The USOAP CMA Audit of The Civil Aviation System of The Lebanese Republic
Overview

- Background
- Objective and Activities
- Executive Summary
- Analysis of Audit results
The scope of the audit is to assess Lebanon’s oversight capabilities and their safety performance based on:

- Evaluating the effective implementation of the eight critical elements of the state’s safety oversight system;
- Review of the civil aviation legislation framework;
Objective and Activities

➤ The USOAP CMA audit covered to the following areas:
  LEG, ORG, PEL, OPS, AIR.

➤ The scope of the USOAP CMA audit did not include the areas of AIG, ANS and AGA.

➤ The USOAP CMA audit assessed the effective implementation of the eight Critical Elements (CEs) of a safety oversight system.

➤ The Audit USOAP CMA activities covered visits to the Industry/Service Providers for general overview.
The audit resulted in an overall Effective Implementation of 57.44% for the eight CEs of the State’s Safety Oversight System.

Critical Elements CEs with low EI are:

- CE4, State Systems & Functions, at 31.17%
- CE5, Qualified Technical Personnel, at 15.49%
- CE8, Resolution of safety issues, at 43.75%
Effective Implementation by Critical Elements of the Safety Oversight System

EI before Audit: 61.73%
EI after Audit: 57.44%

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Analysis of Audit results (Critical Elements)

Analysis of Results by Sub-Areas of Critical Elements 1 to 4:
### CE-1 Primary Aviation Legislation

**Effective Implementation (%) in CE-1 Sub-Areas**

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Effective Implementation Before Audit</th>
<th>Effective Implementation After Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformance to The Chicago Convention</td>
<td>61.54%</td>
<td>84.62%</td>
</tr>
<tr>
<td>Establishment of a CAA/Investigation Authority</td>
<td>33.33%</td>
<td>33.33%</td>
</tr>
<tr>
<td>Delegation of Authority</td>
<td>50.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Enforcement Provisions</td>
<td>100.00%</td>
<td>100.00%</td>
</tr>
<tr>
<td>Empowerment of CAA Inspectors/Investigators</td>
<td>33.33%</td>
<td>77.78%</td>
</tr>
</tbody>
</table>

*EI before Audit: 54.84%  
EI after Audit: 80.65%*

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Analysis of Results by Sub-Areas of Critical Elements 1 to 4: Lack of EI in the following areas

- CE1, CAA and independent Investigation Authority are not fully established.
CE-2 Specific Operating Regulations
Effective Implementation (%) in CE-2 Sub-Areas

EI before Audit: 72.16%
EI after Audit: 66.35%

Below 24%
Analysis of Audit results (Critical Elements)

Analysis of Results by Sub-Areas of Critical Elements 1 to 4: 
Lack of EI in the following areas

- CE2, Regulatory Amendment Procedure & procedure to identify and notify regulatory differences to ICAO require implementation.
CE-3  State System and Functions  
Effective Implementation (%) in CE-3 Sub-Areas

EI before Audit: 34.21%  
EI after Audit: 31.17%

Organizational Structure  
Functions and Responsibilities  
Credentials  
recruitment and Staffing  
Financial Resources  
Delegation of Tasks Outside CAA

EI Before the Audit  
EI After the Audit

EI Below 32%
Analysis of Results by Sub-Areas of Critical Elements 1 to 4:
Lack of EI in the following areas

- CE3, The Organizational structure, Functions & Responsibilities, Staffing, Credential powers and Financial resources need a comprehensive review (Below 32%)
CE-4  Qualified Technical Personnel
Effective Implementation (%) in CE-4 Sub-Areas

EI before Audit: 11.59%
EI after Audit: 15.49%

Overall Training Areas

Specific Training Areas

EI before the Audit  |  EI After the Audit
---|---
Technical Personnel Qualifications and Experience  |  EI Before: 50.00%  |  EI After: 44.44%
Training Policy and Programme  |  6.25%  |  12.50%
Training Plan and Records  |  4.17%  |  8.33%

