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**ASSEMBLY — 41ST SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 20: Increasing the efficiency and effectiveness of ICAO**

**WATER AERODROMES REGULATORY FRAMEWORK**

(Presented by Saudi Arabia)

**EXECUTIVE SUMMARY**

This paper provides an overview on water aerodrome regulatory framework adopted by General Authority of Civil Aviation (GACA) of the Kingdom of Saudi Arabia. This framework is mainly composed of GACA Regulation Part 137 and Safety Inspector Guidance E-book Volume 7 used by the safety inspectors for oversight activities of water aerodromes. The paper highlights also the categorization used for water aerodromes considering their intent and complexity of operations and the processes used either for certification or authorization.

<i>Strategic Objectives:</i>	This working paper relates to the Safety and Air Navigation Capacity and Efficiency Strategic Objectives.
<i>Financial implications:</i>	Without any financial implications
<i>References:</i>	Annex 14 - <i>Aerodromes</i> Doc 9981, <i>PANS-Aerodromes</i> Doc 10140, <i>Assembly Resolutions in Force (as of 4 October 2019)</i> Asia Pacific Regional Guidance on Requirements for the Design and Operations of Water Aerodromes for Seaplane Operations

## 1. INTRODUCTION

1.1 The Annex 14 Volume I – *Aerodrome Design and Operations* does not differentiate between land and water as a surface from which aircraft can operate and defines that an aerodrome is defined as area on land or water intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft. The operations of aircraft on water are significantly different from those conducted on land and the criteria and requirements used for certification of land aerodromes may not be appropriate for certification of water aerodromes. Currently, there is no globally accepted standards related to the design, certification, and operations of water aerodromes for seaplane operations.

1.2 Considering the need to promulgate global standards related to the design, certification and operations of water aerodromes for safe, regular, efficient seaplane operations, the International Civil Aviation Organization (ICAO) Assembly 40th session adopted the Resolution A40-8: Global provisions for design, certification and operations of water aerodromes inviting *the Council, as a matter of priority, to review existing SARPs related to aerodromes and to develop specific Standards and Recommended Practices in the appropriate Annexes to the Convention in order to address the design, certification, management, safety and reporting requirements for water aerodromes operations*”.

## 2. OVERVIEW ON GACA REGULATORY FRAMEWORK FOR WATER AERODROME

2.1 In March 2016, the General Authority of Civil Aviation of Saudi Arabia (GACA) in the kingdom of Saudi Arabia issued new safety regulation known as GACA Regulations (GACARs) divided into seventy parts covering all civil aviation areas including aerodromes. The safety regulation related to aerodromes and heliports is composed of two parts i.e., GACAR Part 138 – Certification, authorization, and operation of heliports and GACAR Part 139 – certification, authorization, and operation of aerodromes. Both GACAR Parts are fully compliant and aligned with the last amendments to Annex 14, Volumes I & II Standards and Recommended Practices (SARPs) applicable from November 2020. GACA safety regulation is available through this link: <https://gaca.gov.sa/web/en-gb/content/laws-and-regulation>.

2.2 Under the implementation of vision 2030 adopted by the kingdom of Saudi Arabia, the Red Sea project<sup>(\*)</sup> sits over 28 000 km<sup>2</sup> of pristine lands and territorial waters and includes a vast archipelago of more than 90 islands and will set new standards in regenerative tourism and sustainable development, creating unique travel experience, and air connectivity through seaplane services. To cope with the expected development of islands in Red Sea and supporting infrastructure, GACA adopted in January 2022, GACAR Part 137 - Certification, authorization, and operation of water aerodromes.

2.3 The development of GACA regulation for water aerodromes was based on regulations developed by various states that are using seaplanes as common and regular mode of transportation between islands and mainly on the guidance developed by ICAO- APAC Office which provides general guidance to States for establishing national regulations for water aerodromes to assist operators in planning, designing, and constructing water aerodromes and associated facilities.

