Aerodromes to be listed in Asia Pacific Air Navigation Plan [Updated on 13 May 2022]

Serial #	Sub-region	State / Admin	ICAO Code	Name of City	Name of Aerodrome	Type	APAC ANP
1	SA	Afghanistan	OAHR	Herat	Herat Intl	UNK	0
4	SA	Afghanistan	OAMS	Mazar-e-Sharif	Mazar-e-Sharif	UNK	0
44	SEA	Cambodia	VDSV	Sihanouk	Sihanouk Intl	UNK	0
45	NA	China	ZBOW	Baotou		UNK	0
46	NA	China	ZGBH	Beihai		UNK	0
48	NA	China	ZBAD	Beijing	Daxing	UNK	0
49	NA	China	ZYCC	Changchun	Longjia	UNK	0
51	NA	China	ZSCG	Changzhou	Benniu	UNK	0
55	NA	China	ZLDH	Dunhuang		UNK	0
56	NA	China	ZHES	Enshi	Xujiaping	UNK	0
58	NA	China	ZSGZ	Ganzhou	Huangjin	UNK	0
62	NA	China	ZUGY	Guiyang	Longdongbao	UNK	0
63	NA	China	ZBLA	Hulunbeier	Hailar	UNK	0
64	NA	China	ZJHK	Haikou	Meilan	UNK	0
69	NA	China	ZWTN	Hotan		UNK	0
70	NA	China	ZSSH	Huai'an	Lianshui	UNK	0
71	NA	China	RCYU	Hualien	Hualien	UNK	0
72	NA	China	ZSTX	Huangshan	Tunxi	UNK	0
73	NA	China	ZYJM	Jiamusi		UNK	0
74	NA	China	ZGOW	Jieyang	Chaoshan	UNK	0
79	NA	China	ZULS	Lhasa	Gonggar	UNK	0
80	NA	China	ZSLG	Lianyungang	Baitabu	UNK	0
81	NA	China	ZPLJ	Lijiang	Sanyi	UNK	0
82	NA	China	ZSLY	Linyi	Shubuling	UNK	0
83	NA	China	ZHLY	Luoyang	Beijiao	UNK	0
84	NA	China	ZPMS	Dehong	Mangshi	UNK	0
85	NA	China	ZBMZ	Manzhouli	Xijiao	UNK	0
86	NA	China	ZYMD	Mudanjiang	Hailang	UNK	0
87	NA	China	ZSCN	Nanchang	Changbei	UNK	0
90	NA	China	ZSNT	Nantong	Xingdong	UNK	0
91	NA	China	ZSNB	Ningbo	Lishe	UNK	0
92	NA	China	ZBDS	Ordos	Ejin Horo	UNK	0
94	NA	China	ZYQQ	Qiqihar	Sanjiazi	UNK	0
95	NA	China	ZSQZ	Quanzhou	Jinjiang	UNK	0
101	NA	China	ZBSJ	Shijiazhuang	Zhengding	UNK	0
104	NA	China	RCMQ	Taichung	Cingcyuangang	UNK	0
105	NA	China	RCNN	Tainan	Tainan	UNK	0
109	NA	China	ZSWH	Weihai	Dashuipo	UNK	0

Serial #	Sub-region	State / Admin	ICAO Code	Name of City	Name of Aerodrome	Type	APAC ANP
110	NA	China	ZSWZ	Wenzhou	Longwan	UNK	0
112	NA	China	ZSWX	Wuxi	Shuofang	UNK	0
113	NA	China	ZSWY	Wuyishan		UNK	0
117	NA	China	ZLXN	Xining	Caojiabao	UNK	0
118	NA	China	ZPJH	Xishuangbanna	Gasa	UNK	0
119	NA	China	ZSXZ	Xuzhou	Guanyin	UNK	0
120	NA	China	ZSYN	Yancheng	Nanyang	UNK	0
121	NA	China	ZYYJ	Yanji	Chaoyangchuan	UNK	0
122	NA	China	ZSYT	Yantai	Penglai	UNK	0
123	NA	China	ZSYA	Yangzhou	Taizhou	UNK	0
124	NA	China	ZHYC	Yichang	Sanxia	UNK	0
125	NA	China	ZLIC	Yinchuan	Hedong	UNK	0
126	NA	China	ZSYW	Yiwu		UNK	0
127	NA	China	ZGZJ	Zhanjiang		UNK	0
128	NA	China	ZGDY	Zhangjiajie	Hehua	UNK	0
129	NA	China	ZHCC	Zhengzhou	Xinzheng	UNK	0
130	NA	China	ZSZS	Zhoushan	Putuoshan	UNK	0
131	NA	China	ZUZY	Zunyi	Xinzhou	UNK	0
133	PAC	Cook Islands	NCAI	Aitutaki		UNK	0
144	SA	India	VEBS	Bhubaneswar		UNK	0
146	SA	India	VICG	Chandigarh		UNK	0
151	SA	India	VOGO	Goa		UNK	0
162	SA	India	VOPB	Port Blair		UNK	0
163	SA	India	VAPO	Pune		UNK	0
164	SA	India	VISR	Srinagar		UNK	0
202	NA	Japan	RJSA	Aomori		UNK	0
203	NA	Japan	RJEC	Asahikawa		UNK	0
205	NA	Japan	RJSF	Fukushima		UNK	0
207	NA	Japan	RJSI	Hanamaki		UNK	0
209	NA	Japan	RJAH	Hyakuri		UNK	0
210	NA	Japan	ROIG	Ishigaki	New Ishigaki	UNK	0
213	NA	Japan	RJFR	Kitakyushu		UNK	0
214	NA	Japan	RJNK	Komatsu		UNK	0
216	NA	Japan	RJFM	Miyazaki		UNK	0
224	NA	Japan	RJFS	Saga		UNK	0
226	NA	Japan	RJCO	Sapporo	Sapporo	MIL	0
228	NA	Japan	RORS	Shimojishima		UNK	0
229	NA	Japan	RJNS	Shizuoka		UNK	0

Serial #	Sub-region	State / Admin	ICAO Code	Name of City	Name of Aerodrome	Type	APAC ANP
231	NA	Japan	RJOS	Tokushima		UNK	0
234	NA	Japan	RJNT	Toyama		UNK	0
235	NA	Japan	RJOH	Yonago	Miho	UNK	0
269	PAC	Micronesia	PTSA	Kosrae I.	Kosrae	UNK	0
270	NA	Mongolia	ZMCD	Dornod	Choibalsan	UNK	0
292	PAC	N. Mariana Is.	PGWT	Tinian I.	West Tinian	UNK	0
326	PAC	Solomon Islands	AGGM	Munda		UNK	0
330	SA	Sri Lanka	VCCJ	Jaffna		UNK	0
350	SEA	Viet Nam	VVDL	Da Lat	Lien Khuong	UNK	0

Notes:

Australia: Need to finalize the Table AOP II -1, APAC ANP V-II.

US

1) Tinian I./West Tinian [PGWT] for N. Mariana Is. should be added in Table AOP I – 1 of APAC ANP Volume - I and Table AOP II – 1 of APAC ANP Volume - II.
2) JOHNSTON ATOLL/Johnston I (PJON) should be withdrawn from Table AOP I – 1 of APAC ANP Volume - I and Table AOP II – 1 of APAC ANP Volume - II as it had been permanently closed for operation.