EI Below 13%

Not Audited

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Analysis of Results by Sub-Areas of Critical Elements 1 to 4:

Lack of EI in the following areas

- CE4 Training & competency are not efficiently implemented (Below 13%)
Analysis of Results by Audit Areas:

Effective Implementation reported in the following areas:

- LEG, 66.67%
- ORG, 30%
- OPS, 59.56%
- PEL, 54.35%
- AIR, 76.67%
Effective Implementation by Audited Area

<table>
<thead>
<tr>
<th>Area</th>
<th>EI Before the Audit</th>
<th>EI After the Audit</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEG - Primary Aviation legislation</td>
<td>38.10%</td>
<td>66.67%</td>
</tr>
<tr>
<td>ORG - Civil Aviation Organization</td>
<td>50.00%</td>
<td>30.00%</td>
</tr>
<tr>
<td>PEL - Personnel Licensing and Training</td>
<td>54.35%</td>
<td>82.93%</td>
</tr>
<tr>
<td>OPS - Aircraft Operations</td>
<td>59.56%</td>
<td>80.99%</td>
</tr>
<tr>
<td>AIR - Airworthiness of aircraft</td>
<td>66.36%</td>
<td>76.67%</td>
</tr>
<tr>
<td>AIG - Aircraft Accident and Incident</td>
<td>56.04% 56.04%</td>
<td></td>
</tr>
<tr>
<td>Navigation Services</td>
<td>39.31% 39.31%</td>
<td></td>
</tr>
<tr>
<td>AGA - Aerodromes and Ground Aids</td>
<td>64.96% 64.96%</td>
<td></td>
</tr>
</tbody>
</table>

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Analysis of Audit results
(High Priority remedial actions)

LEG: EI 66.67%

- Establish and implement a rulemaking process to enable the timely development, promulgation & amendment of specific operating regulations.
- Establish and implement procedures for identifying and notifying to ICAO differences between ICAO SARPs and the Lebanese legislation.
- Establish and implement a process to ensure the identification and publication in the (AIP) of significant differences between the SARPs/PANS/SUPPS and the Lebanese Regulations and practices.
- Revise the Lebanese flight operations and dangerous goods regulations in order to ensure full compliance with the provisions of Annexes 6 and 18 to the Chicago convention.
- Promulgate the regulations for operators of aeroplanes over 5700 Kg maximum certified take-off mass to monitor and assess maintenance and operational experience.
Analysis of Audit results
(High Priority remedial actions)

**ORG: EI 30%**

- Separate the Safety oversight and service provision functions in the areas of ANS and AGA.
- Establish and implement mechanism to ensure that DGCA has sufficient funds to carry out all Safety oversight-related activities.
- Establish and implement mechanism to enable the DGCA to identify staffing needs, attract and recruit qualified/experienced technical personnel.
- Provide the required training to all DGCA staff to allow them to adequately carry out Safety oversight-related tasks.
- Carry out a quality review of all documentation (instructions, procedures and guides for inspectors and technical staff).
Analysis of Audit results
(High Priority remedial actions)

**PEL: EI 54.34%**

- Ensure the implementation of a medical system by the establishment of the required structure and by the designation and supervision of qualified doctors in charge of the assessment of medical fitness of license holders and applicants concerned.

- Administer adequately the examinations of license holders and applicants.

- Implement an effective surveillance programme of the approved training organizations (TOs).

- Implement a system for the approval of foreign TOs and establish agreements with foreign civil aviation authorities (CAAs).

