ICAO Heliport Update:

Adel Ramlawi
Regional Officer, Aerodromes,
ICAO MID Regional Office

ICAO Heliport Seminar (IHS)
Dubai, UAE, 8 December 2015
Overview

- ICAO
- Heliport SARP’s
- ADOP & HDWG
- Heliports in the MID Region
ICAO

- UN Organization
- Established 1944
- 192 States
- HQ in Montreal
- 7 Regional Offices:
  - Bangkok, Cairo, Dakar, Lima, Mexico, Nairobi, & Paris
- MID Region: 15 States
ICAO

- Assembly (ordinarily every 3 years)
- Council – 36 States
- Air Navigation Commission – 19 members
- Air Navigation Bureau
- Standards, Recommended Practices
The Chicago Convention, since 1944

- Government signatories
- Agreement on certain principles and arrangements
- Safe and orderly development of international civil aviation
- International air transport services based on equal opportunity and operated soundly and economically
Part I, Chapter VI

- Article 37:
  - Adoption of international standards and procedures

- Article 38:
  - Departures from international standards and procedures
Annexes to the Convention

• 19 Annexes currently
Annexes to the Convention on International Civil Aviation

- Annex 1 Personnel Licensing
- Annex 2 Rules of the Air
- Annex 3 Meteorological Service for International Air Navigation
- Annex 4 Aeronautical Charts
- Annex 5 Units of Measurement to be Used in Air and Ground Operations
- Annex 6 Operation of Aircraft
- Annex 7 Aircraft Nationality and Registration Marks
- Annex 8 Airworthiness of Aircraft
- Annex 9 Facilitation
• Annex 11 Aeronautical Telecommunication
• Annex 11 Air Traffic Services
• Annex 12 Search and Rescue
• Annex 13 Aircraft Accident and Incident Investigation
• Annex 14 Aerodromes (Vol I – Aerodrome Design and Operation; Vol. II – Heliports)
• Annex 15 Aeronautical Information Services
• Annex 16 Environmental Protection
• Annex 17 Security
• Annex 18 The Safe Transport of Dangerous Goods by Air
• Annex 19 Safety Management
- **5 PANS** (Procedures for Air Navigation Services) documents – Detailed procedures, supporting the implementation of the SARP’s; Aimed at States and Operators.

- **Guidance Materials** – Composed of hundreds of Manuals, Circulars, handbooks. Support the implementation of SARP’s and PANS. Not mandatory.
PROCEDURES FOR AIR NAVIGATION SERVICES:

PANS-ATM (Doc 4444, Air Traffic Management)
PANS-OPS (Doc 8168, Aircraft Operations)
PANS-ABC (Doc 8400, ICAO Abbreviations and Codes)
PANS-TRG (Doc 9868, Training)
PANS-Aerodromes (Doc 9981)

Guidance Materials (hundreds of documents, associated to the 19 annexes):
Manuals... (Including the Heliport Manual – Doc 9261)
Circulars...
The newest PANS doc is the PANS-Aerodromes (1st edition officially published July 2015)

Applicable Nov. 2016

Next Edition of PANS Aerodromes (planned to be published 2017) will include

1. Wildlife hazard
2. FOD
3. Global reporting Format
4. Runway safety
5. Apron Safety
6. Inspection of Movement Area
7. Training for Aerodrome Personnel
8. Work in Progress (WIP)

planned to contain provisions pertaining to Heliports –
Development phase

Note: Proposals for action may originate from Assembly Sessions, Council, ANC, Secretariat, Contracting States, International Organizations, Expert Group Meetings, Panels and Committees
Review phase

ANC Preliminary Review

Consultation via State Letter

Contracting States

International Organizations

SECRETARIAT

Secretariat Analysis

ANC Final Review
Adoption/Publication phase

ANC Final Review

Council Adopts

State letter

Green Edition

States

Secretariat

Blue Edition

Supplement

Annex Amendment

Disapprove

Notification of Differences

Applicability Date

4 Months
ICAO Section to handle Heliports is:

• **AOI**: Airport Operations & Interoperability
  – Aerodromes
  – Meteorology
  – Navigation Systems
  – Spectrum
  – Charting
Aerodrome Strategy

• Challenges
  – Safety
  – Capacity
  – New larger aircraft and technology impact
  – Other challenges, including economic, security and environmental issues
Aerodrome Strategy

• Vision
  – Optimize aerodrome/surface facilities and operations to enable air transportation services to be delivered in a safe, efficient, cost-effective and environmentally responsible manner.