PROPOSAL FOR AMENDMENT OF THE ICAO ASIA AND PACIFIC REGIONS AIR NAVIGATION PLAN, VOLUME XX

(Serial No.: APAC-XX XX/XX – AOP**)**

a) **Plan:**	Doc 9673, Asia and Pacific Air Navigation Plan (ANP), Volume XX
b) **Proposed amendment:**	***Editorial Note*:** Amendments are arranged to show deleted text using strikeout (~~text to be deleted~~), and added text with grey shading (text to be inserted) *Add, Amend or Delete* requirement as follows: 1) Volume I PART II – AERODROMES/AERODROME OPERATIONS (AOP) In respect of aerodromes in [**Name of State**], amend Table AOP I-1 as indicated in **Appendix 1** to this document. (cf. Part II, Table AOP I-1, Page II-xx) 2) Volume II PART II – AERODROMES/AERODROME OPERATIONS (AOP) In respect of aerodromes in [**Name of State**], amend Table AOP II-1 as indicated in **Appendix 2** to this document. (cf. Part II, Table AOP II-1, Page II-xx to ….)
c) **Originated by:**	[**Name of State or Organization**]
d) **Originator's reasons for amendment:**	**[Example of the Text]** To reflect the current requirements in respect of aerodromes (including their designations) that are required in the Regions to serve international civil aviation operations (international scheduled air transport, non-scheduled air transport and general aviation operations).
e) **Intended date of: implementation**	As soon as possible after final approval of the proposal.

f) **Proposal circulated to the following States and International Organizations:**	[PROPOSING STATE OR STATES]* [LIST OTHER STATES]	[LIST OTHER STATES]	[LIST OTHER STATES AND/OR INTERNATIONAL ORGANIZATIONS]
	* *for information*		

g) **Secretariat Comments:**	1. [TEXT] 2. [TEXT] 3. [TEXT]

— — — — — — — —

Appendix 1

***Editorial Note*:** Amendments are arranged to show deleted text using strikeout (~~text to be deleted~~), and added text with grey shading (text to be inserted)

Amend Table AOP I-1 – International aerodromes required in the Asia/Pacific Region. **Add/delete** the following requirements under [**Name of State**]

Table AOP I-1 [Example only]

Location Indicator	Name of City/Aerodrome	Designation
PAKISTAN		
OPFA	FAISALABAD/Faisalabad Intl	RS
OPGD	GWADAR/Gwadar	RS
OPRN	ISLAMABAD/Benazir Bhutto Intl	RS
OPIS	ISLAMABAD/Islamabad Intl	RS
OPKC	KARACHI/Jinnah Intl	RS
OPLA	LAHORE/Allama Iqbal Intl	RS
OPMT	MULTAN/Multan Intl	RS
OPNH	NAWABSHAH/Nawabshah	AS
OPPS	PESHAWAR/Peshawar	RS
OPQT	QUETTA/Quetta Intl	RS

Explanation of the Table AOP I-1

City/Aerodrome: Name of the city and aerodrome, preceded by the location indicator.
Designation: Designation of the aerodrome as:
RS — international scheduled air transport, regular use;
RNS — international non-scheduled air transport, regular use;
AS — international scheduled air transport, alternate use;
ANS — international non-scheduled air transport, alternate use.

Note 1 — when an aerodrome is needed for more than one type of use, normally only the use highest on the above list is shown.
[Example — an aerodrome required for both RS and AS use would only be shown as RS in the list.]

Note 2 — when the aerodrome is located on an island and no particular city or town is served by the aerodrome, the name of the island is included instead of the name of a city.

New aerodrome

1) For a new aerodrome, States should first send a formal request to ICAO APAC Office for obtaining ICAO Location Indicator in the format below:

Subject: Request registration of a new location indicator in ICAO Doc 7910 – *Location Indicators*:

Location Name:	[Xxxxxxx]
Location Indicator Requested:	[XXXX]
FIR:	Xxxxxx
Use:	[e.g. Civil, Military, Civil/Military]
IATA Code (if any):	
Connected to AFTN:	[YES/NO]

2) On receipt of the formal request, ICAO APAC will coordinate with ICAO headquarters, and respond to the State in due course.

3) Following approval by ICAO the Location Indicator will be included in the next routine update of Doc 7910.

Appendix 2

***Editorial Note*:** Amendments are arranged to show deleted text using strikeout (~~text to be deleted~~), and added text with grey shading (text to be inserted)

[Example only]

Table AOP II-1 — Requirements and capacity assessment in international aerodromes in the Asia and Pacific Regions, **add** the following requirements under [**Name of State**].

City/Aerodrome/Designation		RFF category	Physical characteristics			Remarks
			RC	RWY No.	RWY type	
1		2	3	4	5	6
PAKISTAN						
OPFA	FAISALABAD/Faisalabad Intl	8	4D	03	PAI	A310
	RS			21	NPA	
OPGD	GWADAR/Gwadar Intl	4	3C	06	NPA	ATR72
	RS			24	NPA	
OPRN	ISLAMABAD/Benazir Bhutto intl	9	4E	12	NPA	B747
	RS			30	PA1	
OPIS	ISLAMABAD/Islamabad Intl	10	4E	10L	NPA	B747
	RS			28R	PA1	
			4F	10R	PA1	A380
				28L	PA2	
OPKC	KARACHI/Jinnah Intl	9	4E	07L	NPA	A310
	RS			25R	PA1	
			4E	07R	NPA	B747
				25L	PA1	
OPLA	LAHORE/Allama Iqbal Intl	9	4E	18L	NPA	B747
	RS			36R	PA3B	
			4E	18R	NPA	EA 30
				36L	PA1	
OPMT	MULTAN/Multan Intl	9	4E	36	PAI	B747
	RS			18	NPA	
OPNH	NAWABSHAH/Nawabshah	9	4E	02	NPA	B747
	AS			20	NPA	
OPPS	PESHAWAR/Bacha Khan Intl	9	4D	17	NPA	B777
	RS			35	PA1	
OPQT	QUETTA/Quetta Intl	9	4D	13L	PAI	A310
	RS			31R	NINST	

Explanation of the Table AOP II-1

Note: Columns 3 to 5 for physical characteristics relate to runways and taxiways. The physical characteristics of taxiways and aprons should be compatible with the aerodrome reference code (Column 3) and appropriate for the runways with which they are related.

Column

1 Name of the city and aerodrome, preceded by the location indicator.

Note 1— When the aerodrome is located on an island and no particular city or town is served by the aerodrome, the name of the island is included instead of a city.

Designation of the aerodrome as:
RS — international scheduled air transport, regular use;
RNS — international non-scheduled air transport, regular use;
AS — international scheduled air transport, alternate use; and
ANS — international non-scheduled air transport, alternate use.

2 Required rescue and firefighting service (RFF). The required level of protection expressed by means of an aerodrome RFF category number, in accordance with Annex 14, Volume I, 9.2.

3 Aerodrome reference code (RC). The aerodrome reference code for aerodrome characteristics expressed in accordance with Annex 14, Volume I, Chapter 1. The code letter or number within an element selected for design purposes is related to the critical aeroplane characteristics for which the facilities are provided.

4 Runway Designation numbers.

5 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume I, Chapter 1, are:

NINST — non-instrument runway;
NPA — non-precision approach runway;
PA1 — precision approach runway, Category I;
PA2 — precision approach runway, Category II;
PA3 — precision approach runway, Category III.

6 Remarks. Additional information including critical design aircraft selected for determining RC, critical aircraft selected for determining the RFF category and critical aircraft for pavement strength. Only one critical aircraft type is shown if it is used to determine all the above three elements: otherwise different critical aircraft types need to be shown for different elements.

General Guidance

It is the responsibility of a State originating an amendment proposal to ensure that the proposal is consistent, complete and unambiguous, whilst it is the responsibility of the Regional Office to verify that this is the case before processing the proposal; and in particular ensure that it is:

a) **fully justified**: It should state the operational requirement that support the proposed change.

b) **accurate**: This applies in particular to typographical errors which can be critical in the case of geographical coordinates or air route headings.

c) **complete**: The proposal should give full details under the seven headings under which it is presented. Proposals for changes in airspace organization, ATS routes, location of facilities, etc. should always be accompanied by simplified, although accurate, sketches, charts, diagrams, etc.

d) **consistent**: The consequences produced by proposals should be properly reflected throughout the plan. Amendment proposals need to be systematically examined for the potential need for consequential amendment, and, if necessary, refer the proposal back to the originating State for consultation. Any consequential amendments should then be combined with the original into one multiple amendment proposal and processed in the established manner.

e) **timely**: Proposed implementation dates should allow sufficient time for the required processing formalities to be completed.

The following minimum information should be given to States in respect of each proposal that is circulated to them for comments:

a) Plan (a reference to the air navigation plan document should be given);

b) Proposed amendment;

c) Originated by xxx;

d) Originator's reason for amendment;

e) Intended date of implementation;

f) Proposal circulated to the following States and organizations; and

g) Secretariat comments.

Each proposal should be complete in itself and be stated in narrative form whenever possible. Item e) should provide a realistic implementation date or alternatively the phrase “As soon as possible after final approval of the proposal” may be used. Item g) should include additional explanatory comments or background information which is considered necessary for a clear understanding of the amendment proposal, both by States and by Headquarters as well as comments of technical and operational nature that would indicate the added value of Secretariat’s examination of the proposal. The concurrence of the State(s) whose facilities will be affected by proposals submitted by international organizations or initiated by the Secretariat should also be shown under this item.

