules for allocation of slots ("Official Gazette of RM", No. 121/10; 125/10);

Last updated on 10.01.2011
PART 6 AVIATION BY-LAWS IN RESPECT OF AIR NAVIGATION

6.1 Regulation on procedure, rules and special requirements for inspection and special requirements to be met by a person to carry out inspection of provision of air navigation services,
("Official Gazette of RM", No. 143/07)

6.2 Regulation on method of provision of Air Navigation Services and special requirements in respect of required staff, equipment and other special requirements necessary for safe and regular work
("Official Gazette of RM", No. 114/08; 117/09)

6.3 Decision on commencing a procedure on establishing state shareholding company for performing the activity of Air Navigation Service Provider
("Official Gazette of RM", No. 133/08)

6.4 Statute of the state shareholding company for performing the activity of Air Navigation Service Provider
("Official Gazette of RM", No. 139/08; 69/09; 80/09)

6.5 Decision on Level Charge for Air Navigation Services
("Official Gazette of RM", No. 147/08)
6.5a Correction on the Decision on Level Charge for Air Navigation Services
("Official Gazette of RM", No. 8/09)

6.6 Regulation on duration of uninterrupted working time, duration of shifts and day rest of air traffic controller and assistant air traffic controller,
("Official Gazette of RM", No. 23/09);

6.7 Regulation on procedures and minimum requirements for safe take off and landing of airplanes
("Official Gazette of RM", No. 43/09);

Last updated on 28 September 2009
APPENDIX 2 AN ACCEPTABLE LEVEL OF SAFETY

1. Background

1.1 In any system, it is necessary to set and measure performance outcomes in order to determine whether the system is operating in accordance with expectations, and to identify where action may be required to enhance performance levels to meet these expectations.

1.2 The introduction of the concept of acceptable level of safety responds to the need to complement the prevailing approach to the management of safety based upon regulatory compliance, with a performance-based approach. Acceptable level of safety expresses the safety goals (or expectations) of an oversight authority, an operator or a service provider. From the perspective of the relationship between oversight authorities and operators/service providers, it provides an objective in terms of the safety performance operators/service providers should achieve while conducting their core business functions, as a minimum acceptable to the oversight authority. It is a reference against which the oversight authority can measure safety performance. In determining an acceptable level of safety, it is necessary to consider such factors as the level of risk that applies, the cost/benefits of improvements to the system, and public expectations on the safety of the aviation industry.

1.3 In practice, the concept of acceptable level of safety is expressed by two measures/metrics (safety performance indicators and safety performance targets) and implemented through various safety requirements. The following explains the use of these terms in this text.

- **Safety performance indicators** are a measure of the safety performance of an aviation organization or a sector of the industry. Safety indicators should be easy to measure and be linked to the major components of a State’s safety programme, or an operator’s/service provider’s SMS. Safety indicators will therefore differ between segments of the aviation industry, such as aircraft operators, aerodrome operators or ATS providers.

- **Safety performance targets** (sometimes referred to as goals or objectives) are determined by considering what safety performance levels are desirable and realistic for individual operators/service providers. Safety targets should be measurable, acceptable to stakeholders, and consistent with the State’s safety programme.

- **Safety requirements** are needed to achieve the safety performance indicators and safety performance targets. They include the operational procedures, technology, systems and programmes to which measures of reliability, availability, performance and/or accuracy can be specified.

1.4 A range of different safety performance indicators and targets will provide a better insight of the acceptable level of safety of an aviation organization or a sector of the industry than the use of a single indicator or target.

1.5 The relationship between acceptable level of safety, safety performance indicators, safety performance targets and safety requirements is as follows: acceptable level of safety is the
overarching concept; safety performance indicators are the measures/metrics used to determine if the acceptable level of safety has been achieved; safety performance targets are the quantified objectives pertinent to the acceptable level of safety; and safety requirements are the tools or means required to achieve the safety targets. This manual focuses primarily on safety requirements, i.e. the means to achieve acceptable levels

1.6 Establishing acceptable level(s) of safety for the safety programme does not replace legal, regulatory, or other established requirements, nor does it relieve States from their obligations regarding the Convention on International Civil Aviation (Doc 7300) and its related provisions. Likewise, establishing acceptable level(s) of safety for the SMS does not relieve operators/service providers from their obligations under relevant national regulations, and those arising from the Convention on International Civil Aviation (Doc 7300).