• Mission
  – To help States achieve the above vision, ICAO provides policy, develops and assists in implementing aerodrome SARPs, procedures and guidance material and manages regional planning on aerodrome facilities and operations.
ICAO Heliport related provisions

Provisions pertaining to **Heliport planning, design, and operations** are developed by the ICAO **Aerodrome Design and Operations Panel (ADOP)**, through its **Heliport Design Working Group (HDWG)**, with cooperation with other ADOP Working Groups (for ex. the RFFWG) and others. ADOP Working Groups include: ADWG, A-CDM, RFFWG, **HDWG**, VAWG, and GHTF (Ground Handling task force).

Provisions pertaining to **Helicopter Operations** are developed by the ICAO Flight Operations Panel (FLTOPSP) through its Helicopter sub-group (HSG) and contained in Annex 6 Part III (International Operations - Helicopters).

(Until the early 90’s, a standalone panel existed - the Helicopter Operations Panel).
The Heliport Design Working Group (HDWG) :
A specialized group of the Aerodrome Design and Operations Panel (ADOP),
and the ICAO leading group of experts on Heliports matters. Comprised of 30
experts and technical advisors representing Civil Aviation Authorities,
International organisations and the industry. The HDWG develops SARP’s and
guidance materials and update existing provisions, based on the ICAO Air
Navigation Commission directives.
ICAO provisions on Heliports


Annex 14 (Aerodromes) to the Chicago convention, containing Standards and Recommended Practices for aerodromes, was first published by ICAO in 1951. However, these SARP’s did not specifically address heliports.

Introduced in 1990 (1st edition). Therefore, in 1990 a new volume of Annex 14 was introduced as a means of including provisions for heliports, partitioning Annex 14 from that year on to two parts – Volume I on Aerodrome Design and Operations (refers to Aerodromes meant for fixed wings aeroplanes’ ops), and Vol. II – Heliports.
Annex 14 Vol. II

Annex 14 Vol. II – Heliports, includes specifications on the planning, design and operation of heliports, and covers the following main topics:

• **Physical characteristics**;
• **Heliport data**;
• **Obstacle environment**;
• **Visual aids**; and
• **Heliport services** (including RFF).
Annex 14 Volume II contains the following key definitions:

**Heliport** - “An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters”.

**Helideck** - “A heliport located on a fixed or floating offshore facility such as an exploration and/or production unit used for the exploitation of oil or gas”.

---

[Image of a helicopter on a helideck and a helideck on an offshore facility.]
**Elevated heliport** - “A heliport located on a raised structure on land”.

**Shipboard heliport** - “A heliport located on a ship that may be purpose or non-purpose-built...”.

“Helipad”, “helicopter landing site”, "helicopter landing zone“ etc’ are all Non-ICAO terms, and are not defined in the ICAO Heliports related documents.
ICAO provisions on Heliports – Cont’d


The Heliport Manual supports the high-level Standards and Recommended Practices contained in Annex 14 Volume II and assists in their implementation. The Manual not only enlarges upon some of the specifications in Annex 14 Volume II, but also provides guidance on aspects not dealt with in the Annex, e.g. site selection, winching areas, underslung load operating areas, etc.

The following main topics are covered by the Heliport Manual:

- **Site selection and structural design**;
- **Physical characteristics**;
- **Obstacle restriction and removal**;
- **Winching areas and underslung load operating areas on ships**;
- **Visual aids**;
- **Rescue and Fire fighting**; and
- **Heliport data**.
Recent developments by ICAO


- **The next amendment of Annex 14 Volume II**, planned to become applicable in November 2016 and detailed in State Letter 97/2014, will address the topics of removal of redundant definitions from the Annex, Heliport emergency planning, physical characteristics, Shipboard heliports, and visual aids.
Recent developments by ICAO (cont.)

- **Complete revision and updating of the Heliport Manual (doc 9261) Off Shore part** – Following a massive effort by the HDWG Off-shore sub-group. The updated material will address Helidecks and Shipboard Heliports and has entered the internal ICAO phase of editing and coordination (planned to be officially published in 2016).

- **Expansion of the HDWG**
  - New members from the UAE have joined the group, mainly (but not only) to support the development of provisions pertaining to Heliport certification.
Main components of the HDWG Work Plan

- **Provisions on the certification of heliports, including implementation of SMS.**


  Target dates: development of provisions by Q4/2017; Applicability Q4/2020 (following the mandatory consultation process with Member states and the Industry).
• Review of Annex 14 Vol. II provisions concerning lighting at heliports, (Final approach and Take-Off) FATO characteristics, markings of FATO’s and Touchdown and Lift-off (TLOFs), and RFF.