……..……..

INTERNATIONAL CIVIL AVIATION ORGANIZATION

GENERIC SURVEILLANCE PROGRAMME FOR CERTIFIED AERODROMES

VERSION 1.0 – August 2022

Introductory Notes

This generic document was developed by the ICAO Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG) for reference by States in the APAC Regions. When referring to this generic document, States are expected to customize the content in accordance to the States' legislations, regulations and situations.

It was approved by AOP/SG/6 (Video Teleconference, 27 – 30 June 2022) and published by ICAO Asia and Pacific Office, Bangkok.

ICAO Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services and Guidance Materials shall take prevalence in the event of any conflict between the aforementioned provisions and this generic document.

Enquiries and feedbacks regarding this generic document can be made to ICAO APAC Office at apac@icao.int.

RECORD OF AMENDMENTS

AMENDMENTS				AMENDMENTS			
No.	Date applicable	Date entered	Entered by	No.	Date applicable	Date entered	Entered by

CIVIL AVIATION AUTHORITY

GENERIC SURVEILLANCE PROGRAMME FOR CERTIFIED AERODROMES

Foreword

This manual is a [CAA] safety programme document. It contains processes determined to be necessary in supporting operational safety at aerodromes in the [State]. This manual is being issued under the authority of the Director General of [CAA].

Copies are available at the office of:

[Post holder]
[Address]

This document may be amended from time to time as necessary, and the Director General of [CAA] will provide such amendment service.

The term "Head" as referred to in this manual describes the most senior [CAA] officer responsible for certification, registration and continuing safety oversight (surveillance) functions of aerodromes and heliports. The incumbent official holding this position reports directly to the Director General, [Civil Aviation Authority (CAA)].

Comments from staff members of [CAA], stakeholders, (or members of the) concerned aviation industry users and public about the contents of this manual are welcome. Clarifications or inquiries can be directed to:

Head of Aerodrome Standards
[Office]
[Address]
[Telephone]:
[Email]:

Amendments

Record of amendment			
Number	**Date Applicable**	**Date Entered**	**Entered by:**

Record of corrigenda			
Number	**Date Applicable**	**Date Entered**	**Entered by:**

Revision History

Revisions to this Document shall be made by authorised personnel only. After inserting the revision, enter the required data in the revision sheet below. The *'Initials'* has to be signed off by the personnel responsible for the change.

Rev No.	Revision Date	Revision Details	Initials

List of Effective Pages

Part	Page Nos.	No. of Pages	Version	Date of Issue
Cover Page	-	1	1	mm 2022
Foreword	i	1	1	mm 2022
Amendments	ii	1	1	mm 2022
Revision history	iii	1	1	mm 2022
List of effective pages	iv	1	1	mm 2022
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Chapter 2: Surveillance Programme	4 - 5	2	1	mm 2022
Chapter 3: Surveillance Audit Process	6 - 8	3	1	mm 2022
Chapter 4: Surveillance Audit Preparation & Notification to Aerodrome Operator	9 - 9	1	1	mm 2022
Chapter 5: Surveillance Audit	10 - 12	3	1	mm 2022
Chapter 6: Audit Report	13 - 13	4	1	mm 2022
Chapter 7: Corrective Action	14 - 15	2	1	mm 2022
Appendix I - Sample Agenda Items for an Opening Meeting	16 - 16	1	1	mm 2022
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Chapter 1 – Surveillance Policy

1.1 Introduction

1.1.1 The contents of the Chapter 1 of this manual represent the policy of the Civil Aviation Authority (CAA) with respect to the surveillance requirements embodied in the Civil Aviation Act [Year] or Civil Aviation Regulations (CAR) as amended. The policy is designed to provide the foundation for the CAA's continued safety oversight (surveillance) function. CAA has adopted a systems and Risk-based surveillance approach, utilising a sampling process, to assess the Risk mitigation and Compliance levels of aerodrome certificate holders.

1.1.2 This manual describes the requirements for aerodromes to operate with an Aerodrome Certificate and the process of surveillance by the Civil Aviation Authority (CAA).

1.1.3 Aerodromes of the armed forces not open for civil aircraft operations are not subjected to the need for certification and surveillance.

1.1.4 Once the CAA has completed a thorough review of the compliance of an aerodrome with the applicable certification requirements, leading to the granting of the certificate to the aerodrome operator, continued oversight (surveillance programme) shall be established in order to ensure that compliance with regard to certification conditions and ongoing additional requirements is maintained.

1.1.5 An Aerodrome Certificate is valid for xx (x) years or unless it is suspended or cancelled, whichever is earlier. CAA should conduct surveillance audit prior to renewal of Aerodrome Certificate.

1.1.6 Civil Aviation Regulations [Regulations No or Year] Regulation nn requires person who operates aerodrome and hold an aerodrome certificate issued by the CAA to allow Aerodrome Inspectors to perform their surveillance duties.

1.1.7 CAA may plan the surveillance audits based on the following criteria:

a) Expiry of the Aerodrome Certificate/time since last surveillance audit conducted

b) Status of findings for the last inspection conducted

c) Report/feedback from stakeholders (for e.g., pilot, ATC and etc.)

1.1.8 Surveillance may be scheduled or unscheduled, opportunity based, random, or targeted across all facets of the aerodrome operator as follows:

a) Scheduled Announced audit

b) Scheduled Unannounced audit

c) Unscheduled Announced audit

d) Unscheduled Unannounced audit

1.1.9 All surveillance findings must be objective and factual. Deficiencies should be provided to aerodrome operator through formal documentation.

1.2 Purposes

1.2.1 Planning of the aerodrome audit is intended to assist the regulator and aerodrome in planning human and other resources and in ensuring a consistent and adequate level of oversight. However, it does not prevent the CAA from carrying out surveillance inspections, if deemed necessary. The CAA retains the provision to conduct surveillance audit for the purpose to ensure that certified aerodrome continues to comply with the relevant Regulations, Directives or Guidance and other conditions stated in the Aerodrome Certificate.

1.2.2 These surveillance inspections follow the same methodology as the scheduled audit or technical inspection for certification as appropriate and may be carried out using the same checklists or could be aimed at a specific subject of concern.

1.3 Scope of Surveillance

1.3.1 The scope of surveillance does not necessarily cover all areas established through the regulatory framework applicable to the aerodrome but it usually focuses on specific areas. Surveillance programmes may not need to be as exhaustive but shall be based on principles ensuring that compliance is maintained throughout the planning of adequate oversight actions.

1.3.2 Specific and targeted actions, in addition to the planned activities, may be carried out by CAA, for example, in relation to changes, analysis of occurrences, safety of aerodrome works, monitoring of corrective action plans, or those related to the National Aviation Safety Plan. CAA may also have to address other issues regarding aerodrome safety depending on the aerodrome organization, such as obstacle control or oversight of ground handlers.

1.3.3 The scope of surveillance may include the following subjects as listed below:

a) compliance of the aerodrome infrastructure with the applicable regulations for the operations the aerodrome is intended to serve;

b) the operational procedures and their day-to-day application, when applicable, concerning:

1) Aerodrome data and reporting;
2) Access to the movement area;
3) Aerodrome emergency plan;
4) Rescue and firefighting (RFF);
5) Inspection of the movement area and OLS;
6) Visual aids and aerodrome electrical systems;
7) Maintenance of the movement area;
8) Safety during aerodrome works;
9) Apron management;
10) Apron safety;
11) Vehicles control on the movement area;
12) Wildlife hazard management;

13) Obstacles control;
14) Removal of a disabled aircraft;
15) Handling of Hazardous Materials;
16) Low visibility operations;
17) Protection of Radar & Navigation Aids;
18) Snow and Ice Control and hazardous meteorological conditions;
19) Reporting of Runway Surface Conditions; and
20) Compliance of the safety management system (SMS) with applicable regulations.

Chapter 2 – Surveillance Programme

2.1 CAA's surveillance programme uses a systems and risk-based approach. Surveillance events are recorded and tracked in the supporting IT system (especial application or simple excel sheet) and the results analysed, which allows CAA to evaluate the Aerodrome Operator's safety performance.