2. Defining an acceptable level of safety

2.1 Aviation organizations must meet regulatory requirements to ensure acceptable levels of safety. The organizations that just meet these minimal requirements, however, may not be healthy from a safety point of view. Although they have reduced their vulnerabilities to the unsafe acts and conditions most conducive to accidents, they have only taken minimum precautionary measures.

2.2 Weak organizations that fail to meet the acceptable levels of safety will be removed from the aviation system either proactively, by the regulator revoking their operating certificate, or reactively, in response to commercial pressures such as the high cost of accidents or serious incidents, or consumer resistance.

2.3 The term "safety oversight" refers to the activities of a State under its safety programme, while safety performance monitoring refers to the activities of an operator or service provider under its SMS.

2.4 Safety oversight or safety performance monitoring activities are an essential component of an organization’s safety management strategy. Safety oversight provides the means by which a State can verify how well the aviation industry is fulfilling its safety objectives.

2.5 Some of the requirements for a safety performance monitoring system are already in place. The Republic of Macedonia has regulations relating to mandatory reporting of accidents and incidents. The Regulation on the principles for conducting investigation of accidents, serious incidents, incidents and occurrences and the manner of their reporting ("Official Gazette of RM No. 137/10), in particular Article 2 thereof provides that reporting is aimed to establishing of the causes for the purpose of prevention of such accidents or incidents, instead of establishing of the guilty party and responsibility. Chapter 2 thereof defines the persons that perform the reporting of accidents and incidents, the manner of reporting, the competences of the CAA and of the Investigation Committee. Chapter 3 contains provisions on investigation of accidents, incidents and occurrences involving civil aircraft.
3. Experience of the Republic of Macedonia in establishing acceptable level of safety

3.1 The CAA of the Republic of Macedonia considers that the current levels of safety achieved, as measured by the various safety performance indicators, are not showing continuous improvement in all areas. There is a public expectation that safety should progressively improve, within reasonable economic constraints and within a reasonable timescale. This is reflected in the CAA's commitment to the continuous improvement of safety.

3.2 In view of the importance of this for service providers and for common interpretation within Europe, it is recommended that there should be a dialogue between the regulators and service providers to provide greater clarity. Without this, the promotion of SMS with service providers could be significantly hampered.

3.3 ICAO stresses that establishing an ALoS for the SSP and SMS does not relieve service providers from their obligations under relevant national regulations and those arising from the Convention on International Civil Aviation (the Chicago Convention). It is evident from this that the SSP and SMS are a means to make improvements in safety over and above those resulting from a compliance-based regulatory approach.

4. Safety Indicators in the Republic of Macedonia

4.1 The Macedonian CAA intends to establish a range of performance indicators for monitoring safety performance. In support of its key objective for safety improvement, the CAA should ensure that the frequency of fatal (and, in some cases, reportable) accidents does not increase in line with forecast growth in traffic. For this purpose, it is necessary to use the measured safety performance to set safety levels. It also takes account of the problem of monitoring 'low number statistics'. This is a problem where there are only one or two accidents over several years in the General Aviation. To cater for this, upper limits have been defined, either by using statistical confidence limits or judgement and these provide an indication of the statistical variation that might be expected.