- Implement procedures to ensure enforcement of regulations, including the application of graduated sanctions, as appropriate.
Analysis of Audit results
(High Priority remedial actions)

**OPS: EI 59.56%**

- Ensure, prior to the issuance of operations specifications (OpsSpecs) that all regulatory requirements and procedures have been established and implemented.
- Implement a formal operator surveillance programme in order to verify all (AOC) holders comply with the national and international requirements.
- Develop and Implement procedures and plans for carrying out both routine and random inspections of all entities.
- Develop and Implement procedures to ensure that entities, other than air operators, establish and implement initial and recurrent dangerous goods training programmes.
Analysis of Audit results
(High Priority remedial actions)

AIR: EI 76.67%

- Develop and implement a ramp inspection programme for A/C operated by AOC holders and foreign air operators.
- Establish and effectively implement the procedure for the issuance of special flight permits.
- Re-issue the noise certificates issued to Lebanese aircraft following the newly developed template.
Analysis of Audit results (Distribution of PQs)

PQ Findings distributed by Critical Elements in areas of:

I. PEL
II. OPS and
III. AIR
Personnel Licensing and Training (PEL)
Protocol Questions by Sub-Areas Groupings

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Undetermined PQs</th>
<th>Satisfactory PQs after the Audit</th>
<th>Unsatisfactory PQs</th>
<th>SCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation and Regulations - PEL</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Organization, Staffing and Training - PEL</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Facilities, Equipment and Documentation</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>Issuance of Licences and Ratings</td>
<td></td>
<td>11</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Conversion and Validation of Foreign Licences</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>Examinations</td>
<td></td>
<td>7</td>
<td></td>
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<tr>
<td>Medical Assessment</td>
<td>6</td>
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<td>8</td>
<td></td>
</tr>
<tr>
<td>Language Proficiency</td>
<td>2</td>
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<tr>
<td>Record Keeping</td>
<td>4</td>
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<td></td>
<td></td>
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<tr>
<td>Approval and Surveillance of Training Organizations</td>
<td>10</td>
<td></td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Number of Protocol Questions
Aircraft Operations (OPS)
Protocol Questions by Sub-Areas Groupings

- **Undetermined PQs**
- **Satisfactory PQs after the Audit**
- **Unsatisfactory PQs**
- **SSCs**

<table>
<thead>
<tr>
<th>Sub-Area</th>
<th>Undetermined PQs</th>
<th>Satisfactory PQs after the Audit</th>
<th>Unsatisfactory PQs</th>
<th>SSCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation and Regulation - OPS</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Organization, Staffing and Training - OPS</td>
<td>1</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Facilities, Equipment and Documentation</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Delegation and Transfer of Responsibilities</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AOC Application</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
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<tr>
<td>Air Operator Document Review</td>
<td>7</td>
<td>15</td>
<td>7</td>
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<tr>
<td>Air Operator Training</td>
<td>5</td>
<td>15</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Crew Scheduling and Operational Control</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>FRMS</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Security Measures</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Handling</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air Operator SMS</td>
<td>7</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dangerous Goods</td>
<td>7</td>
<td>14</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Aircraft Operations Surveillance</td>
<td>1</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resolution of Safety Concerns - OPS</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Airworthiness of Aircraft (AIR) – Airworthiness Inspection Protocol Questions by Sub-Areas Groupings

#### Undetermined PQs | Satisfactory PQs after the Audit | Unsatisfactory PQs | SSCs
---|---|---|---
Legislation and Regulations - AID | 1 | 29 | 7
Organization, Staffing and Training of the Airworthiness Inspection Division (AID) | 1 | 6 | 7
Facilities, Equipment and Documentation of the Airworthiness Inspection Division (AID) | | | 7
Delegation and Transfer of Responsibilities (AID) | 2 | | 2
Aircraft Registration | 1 | 3 | 3
Certificate of Airworthiness and other Authorizations | | 10 | 4
State of Registry/Operator Continuing Airworthiness Responsibilities | 2 | 1 | 2
Airworthiness Certification of Air Operators | | 17 | 1
AMOs | 6 | | 1
Airworthiness Surveillance | 2 | 7 | 1
Resolution of Safety Concern - AIR (AID) | 3 | | 3

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Thank You