2.4 GACAR Part 137<sup>(\*\*)</sup> is divided into 14 Subparts and 13 Appendices covering requirements for civil water aerodrome certification, authorization, design characteristics, operation, and

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(\*) <https://www.vision2030.gov.sa/v2030/v2030-projects/the-red-sea-project/>

(\*\*) <https://gaca.gov.sa/scs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobheadername1=Content-Disposition&blobheadervalue1=inline&blobkey=id&blobtable=MungoBlobs&blobwhere=1442855533316&ssbinary=true>

management. Under the regulation, water aerodromes are divided into two categories considering their type of use and complexity of operations:

- a) Civil/Public Water Aerodrome: All civil/public water aerodromes in the kingdom of Saudi Arabia must be certified, which is open to the public and serves seaplane operations offering scheduled or non-scheduled commercial air services.
- b) General Aviation Water Aerodrome: All general aviation water aerodromes in the kingdom of Saudi Arabia, which includes the following category of use must be authorized to operate:
  - 1) Private water aerodrome used for operation of private seaplanes and not open to the public;
  - 2) Flight Training Water aerodrome used by flight training schools providing pilot training; and
  - 3) General purpose Water aerodrome used for recreation, aerial work, or airshows, or to conduct specific flying activity.

2.5 The water aerodrome operator is responsible to apply for certification of water aerodrome used for public or for authorization used for general aviation, as per classification given in GACAR Part 137 and must apply in prescribed forms that are available under GACA website: <https://gaca.gov.sa/web/en-gb/page/forms>.

2.6 Once the water aerodrome certificate or authorization is issued to the water aerodrome; it is the responsibility of the water aerodrome operator to operate and maintain the water aerodrome, as per the responsibilities of water aerodrome operator described in GACAR Part 137 and the conditions prescribed, if any, in water aerodrome certificate or authorization.

2.7 For GACA aerodrome safety inspectors, internal processes, procedures, and guidance material are outlined in the E-Book Volume 7<sup>(\*\*\*)</sup> - Aerodromes, heliports, and water aerodromes administration. The chapters 13, 14, 15, and 16 of this document provide general guidance and procedures for water aerodrome safety inspectors, water aerodrome certification project managers, and operators to meet the requirements of GACAR Part 137. It also includes forms and templates used for the implementation of the complete regulatory framework, including Water Aerodrome Operation Manual Checklist, and list of training courses and process of competency assessment for management personnel.

2.8 The water aerodrome certification is subject of five-phase process that should be followed/applied by Water Aerodrome Operators and Safety Inspectors. It can be summarized as follows:

- Phase 1: Certification Pre-application Phase (Expression of Interest);
- Phase 2: Certification Formal Application Phase;
- Phase 3: Certification Document Evaluation and Competence Assessment Phase; and
- Phase 4: Certification Technical Inspection and On-site Verification Phase.

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(\*\*\*)<https://gaca.gov.sa/scs/Satellite?blobcol=urldata&blobheader=application%2Fpdf&blobheadname1=Content-Disposition&blobheadervalue1=inline&blobkey=id&blobtable=MungoBlobs&blobwhere=1442855623300&ssbinary=true>

- Phase 5: Issuance or Denial of water aerodrome Certificate Phase

2.9 Regarding water aerodrome authorizations, the Water Aerodrome Operators and Safety Inspectors should follow a five-phases process that will end by Issuance or Denial of Water Aerodrome Authorization. The authorization process can be summarized as follows:

- Phase 1: Authorization Pre-application (Expression of Interest);
- Phase 2: Authorization Formal Application;
- Phase 3: Authorization Document Evaluation;
- Phase 4: Technical Inspection and On-site Verification (Optional, only if necessary); and
- Phase 5: Issuance or Denial of Water Aerodrome Authorization.

### 3. CONCLUSION

3.1 The development of water aerodromes is increasing substantially and is likely to operate large seaplanes for public flying on domestic and specific international routes. Several States developed their own regulations for water aerodromes which could serve as basis for the development of ICAO Standards and Recommended Practices (SARPs) for design, certification, and operation of water aerodromes.

3.2 The kingdom of Saudi Arabia has more than 90 Islands and is planning to develop infrastructure and facilities serving 40 islands in Red Sea to promote high and environment friendly and responsible tourism under its vision 2030. To support an orderly and safe development of water aerodromes, GACA adopted its national regulatory framework i.e., GACAR Part 137 and E-Book–Volume 7 which define the requirements for the design, certification and operation of water aerodromes in the Kingdom.

3.3 The Assembly is invited to take note of the information provided in this paper and encourage States and Regions to exchange information on the regulatory framework related to the design, certification and operations of water aerodromes for seaplane operations.

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