4.2 In total, the CAA plans to introduce safety performance indicators. Five of these will be based on fatal accident rates in industry sectors that have been selected by the CAA to best represent the aviation industry. These are large passenger aircraft, large freighter aircraft, small public transport aircraft, large public transport helicopters and general aviation. There will be also a safety performance indicator based on the reportable accident rate of large public transport aircraft. The final safety performance indicator, in view of public interest in the safety of civil aviation in the Republic of Macedonia, will be based on the fatal accident rate of all large public transport aircraft in the Macedonian airspace. The method employs two principal measures of safety for each sector. They are the forecast (shown as a red solid line) based on a projection of past data, and an upper limit (shown as a black dotted line). By setting two measures, it enables the Macedonian safety performance to be monitored more objectively in the future. These measures will be set in 2011, for the time period 2011 - 2015, and are kept constant. In this way, the performance of each industry sector is being considered against a fixed measure.
4.3 In addition to these safety performance indicators, the CAA will produce quarterly 'Safety Performance Indicators'. These are operationally specific indicators and will be based on occurrence data. These indicators are of value to the regulator to monitor safety performance and to establish safety improvement strategies. For example, the Republic of Macedonia will continuously monitor the number of risk bearing runway incursions. The monitoring will be supported by safety analysis of the data by specialist teams to identify areas for improvement. Other indicators will be risk-bearing Level Busts, Airspace Infringements and high-risk operational occurrences.

4.4 These objective and quantitative safety performance indicators will be combined with other more subjective and qualitative measures in the Macedonian Safety Risk Management Process, detailed in Attachment 3. In order that air navigation service provider, air carriers and airport operator employ similar safety performance indicators for their SMS, the CAA intends to engage in detailed discussions with them.
APENDIX 3  SAFETY RISK MANAGEMENT PROCESS

1. Safety risk management process in the Republic of Macedonia

1.1 The CAA Safety Risk Management Process is illustrated through the system safety process. At the highest level, the main risks to large public transport aeroplanes are first identified through analysis of fatal accidents worldwide. This shows that loss of control, fire, controlled flight into terrain and runway excursions are the most common consequences in fatal accidents, and that various aspects of pilot performance continue to be the leading causal factors.

1.2 At the next level, high-risk occurrences specific to the Republic of Macedonia will be analyses in more detail through a team. The CAA High Risk Analysis Team will include reportable accidents and other 'high risk' incidents that may not have resulted in an accident but represent an undesirable level of risk. First, they are the subjects selected for top down analysis by expert groups. They conduct a structured analysis to search for any safety weaknesses that could contribute to the specified risk. They identify where improvement is needed and propose many of the actions that form the content of the Safety Plan. Second, although these main risks rarely result in fatal accidents in the Republic of Macedonia, it is useful to assess how close the Macedonian fleet comes to such events. For this purpose, there is a project to identify lower level events or 'pre-cursors' in the data that show an aircraft has been one step closer to the risk than safety standards demand. For example, whilst mid-air collisions in the Republic of Macedonia are very rare events there have been significant loss of separation events, level busts, and infringements of controlled airspace, which are pre-cursors to mid-air collision. By developing better pre-cursor measures, we hope to improve awareness of where risks exist and where effort to improve is necessary.

2. Future Risks

There are limitations to an entirely data driven approach to risk management. Where new technology or operating practices are anticipated, there will be no data to highlight them, but it is clear that the potential for risks should be assessed: greater use of composite structures. Global Navigation Satellite System (GNSS), Unmanned Aircraft Systems (UASs) and Very Light Jets are among the changes that have given rise to safety activities. Trends in the market are also of interest and have led to continued interest in areas of strong growth such as business jets. Another source of prognosis on future hazards is the Future Aviation Safety Team (FAST) that originated under the JAA and continues to contribute to ESSI. This team used a systematic method amongst aviation experts to identify future safety risks. The top four areas of change that FAST raised as safety issues are Increasing crew reliance on flight deck automation; Emergence of new concepts for airspace management; Introduction of new technologies with unforeseen human factors aspects; Proliferation of heterogeneous aircraft with widely varying equipment and capabilities. These priorities will be considered during the CAA safety planning work.

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Safety Risk Management

The System Safety discipline is defined as the application of special technical and managerial skills to the systematic, forward-looking identification and control of hazards throughout the life cycle of a project, program, or activity. The primary objective of System Safety is accident prevention. Accident prevention can be achieved by proactively identifying, assessing, and eliminating or controlling safety-related hazards, to acceptable levels. A hazard is a condition, event, or circumstance that could lead to or contribute to an unplanned or undesired event. Risk is an expression of the impact of an undesired event in terms of event severity and event likelihood. Throughout this process, hazards are identified, risk analyzed, assessed, prioritized, and results documented for decision-making. The continuous loop process provides for validation of decisions and evaluation for desired results and/or the need for further action.