2.2 The surveillance programme is dynamic, regularly reviewed and updated, taking into consideration the following:

Expiry of the Aerodrome Certificate/time since last surveillance audit conducted

2.2.1 Over time, without physically verified evidence derived from a comprehensive surveillance, CAA's ability to determine if an aerodrome operator is able to maintain an acceptable level of compliance and maintain robust systems capable of combatting identified and latent safety risks, progressively diminishes. As such, the time since the last surveillance audit conducted is an important consideration in determining if the surveillance audit should be conducted.

Status of findings since the initial aerodrome certification audit or the last surveillance audit/inspection conducted

2.2.2 Consideration of outstanding findings including corresponding corrective action plans (CAPs) needs to be evaluated on a case-by-case basis as the circumstances of outstanding findings can vary greatly. Some of the factors that need to be taken into account may include:

a) the number and complexity of the outstanding findings and associated CAPs

b) the time the finding(s) has been outstanding

c) whether the finding(s) has been responded to and whether the response was satisfactory or not satisfactory

d) whether the finding(s) has been accepted pending verification

Change management

2.2.3 Substantial changes that could affect an aerodrome operator, including changes to management or organisational structure, policy, technology; special projects; changes to aerodrome operator's service providers (contractors); global and/or local threats and regulatory requirements.

Prioritisation of surveillance activities

2.2.4 Determines whether any surveillance reprioritisation is necessary on the basis of changed surveillance priorities, or when oversight or external information identifies concerns.

Surveillance resource requirements

2.2.5 Considers using alternative resources to assist in surveillance activities, as necessary.

Safety Management System (SMS)

2.2.6 Aerodrome Operator's willingness and ability to identify and control its aviation safety-related Risks and application of the Safety Management System (SMS).

2.3 Surveillance programme should include but not limited to:

a) the scheduled surveillance date(s) allowing sufficient time to prepare for the surveillance audit and write up of the Surveillance Report

b) time to be allocated (hours/days)

c) surveillance audit type

d) surveillance lead

e) surveillance team members

f) initial surveillance scope and background behind the determination of the scope

g) justification for proposing the surveillance audit

2.4 If a surveillance event needs to be rescheduled for a previously approved date for any reason, the rescheduled dates and the reason for the rescheduling must be recorded.

Chapter 3 – Surveillance Audit Process

3.1 Aerodrome surveillance process shall comprise but not limited to:

a) Surveillance audit preparation;

- The purpose of having surveillance audit preparation is to develop the strategies, schedules, and work plans for surveillance audits, including resources, timetable etc. The output of this process is a detailed surveillance plan that outlines the approved scope and ensures the assignment of appropriate resources to a surveillance event.

b) Notification;

- Notification on the audit date. Confirm surveillance timetable with aerodrome operator and notify aerodrome operator of upcoming surveillance it if is announced audit.

c) Conduct surveillance audit;

- The purpose of this process is to conduct the appropriate level of surveillance. The outcome of this process is the completion of an approved surveillance audit, including collecting, collating and evaluating all relevant information and evidences.

d) Audit report;

- Audit report shall be issued based on the surveillance audit conducted.

- The purpose of this process is to compile a report based on objective evidence gathered during the surveillance audit conducted. This includes deficiencies identified in regard to compliance and/or safety performance. The outputs of this process are surveillance findings and the Surveillance Report, which forms part of the official record of an aerodrome operator's performance.

e) Remedial and corrective action

- The aerodrome operator shall take corrective actions on all non-compliance registered in the audit report, which are stated and issued.

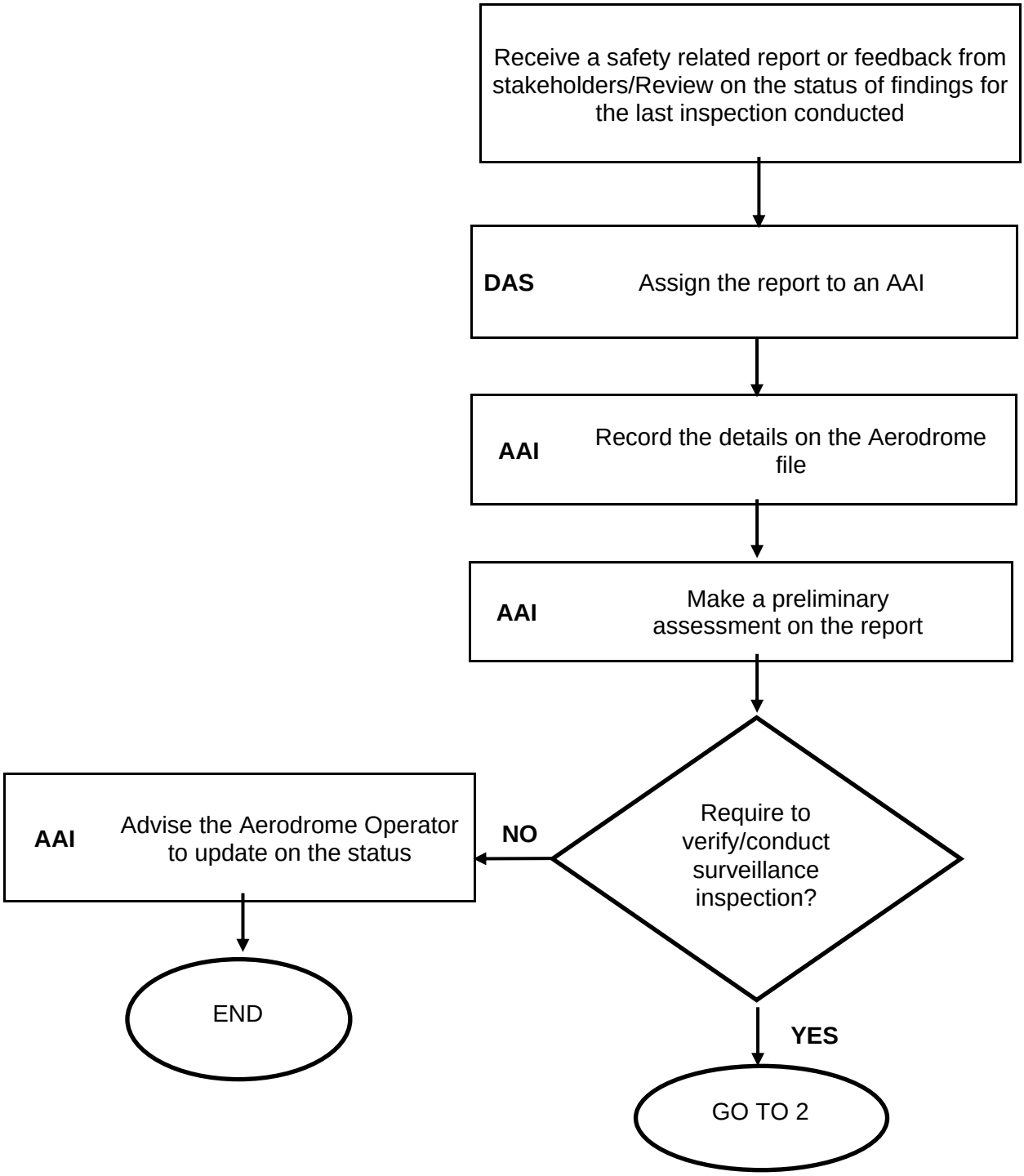
- Remedial Action: immediate action taken in response to a finding to address the deficiency that caused the breach, and which will return performance to a compliant state

- Corrective action: action by an aerodrome operator in response to a breach that reduces the potential of recurrence. The action must address the root cause of the deficiency that caused the breach and must include a review to ensure the action is effective

3.2 The aerodrome operator shall allow authorized personnel (i.e. CAA Surveillance Audit Team) to provide unlimited and unrestricted access to and inspect any of the aerodrome or any aerodrome infrastructure, facilities, including equipment, records and documents, during the surveillance audit.

3.3 The aerodrome operator shall cooperate and facilitate with the authorized personnel in conduct of the surveillance audit, and relevant Aerodrome Operator's personnel shall be made available to facilitate the audit.