• Target dates: development of provisions by Q4/2017; Applicability Q4/2020 (following the consultation process).

• Reviewing the criteria used for categorization of heliports for RFF including a study of the D-values and corresponding fuselage length/width values and develop provisions accordingly.
• Complete revision and updating of the Heliport Manual (doc 9261) — Including its partitioning into two parts: On-shore heliports and Off-shore heliports.
- Off-shore planned for publication in 2016; On shore part by 2018.
<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>STATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>in line with ICAO Annex 14 Volume II? If yes, provide details:</td>
<td></td>
</tr>
<tr>
<td>Has the State notified ICAO of any difference to Annex 14 Vol. II?</td>
<td>EGYPT: No. QATAR: No. Saudi Arabia: Yes. (Ref 5.2.2.6) A heliport identification marking for a heliport at a hospital shall consist of a letter H, WHITE in colour, on a RED CRESCENT. <strong>UAE:</strong> No differences between CAAP 70 and ICAO Annex 14, Volume II.</td>
</tr>
<tr>
<td>If yes, provide details:</td>
<td></td>
</tr>
<tr>
<td>Does the State maintain a database of all heliports and other landing</td>
<td>EGYPT: Yes. (include no., certification statues, operator name, location. QATAR: Yes. Gulf Helicopters- (See Attached). Saudi Arabia: No. <strong>UAE:</strong> Yes: Database of all heliports and other landing areas is maintained on GCAA’s e-Services.</td>
</tr>
<tr>
<td>areas? If yes, provide details:</td>
<td></td>
</tr>
<tr>
<td>QUESTIONS</td>
<td>STATES</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>EGYPT</strong></td>
<td><strong>QATAR</strong></td>
</tr>
<tr>
<td>4  Does the State have a programme to certify/accept/approve heliports?</td>
<td>Yes, ECAR 138 Subpart (B,C,D)</td>
</tr>
<tr>
<td>a) Is heliport certification/acceptance/approval supported by Regulation?</td>
<td>Yes, ECAR 138 Subpart (B,C,D)</td>
</tr>
<tr>
<td>b) Has the State promulgated clear criterion for heliport certification?</td>
<td>Yes, ECAR 138 Subpart (B,C,D)</td>
</tr>
<tr>
<td>c) How many heliports have been identified for certification/acceptance/approval?</td>
<td>Approximately (100)</td>
</tr>
<tr>
<td>d) How many heliports have received their certification/acceptance/approval?</td>
<td>Approximately (40)</td>
</tr>
<tr>
<td>e) What is the percentage of certified heliports?</td>
<td>40%</td>
</tr>
<tr>
<td>f) What are the criteria adopted for RFFS?</td>
<td>ECAR 138, EAC 139-27</td>
</tr>
<tr>
<td>g) How long is the validity of certification/acceptance/approval?</td>
<td>One year</td>
</tr>
<tr>
<td>QUESTIONS</td>
<td>STATES</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Does the State have Helidecks operating within its territories?</td>
<td>EGYPT</td>
</tr>
<tr>
<td><strong>If yes:</strong></td>
<td></td>
</tr>
<tr>
<td>a) How many helidecks (fixed and mobile) and vessels are operating off-shore?</td>
<td>100</td>
</tr>
<tr>
<td>b) How many other vessels are operating (i.e. tankers, cargo vessels, passenger vessels)?</td>
<td>Information not available</td>
</tr>
<tr>
<td>c) In addition to ICAO Annex 14 Volume II, what other publications are used</td>
<td>Only ICAO annex14v2 and other related doc.</td>
</tr>
<tr>
<td>d) What level of safety oversight is provided by the State?</td>
<td>criteria for surveillance and oversight system to ensure safe operation to helicopter.</td>
</tr>
<tr>
<td>e) What level of safety oversight is provided by the oil and gas companies?</td>
<td>Should comply with requirement to have certification.</td>
</tr>
<tr>
<td>QUESTIONS</td>
<td>STATES</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Provide an estimation of the number of heliports in your State and type of use (Oil industry, medical services, etc..)</td>
<td>EGYPT: Oil industry (120), Medical service (2)</td>
</tr>
<tr>
<td>Does the State have a heliport oversight system in-place with sufficient resources and procedures</td>
<td>Yes</td>
</tr>
<tr>
<td>How do helicopter operators demonstrate that the use of heliports are adequate for the type(s) of helicopter and operation(s) concerned?</td>
<td>1) All design criteria is related to the helicopter specification 2) Any limitation was written in the ministerial decree for heliport operation.</td>
</tr>
</tbody>
</table>