The System Safety process steps are depicted graphically in Figure 1. It is a formal and flexible process that generally follows the steps in the FAA’s Safety Risk Management Order, 8040.4. A systematic approach to process improvement requires proactively searching for opportunities to improve the process at every step, not simply identifying deficiencies after an undesired event.

1. Define Objectives
   The first step in the System Safety process is to define the objectives of the system under review. These objectives are typically documented in business plans and operating specifications.

2. System Description
   A description of the interactions among people, procedures, tools, materials, equipment, facilities, software, and the environment. This also includes descriptions of data available.

3. Hazard Identification: Identify hazards and consequences
   In this step, potential hazards may be identified from a number of internal and external sources. Generally, hazards are initially listed on a Preliminary Hazard List (PHL) then grouped by functional equivalence for analysis. Prior to risk analysis you must also include the consequence (undesired event) resulting from the hazard scenarios. Hazard scenarios may address the following: who, what, when, why, and how. This provides an intermediate product that expresses the condition and the consequences that will be used during risk analysis.
4. Risk Analysis: Analyze hazards and Identify Risks

Risk analysis is the process whereby hazards are characterized for their likelihood and severity. Risk analysis looks at hazards to determine what can happen when. This can be either a qualitative or quantitative analysis. The inability to quantify and/or the lack of historical data on a particular hazard does not exclude the hazard from the need for analysis. Some type of a Risk Assessment Matrix is normally used to determine the level of risk (see an example contained in Figure 2).

5. Risk Assessment: Consolidate and Prioritize Risks

Risk Assessment is generally defined as the process of combining the impacts of risk elements discovered in risk analysis and comparing them against some acceptability criteria. Risk Assessment can include the consolidation of risks into risk sets that can be jointly mitigated, combined, and then used in decision making.

6. Decision Making: Develop Action Plans

This step begins with the receipt of a prioritized risk list. Review the list to determine how to address each risk, beginning with the highest prioritized risk. The four options that may be chosen for a risk are transfer, eliminate, accept, or mitigate (TEAM). Generally, design engineering follows the “safety order of precedence”: 1) Design for minimum risk, 2) Incorporate safety devices, 3) Provide warning devices, or 4) Develop procedures and training. This may result in alternative action plans.

7. Validation and Control: Evaluate Results Of Action Plan For Further Action

Validation and control begins with (1) the results of scheduled analyses on the effectiveness of actions taken (this will include identification of data to be collected and identification of triggering events if possible; then developing a plan to review the data collected) and (2) the current status of each prioritized risk. The residual risk will either be acceptable, unacceptable, or unknown. If it is acceptable, then documentation is required to reflect the modification to the system, and the rationale for accepting the residual risk. If it is unacceptable, an alternative action plan may be needed, or a modification to the system/process may be necessary.

8. Modify System/Process (If Needed)

If the status of a risk should change or the mitigation action does not produce the intended effect, a determination must be made as to why. It may be that the wrong hazard was being addressed, or the system/process needs to be modified. In either case, one would then re-enter the system safety process at the hazard identification step.

![Figure 2: Risk Assessment Matrix](image)
### Risk Assessment Matrix

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Catastrophic</th>
<th>Critical</th>
<th>Marginal</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>Red</td>
<td></td>
<td>Yellow</td>
<td>Green</td>
</tr>
<tr>
<td>Probable</td>
<td></td>
<td>Yellow</td>
<td>Yellow</td>
<td>Green</td>
</tr>
<tr>
<td>Occasional</td>
<td></td>
<td>Yellow</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Remote</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Severity Scale Definitions