3.4 The flow chart below provides a detailed view of the surveillance process.



Abbreviation:

Assigned Aerodrome Inspector (AAI)

Director of Aerodrome Standards (DAS)

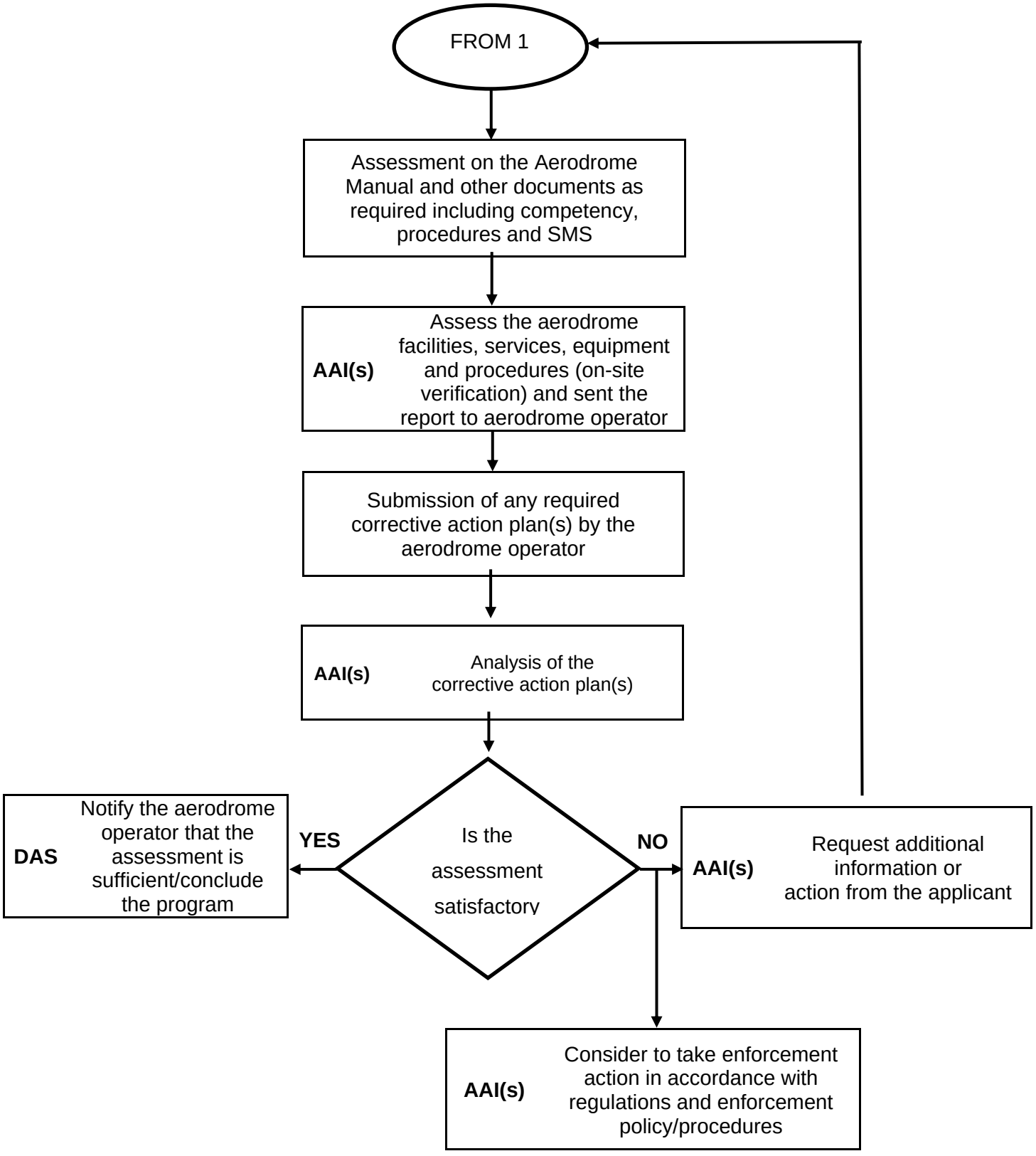


Figure. 1-1: Work Flow Process for the Surveillance of an Aerodrome

Chapter 4 – Surveillance Audit Preparation & Notification to Aerodrome Operator

4.1 Surveillance Pre-Audit Meeting

4.1.1 Surveillance pre-audit meeting may be conducted with a minimum of half of the members and can be conducted via any medium e.g. face to face or videoconference, keeping in mind that the Team Leader still has the final decision.

4.1.2 A thorough preparation before a surveillance audit will be confirmed in the pre-audit meeting as below:

a) confirm initial surveillance audit scope

b) define and plan surveillance team activities and expansion of scope

c) provide a defined structure, including timing and dates to enable the surveillance team to meet its objectives

d) ensure all decision making and planning documents are being recorded

e) review of AIP, Aerodrome Manual, Self-Assessment, outstanding findings and proposed action plans provided by aerodrome operator for the last inspection conducted

Note.- Aerodrome operator is required to submit copy of the Aerodrome Self-Assessment Verification Report conducted to the CAA.

f) travel arrangement (accommodation and mode of transportation)

4.2 Aerodrome inspectors (Audit Team Members) shall gather and review surveillance preparation documentation and produce their assessment report prior to attending the Surveillance Audit.

4.3 Notification to Aerodrome Operator (if it is announced audit)

4.3.1 The assigned aerodrome inspector shall draft the Surveillance Inspection Notification Letter to be signed by the DAS. It is usual practice to include the scoping elements in the notification letter, however these can be excluded, subject to the approval by the DAS.

4.3.2 The assigned aerodrome inspector shall forward the Surveillance Notification Letter to the aerodrome operator and ensure that the aerodrome operator receive the Surveillance Notification Letter two weeks prior to the scheduled surveillance audit.

Chapter 5 – Surveillance Audit

Note:- This chapter should align with the Chapter 5 of APAC Generic Aerodrome Inspector Handbook.

5.1 Surveillance Audit activities shall include but not limited to:

a) Opening meeting

b) Surveillance inspection/conduct verification process (collect, analyse and record evidence)

c) Pre-closing meeting

d) Closing meeting

5.2 Opening Meeting

5.2.1 The purpose of the opening meeting is to finalise the logistics of the surveillance, as well as to clarify the scope, timetable and availability of key personnel of the aerodrome operator. Matters that relate to the subject of the surveillance should not form part of the opening meeting processes, but rather should be conducted as part of the subsequent surveillance activities.

5.2.2 A sample of the typical agenda items for an opening meeting can be found in **Appendix I** and the opening meeting is normally conducted on the aerodrome operator's premises, but in some circumstances may require it to be conducted remotely.

5.2.3 The opening meeting will be chaired by the aerodrome operator, and the Audit Team Leader may explain CAA's approach to aerodrome operator engagement during the conduct of a surveillance audit, as well as any other procedural matters that may arise during the surveillance audit as appropriate.

5.3 Surveillance inspection/conduct verification process

5.3.1 Audit of documentation and other standard operating procedures, preventive and corrective maintenance plans, maintenance records, AIPs, Aeronautical Charts, NOTAMS/SNOWTAMS and other relevant documentation relating to safe and efficient operations of the aerodrome.

5.3.2 The Audit Team will also conduct audits on aerodrome infrastructure, facilities, equipment, services and operational organization to assess compliance with relevant Directives. The Audit Team Members (Aerodrome Inspectors) may conduct the inspection based on a sampling technique in which the depth of sampling required to verify each finding has been determined with the Audit Team Leader (Chief Inspector) during a pre-audit meeting conducted earlier.

5.3.3 Evidence is collected while conducting a surveillance inspection with relevant information recorded in the checklist to support any associated findings.

5.3.4 Evidence includes:

- oral evidence – record date, time, details of conversation on the checklist
- notes taken during any surveillance inspection
- documents sighted during the surveillance inspection – always reference the document title and section affected
- copies of documents and records
- photographs (location shall be recorded, measurement to be taken (if applicable))

5.3.5 Audit Team Members (Aerodrome inspectors) shall validate areas of safety concern with the aerodrome operator to ensure all aspects of the area of concern are covered before concluding verification process.

5.3.6 Audit Team Members (Aerodrome inspectors) shall report the elements of the assessment in the checklist as either:

- Satisfactory;
- Not-Satisfactory; or
- Not-Applicable.

5.3.7 Elements in the report that are reported as Not-Satisfactory shall be accompanied with a brief description or remarks by the Audit Team Members (Aerodrome Inspectors), which may be either:

- deficiencies in the structure and format of documentation;
- deficiencies of information in the documentation;
- non-compliances with regulations, standards;
- inconsistencies of information in the documentation; or
- short-comings in the documentation that requires revision, additions or deletion.