<table>
<thead>
<tr>
<th>Severity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catastrophic</td>
<td>Accident with serious injuries and/or fatalities. Loss (or breakdown) of an entire system or sub-system.</td>
</tr>
<tr>
<td>Critical</td>
<td>Accident or Serious Incident with injuries and/or moderate damage to aircraft. Partial breakdown of a system or subsystem.</td>
</tr>
<tr>
<td>Marginal</td>
<td>Accident or Incident with minor injury and/or minor aircraft damage. System Deficiencies leading to poor air carrier performance or disruption to the air carrier schedules.</td>
</tr>
<tr>
<td>Negligible</td>
<td>Less than minor injury and/or less than minor aircraft damage. Little or no effect on system or subsystem.</td>
</tr>
</tbody>
</table>

### Likelihood Scale Definitions

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>Will be continually experienced unless action is taken to change events.</td>
</tr>
<tr>
<td>Probable</td>
<td>Will occur often if events follow normal pattern.</td>
</tr>
<tr>
<td>Occasional</td>
<td>Potential for infrequent occurrence.</td>
</tr>
<tr>
<td>Remote</td>
<td>Not likely to happen (but could).</td>
</tr>
</tbody>
</table>

### Risk Classification

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>High Risk – Unacceptable; requires action.</td>
</tr>
<tr>
<td>Yellow</td>
<td>Medium Risk – May be acceptable with review by appropriate authority; requires tracking and probable action.</td>
</tr>
<tr>
<td>Green</td>
<td>Low Risk – Acceptable without further action.</td>
</tr>
</tbody>
</table>
APPENDIX 4  DEFINITIONS

Aircraft Accident. 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 and all such persons have disembarked, in which:
   a) any person suffers death or serious injury due to:
      - its stay aboard the aircraft, or
      - direct contact with any part of the aircraft, including the parts detached from the aircraft, or
      - direct exposure to exhaust fumes of the engines,
   except in the cases when the injuries are sustained in customary conditions, self –inflicted or inflicted by other persons, or when the injuries are sustained by stowaways hiding in areas that are available to the passengers and crews; or
   b) the aircraft suffers severe or structural damage which:
      - affects badly the strength of the aircraft structure, or its flight performances;
      - would require huge repair works or replacement of aircraft component,
   except in the case of malfunction or damage to the engines, when the damage is restricted to the engine, its protective nacelles or accessories, or the damage is restricted to the propellers, wing tips, areal, tyres, breaks, falseworks, small indents or holes in the aircraft fuselage; or
      c) the aircraft disappears or is entirely inaccessible.

Aircraft Incident. An occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

Airspace Conflict. A near mid-air collision, intrusion, or violation of airspace rules.

Aviation Hazard. Any condition or set of circumstances that exposes aviation resources or personnel to unnecessary risk or harm.

Contractor. A person or company that is financially procured by the government to provide goods or services. Also referred to as a vendor.

Event. A real or potential condition in which a hazard is encountered that may contribute to or cause a mishap.

Fatal Injury. Any injury, which results in death within 30 days of the accident.

First Aid. Any medical attention that involves no medical bill. If a physician prescribes medical treatment for less than serious injury and makes a charge for this service, that injury becomes “medical attention.”

Forced Landing. A landing necessitated by failure of engines, systems, or components, which makes continued flight impossible, and which may or may not result in damage.
General Aviation. That portion of civil aviation that encompasses all facets of aviation except air carriers.

Incident with Potential. An incident that narrowly misses being an accident and in which the circumstances indicate significant potential for substantial damage or serious injury.

Operator. Any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

Precautionary Landing. A landing necessitated by apparent impending failure of engines, systems, or components, which makes continued flight inadvisable.

Serious Injury. Any injury which: (1) requires hospitalization for more than 24 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); (3) causes severe haemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; or (5) involves second or third degree burns, or any burns affecting more than 5 percent of the body surface.

Substantial Damage. Damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered “substantial damage.”

Systems Approach. The structured, safety-driven means by which the USFS will certify elements that are designed to interact predictably within the USFS aviation systems and sub-systems.

Systems Safety. The application of special technical and managerial skills to identify, analyze, address and control hazards and risks associated with a complete systems. Systems Safety is applied throughout a system’s entire lifecycle to achieve an acceptable level of risk within the constraints of operational effectiveness, time, and cost.

END OF DOCUMENT