5.3.8 A Non-Satisfactory element of the report shall also be referred to either:

- Section(s) of the Civil Aviation Act;
- Regulation(s) of the Civil Aviation Regulations;
- Paragraph(s) of Civil Aviation Requirements (Operating Regulations)/Civil Aviation Directive(s); or
- SARPs of ICAO Annex 14 or other relevant ICAO Annexes, if they are not covered under National Regulations.

5.3.9 The assessment report shall also contain Audit Team Member's (aerodrome inspector's) recommendation regarding the deficiencies, non-compliances, inconsistencies or shortcomings; which may either:

- require immediate clarification, correction and/or additional documentation from aerodrome operator; or

- registered as findings [Level 1 or Level 2 non-compliances or observations] and to be clarified by aerodrome operator during surveillance inspection.

5.4 Pre-closing meeting

5.4.1 Pre-closing meeting is conducted internally among the Team Leader (Chief Inspector) and Team Members (aerodrome inspectors). The purpose of this meeting is for the Team Leader and Members to analyse the results of the surveillance and to determine what will be presented at the closing meeting.

5.4.2 Audit Team Members shall prepare for the following:

a) Assess all evidences gathered during the surveillance inspection

b) Draft potential findings for the team's final analysis of the surveillance

c) Discuss results of the surveillance

d) Discuss the delivery of the closing meeting agenda to ensure a coordinated approach

5.5 Closing Meeting

5.5.1 The Audit Team Leader (Chief Inspector) chairs the closing meeting and will explain the subsequent processes to be followed, particularly in applying 'Just culture' principles to be followed, including procedural fairness principles whereby the aerodrome operator will be given the opportunity to consider and potentially object to any findings of the Aerodrome Operator.

5.5.2 During the closing meeting, preliminary findings identified during the surveillance inspection are brought to the attention of the Accountable Executive including Safety Managers and key technical personnel of the Aerodrome Operator.

5.5.3 It must be explained during the closing meeting that the aerodrome operator will have the opportunity to provide response or evidence on the preliminary findings within the timeframe stipulated in Civil Aviation Regulations (e.g. two (2) to four (4) weeks' time).

5.5.4 It should also be made clear that official Non-compliance/Observation Reports (NCRs) in the format provided in **Appendix II** are formulated and issued after finalisation in conjunction with the response provided by aerodrome operator on the potential findings.

Chapter 6 – Audit Report

6.1 Following the conduct of a surveillance inspection and review of evidence obtained, a copy of the Surveillance Audit Report is provided to the aerodrome operator to inform them of their current level of compliance and any identified findings. All the information on the findings will be registered in the Non-Compliance/Observation Report Form **(Refer Appendix II)**.

6.2 Findings shall be classified as follows:

(1) Level 1 non-compliances:

Where the CAA determines that the level of compliance and/or safety performance of an organisation or individual has fallen to the extent that there is a potential or significant risk to flight safety, a Level 1 finding will be made. The CAA will take action in accordance with the relevant regulation, which may result in provisional or substantive suspension or variation of the approval, or a proposal to revoke the approval. The CAA may also consider the need for possible prosecution. Corrective action will be required before the suspension is lifted and before the activity giving rise to the finding is recommenced.

(2) Level 2 non-compliances:

This action may be taken where the CAA identifies a non-compliance with a regulation but determine that the nature of that non-compliance is such that there is no immediate risk to safety. The CAA will require the Aerodrome Operator to develop a corrective action plan acceptable to the CAA that will restore compliance within an agreed timescale.

(3) Observations:

The CAA may provide advice and guidance to industry on how non-compliance might be avoided. The CAA expects Aerodrome Operator to take this advice seriously and act on it immediately. Observations will usually be raised as the result of an audit or inspection when best practices in accordance with CAA Guidance (i.e. Advisory Circulars, Directives etc.) are not being followed, or when it is anticipated that the auditee, although currently in compliance, is unlikely to remain so unless appropriate action is taken.

6.3 The Aerodrome Inspector assigned shall prepare a surveillance audit/inspection report to the aerodrome operator, containing a list of audit/inspection findings (report number).

Chapter 7 – Corrective Action

7.1 All non-compliances registered in an audit report, and which are stated and issued to the aerodrome operator in the Non-Compliance/Observation Report Form (**Appendix II**), will require corrective action by the aerodrome operator.

7.2 Aerodrome operator shall state their proposed corrective action plan in the Non–Compliance/Observation Report Form (**Appendix II**) and submit within timeframe stipulated in Civil Aviation Regulations (e.g. generally thirty (30) days of the date of the audit report).

7.3 The corrective action plan shall describe method(s) to be taken by the aerodrome operator to address the non-compliance, the time duration required and the date when a compliance will be achieved.

7.4 The Aerodrome Inspector assigned shall:

a) record the corrective action plan(s) received from the aerodrome operator;

b) check the list of audit/inspection findings issued to the aerodrome operator in audit/inspection report and ensure that the aerodrome operator submits all the required corrective action plans;

c) notify aerodrome operator, if any, corrective action plan(s) to findings not submitted by the aerodrome operator; and

d) distribute the corrective action plan(s) to relevant Aerodrome Inspectors for their assessment (if applicable).

7.5 Upon receipt and evaluation of aerodrome operator's corrective action plan, the plan may or may not be approved.

7.6 The Aerodrome Inspector(s) shall:

a) conduct an assessment whether corrective action plan(s) is suitable and acceptable to rectify the non-compliances; and

b) notify the Audit Team Leader (Chief Inspector) and DAS either the corrective action plan(s) acceptable or not.

7.7 Where the corrective action plan suggested is not satisfactory or the time duration to correct the findings is considered unacceptable, the aerodrome operator will be notified to revise the corrective action plan.

7.8 A revised corrective action plan shall be submitted within the timeframe stipulated in Civil Aviation Regulations (e.g. fourteen (14) days of the notification).

7.9 Regardless of the above, the CAA expects: -

- Level 1 non-compliances on aerodrome facilities, equipment and services shall be immediately corrected not exceeding the timeframe stipulated in Civil Aviation Regulations (e.g. 7 days from the date of closing meeting);

- Level 2 non-compliances, the default closure timeline is as stipulated in Civil Aviation Regulations (e.g. maximum 60 days from the date of closing meeting); and

- For Observations, which require an action, the default closure timeline is as stipulated in Civil Aviation Regulations (e.g. maximum 90 days from the date of closing meeting)

7.10 The Aerodrome Inspector assigned should:

a) monitor the progress of the corrective action taken by aerodrome operator;

b) inform DAS when corrective action is completed and finding(s) has been satisfactorily resolved;

c) classify corrective action plan(s) that has been satisfactorily accomplished and notify the aerodrome operator that the relevant finding is closed; and

d) update the information in the file of relevant aerodrome.

7.11 The aerodrome inspectors should conduct a follow-up inspection to check the progress on outstanding corrective action against the finding(s) unless a confirmation of completion of the same by the aerodrome operator has been received by DASS.

Appendix I – Sample Agenda Items for an Opening Meeting

a) Welcome
b) Introduction of the auditors and interviewees from the audited sectors
c) Presentation of the audit approach
d) Presentation of the audit context
e) If appropriate, mention the previous audit
f) Review of objectives and the scope (field of application) of the audit
g) Brief presentation of the audit methodology while insisting on its standardized nature
h) Presentation of the audit sequence: discussions, visits (ask if it is possible to take photos), consulting of documents
i) Auditor's code of ethics: non-argumentative, non-intrusive, non-accusatory, confidentiality assured
j) Presentation of the advantages of the audit (progress and improvements in the aerodrome programme)
k) Presentation of the audit plan with possible last-minute changes
l) Confirmation of the date and time of all discussions and of the final meeting
m) Clarification of any unclear aspects of the audit plan
n) Resolution of material aspects: Confirmation of the availability of the necessary equipment and installations
o) Clarification of any unclear aspect of the aerodrome certificate holders, aerodrome programmes or pre-audit questionnaire
p) Answer the questions of the representatives from the different services responsible for aerodrome operations
q) Record of attendees
r) Audit termination
s) Conclusion

Appendix II – Sample of Non-Compliance / Observation Report Form

NON-COMPLIANCE / OBSERVATION REPORT FORM

<table>
<tr><td colspan="2">NON-COMPLIANCE / OBSERVATION REPORT</td><td>Report No:</td></tr>
<tr><td rowspan="3"><u>STATUS</u>

☐ LEVEL 1
☐ LEVEL 2
☐ OBSERVATION</td><td>Name of CAA Aerodrome Inspector:</td><td>Reference No. / Document:</td></tr>
<tr><td>Date of Inspection:</td><td>Name of Aerodrome Operator:</td></tr>
<tr><td colspan="2">Procedure / Facility Title (With appropriate rule, CAR, GM etc. reference):</td></tr>
</table>

<table>
<tr><td>NON-COMPLIANCE DETAILED INFORMATION
(To be filled by CAA Aerodrome Inspector)</td><td>Aerodrome Inspector:
(Signature)

Director Aerodrome Standard, CAA:
(Signature)</td></tr>
<tr><td>CORRECTIVE ACTION DETAILED INFORMATION
(To be filled by Aerodrome Manager)</td><td>Aerodrome Manager:
(Signature)</td></tr>
<tr><td>AERODROME INSPECTOR VERDICT:
(To be filled by Aerodrome Inspector)

☐ NCR CLOSED Date of Closure:

☐ CAP ACCEPTED Expected Date of Closure:

☐ CA/CAP IS NOT ACCEPTED Date:
Remarks:</td><td>Director Aerodrome Standard, CAA:
(Signature)</td></tr>
</table>

Appendix III – Sample of Aerodrome Surveillance Programme for XYZ Airport for Year 2022 – 2025

Name of Aerodrome: XYZ Airport					
Date Certified: 21 June 2021			**Next Date of Certification: 22 June 2026**		
Year	**Tentative Date of Surveillance Programme**	**Type of Surveillance**	**Duration**	**Scope Covered**	**Surveillance Team Members**
2022	06/06/2022	Unscheduled Unannounced Audit	2 days	<u>Civil & Electrical</u> • maintenance of the movement area • visual aids and aerodrome electrical systems	Civil + Electrical AIs (2)
2023	10/07/2023	Scheduled Announced Audit	2.5 days	<u>Operations & AFRS</u> • vehicles control on the movement area • wildlife hazard management • removal of a disabled aircraft • reporting of Runway Surface Conditions • aerodrome emergency plan • rescue and firefighting (RFF)	Operations + AFRS AIs (2)
2024	06/05/2024	Unscheduled Announced Audit	1 day	<u>SMS</u> • SMS Manual • ALoSP • HIRARC	SMS AIs (2)

Name of Aerodrome: XYZ Airport					
Date Certified: 21 June 2021			**Next Date of Certification: 22 June 2026**		
Year	**Tentative Date of Surveillance Programme**	**Type of Surveillance**	**Duration**	**Scope Covered**	**Surveillance Team Members**
2025	05/05/2025	Scheduled Unannounced Audit	3 days	All	Civil + Electrical + Operations + AFRS + SMS AIs (5)

Abbreviation:

Aerodrome Inspector (AI)

WILDLIFE HAZARD MANAGEMENT PROGRAMME (WHMP)

STATE ACTION PLAN FOR DEVELOPMENT AND IMPLEMENTATION OF WHMP

GENERIC TEMPLATE

_____ [Insert name of State]

This generic template provides a recommended action plan for States to implement WHMP. Certain action(s) and/or order of actions recommended here may be not applicable in all States. States may adapt this action plan to suit their national and local conditions as appropriate.

ID	ACTION	ENTITY RESPONSIBLE	TARGETED IMPLEMENTATION DATE	ACTUAL IMPLEMENTATION DATE	REMARKS
WHMP 1	Designate a WHM National Coordinator to coordinate activities for the development and implementation of WHMP at the national level	State Aviation Authority[1] responsible for aviation safety (hereafter referred to as CAA)			
WHMP 2	Identify/designate WHM Focal Points in all stakeholders, e.g. aerodrome operators, ANSPs, aircraft operators, and pilots. *Note.– Stakeholders may be represented by their national, regional or international associations, e.g. ACI, CANSO and IFALPA.*	CAA, Aerodrome Operators, ANSPs, Aircraft Operators.			
WHMP 3	Review ICAO provisions and guidance issued by other relevant aviation organisations.	CAA, Aerodrome Operators, ANSPs, Aircraft Operators			

ID	ACTION	ENTITY RESPONSIBLE	TARGETED IMPLEMENTATION DATE	ACTUAL IMPLEMENTATION DATE	REMARKS
WHMP 4	Establish National WHM Committee (NWHMC) with defined terms of reference. *Note.– See list of publications in suggested references below.*	CAA or industry representative appointed by CAA			
WHMP 5	Facilitate WHM initial training in basic WHM concepts for NWHMC members.	CAA			
WHMP 6	Organize initial and recurrent technical WHM training and seminars for Focal Points and relevant staff members of all stakeholders. *Note.– Regular seminars, e.g. annual, are important for maintaining recency and promoting sharing of knowledge and best practices in WHM.*	Other stakeholders, e.g. ANSP, aerodrome operators			
WHMP 7	Identify, if non-existing, develop, and if need be, amend regulations, standards and guidance materials, e.g. SSP, reference to WHMP in aerodrome manual and SMS manual. *Note.– States may reverse order of WHMP7 and WHMP9 as they see fit. See Note 2 below the Table.*	CAA, National WHM Coordinator and all relevant Focal Points for all stakeholders			

ID	ACTION	ENTITY RESPONSIBLE	TARGETED IMPLEMENTATION DATE	ACTUAL IMPLEMENTATION DATE	REMARKS
WHMP 8	Establish regulations and/or guidelines that consider WHM aviation safety impacts related to land and infrastructural developments outside the aerodrome boundary. *Note.– Examples of land and infrastructural developments that may have safety impacts are theme parks, restaurants, solar panel installations.*	State, e.g. Ministry responsible for Civil Aviation in coordination with other concerned Ministries.			
WHMP 9	Establish airport WHM committees with defined terms of reference and representation from all relevant stakeholders. *Note.1 – States may reverse order of WHMP7 and WHMP9 as they see fit. See Note 2 below the Table.* *Note 2.– Examples of relevant stakeholders to be represented on the WHM committees are airport runway safety team, urban planning and land administration authorities.*	Aerodrome operators			

ID	ACTION	ENTITY RESPONSIBLE	TARGETED IMPLEMENTATION DATE	ACTUAL IMPLEMENTATION DATE	REMARKS
WHMP 10	Develop airport WHM Plan covering on and off airport activities, facilities and infrastructure and any changes thereof, contingencies and crises so that any impact of such elements shall be included in the WHM plan. Consistency with other plans shall also be duly considered. *Note.1 – Refer to Part 3 of Doc 9137 for guidance on the establishment of airport WHM plan.* *Note 2.– An example of "other plans" is waste management plan.* *Note 3.– WHMP should be drafted with achievable actions, define clear list of roles & responsibilities.*	Aerodrome operators			
WHMP 11	Include the review of effectiveness of airport-level WHM Plan(s) in State safety oversight program. *Note. – The review of the effectiveness of airport WHM Plan could be included in the aerodrome SMS.*	CAA			
WHMP 12	Establish methodology and procedures to review regularly, e.g., annually, the effectiveness of national WHM program. *Note. – This could be part of SSP.*	CAA			

ID	ACTION	ENTITY RESPONSIBLE	TARGETED IMPLEMENTATION DATE	ACTUAL IMPLEMENTATION DATE	REMARKS
WHMP 13	Coordinate airport WHM Plan with air operators and other airport users in the identification of wildlife hazards, e.g. locations and probabilities of wildlife presence, to improve effectiveness of mitigation measures, e.g. by providing a mechanism to share in a timely manner wildlife hazard intelligence with other stakeholders, in particular, pilots, such as alert bulletins, NOTAMs and wildlife detection technologies. *Note. – "timely manner" in this context means "as close to real time as possible".*	CAA and all relevant Focal Points for all stakeholders			
WHMP 14	Identify the necessary means and resources for the implementation of national WHMP (human, financial and material resources)	National Coordinator and NWHMC			
WHMP 15	Promote safety and reporting culture as per safety management principles	CAA and all relevant stakeholders			
WHMP 16	Establish wildlife hazard database as part of SDCPS[3] under SMS and SSP and report electronically wildlife strikes in the standard ICAO format. *Note. – Information technologies should be adopted to facilitate the recording, sharing and reporting of wildlife activities and strikes.*	CAA and aerodrome operators			

Notes:

1. Examples of State Aviation Authority are CAA, DGCA and DCA.
2. State may change order of action items as they see fit.
3. SDCPS stands for Safety Data Collection and Processing Systems

References

Publications / Websites

1. PANS Aerodromes (Doc 9981)
2. Airport Services Manual (Doc 9137), Part 3 - Wildlife Hazard Management
3. ICAO Asia Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programm
4. ICAO Asia Pacific Guidance for Establishment of National Procedure for Recording and Reporting Wildlife Strikes to Aircraft
5. ICAO Asia Pacific Guidelines on the drafting of Terms of References of National Wildlife Hazard Management Committee
6. IBIS Manual (under revision as at 2021). See https://www.icao.int/safety/Pages/IBIS.aspx.
7. ACI Wildlife Hazard Management Handbook

Training

1. ACI Wildlife Hazard Management Professional Certificate Course (classroom interactive)
2. ACI Wildlife Hazard Management Training Couse (online self-learning)

Activities

1. ICAO AP-WHM/WG

INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASIA/PACIFIC GUIDANCE ON DEVELOPMENT AND IMPLEMENTATION OF AERODROME WILDLIFE HAZARD MANAGEMNT PROGRAMME

First Edition - August 2022

This Guidance Material was developed by AP-WHM/WG and approved by the AOP/SG/6 Meeting and published by ICAO Asia and Pacific Office, Bangkok

RECORD OF AMENDMENTS

AMENDMENTS				AMENDMENTS			
No.	Date applicable	Date entered	Entered by	No.	Date applicable	Date entered	Entered by

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FOREWORD

Annex 14, Volume I, Aerodrome Design and Operations requires to collect, record, analyse and report wildlife activities at or in the vicinity of aerodromes.

PANS-Aerodromes (Doc 9981) requires that an aerodrome operator shall develop, implement and demonstrate an effective wildlife hazard management programme at the aerodrome, and this should be tailored to and commensurate with the size and level of complexity of the aerodrome, and the number of aircraft movements and their type, taking into account the potential wildlife hazards identified and the risk assessment of those hazards.

This Regional Guidance Material has been developed to fulfil the requirements of *ICAO Annex 14, Volume I, Aerodrome Design and Operations* and *PANS-Aerodromes (Doc 9981)* using material sourced from the latest *ICAO Doc 9137, Aerodrome Services Manual, Part 3 — Wildlife Hazard Management*, the *Airport Council International Wildlife Hazard Management Handbook* and other CAA/Aerodrome Operator documents available online, in an attempt to put together, in one document, best practices in this area. Having this best practice information in one document will assist the aerodrome operator to effectively develop and implement a suitable wildlife hazard management programme for the aerodrome to meet the national and international requirements on wildlife hazard management on and in the vicinity of the aerodrome and also to assist the responsible authorities (CAAs) to assess the standards through periodic audits.

1. INTRODUCTION

1.1 The most common aviation safety concerns reported across the globe is the wildlife strikes. There has been an increasing trend which cause concern among aerodrome operators. The constant and continuous improvement in strike reporting by aerodrome operators allows the aviation industry to better understand the true strike rate. In response to this ever-present wildlife hazard, aerodromes will need to develop a wildlife hazard management programme. This will include the completion of a mandatory wildlife hazard assessment and the development and implementation of a wildlife hazard management plan (WHMP) which will be based on relevant accurate data, providing more efficient and effective wildlife hazard management. The Aerodrome's WHMP should provide details on the actions and procedures necessary to manage habitat and wildlife given the country and region specific conditions. Habitat Management is an on-going long-term issue and will involve capital and operational investment to deal with various habitat management activities. There will be short term activities which include upkeep and maintenance of vegetation at regular intervals.

2. WHAT IS WILDLIFE HAZARD MANAGEMENT?

2.1 Wildlife hazard management involves manipulating an animal's behaviour on or its habitat in order to achieve a specific goal with regards to altering animal's behaviour, population, or geographic distribution. At aerodromes, the goal of wildlife management is to change the behaviour of animals so that they do not occupy critical safety zones where aircraft operate. The key to managing wildlife at aerodromes is to understand the animals' basic requirements and how their behaviour can lead to an aviation safety hazard. Essentially, it is imperative to know why animals behave the way they do and take necessary actions to prevent a wildlife strike, this ongoing process is wildlife hazard management.

3. WILDLIFE INSTINCTS ON AERODROME HABITATS

3.1 All wildlife has basic instincts for survival and reproduction and these instincts dictate how they will behave in an ecosystem. They need energy and nutrients, including water, to survive and thrive. They must maintain the core temperature of their bodies, they must avoid being eaten by other animals, and they must reproduce. All of their behaviour can be traced to these basic needs. Different species have different behaviours and some of these can lead to high risk situations at aerodromes. Once the aerodrome operator understands these instincts of the wildlife that lead to its high risk behaviour, they can begin to take steps to change that behaviour or alter the habitat.

3.2 Wildlife meets its basic instincts by utilizing various habitats. A habitat is any kind of distinguishable feature within the aerodrome ecosystem, such as an open meadow, a stand of trees or a water body. Different animals use different habitats to meet their instincts, and some vary the types of habitats they use at different times of the year, depending on the specific instinct they are fulfilling.

4. MANIPULATING HABITATS

4.1 With an understanding of how wildlife behave and use different habitats to meet their instincts, the aerodrome operator should begin to manage them without impacting to operations. This is a continuous process where immediate results are seldom possible. Around the aerodrome, this usually means manipulating habitats, especially around the critical safety zones, so that wildlife is not able to fulfil their instincts there. This kind of manipulation varies depending on the wildlife involved and the instincts they need to fulfil. For example, a drainage ditch full of water will provide ducks with a safe place to bathe and feed. If the ditch is directly adjacent to a runway, there may be a risk of ducks being struck by aircraft as they move to and from the ditch habitat. When the drainage ditch is enclosed with a box culvert, the habitat that the duck requires is gone. The duck is no longer able to fulfil its instincts in that location and will have to find another suitable habitat. As a result, there will be fewer ducks in a critical safety zone for aircraft, and, therefore, a reduced risk to aviation safety.

4.2 Manipulation of Habitats on and in the vicinity of aerodrome is an ongoing process, it might require several techniques and approaches to manage the Habitat to reduce the risk of wildlife strikes.

5. NATIONAL LEGISLATION AND GUIDELINES

5.1 Management of wildlife on and in the vicinity of aerodrome is regulated under State's Civil Aviation and territory legislation. These requirements may relate to the use of firearms, lasers, pyro techniques, legal humane killing and safe control and disturbance of wildlife. The clearing of vegetation or other habitat management must be under the guidelines of legislative requirements of individual State.

6. WILDLIFE HAZARD MANAGEMENT PLAN

6.1 A wildlife hazard management plan (WHMP) documents an aerodromes wildlife hazard management programme within a framework of documents. Refer to details of WHMP in Doc 9137 – Chapter 9.

ID	Document	Custodian	Edition/Version	Comments
1	Aerodrome Manual			
2	Safety Management System			
3	Wildlife hazard management Plan			
4	Standard Operating Procedures (SOP's)			
5	Aerodrome Environment Management plan			

6.2 Developing an aerodrome wildlife hazard management plan (WHMP) is the most appropriate means of mitigating wildlife risk at aerodromes.

6.3 Aerodrome WHMP Contents:

Ecological and Wildlife hazard survey

- Study and assessment on aerodrome topography
- Survey and assessment on flora and fauna
- Survey and assessment on ecosystem
- Survey and assessment of potential wildlife habitat around aerodrome area up to 13 kms
- Survey and assessment on aerodrome habitat
- Daily inspection and assessment on critical ~~area~~ safety zones
- Collect flora and fauna of aerodrome and its surrounding area
- Get an overview of wildlife activity and make a list of species impacting airspace

Data Analysis

- Collect wildlife activity data within aerodrome critical area with standard sampling model
- Collect wildlife strike data
- Analyse wildlife data to identify potential hazardous species for aerodrome operations
- Summary of dispersal data

Habitat Management

- Prepare a vegetation management plan for aerodrome
- Prepare grass height management chart
- Set up calendar events to manage habitat on a regular basis
- Track the actions taken to manage habitat
- Determine Potential areas of wildlife activity
- Determine seasonality patterns

Risk Assessment

- Aerodrome areas may be categorised by distinguishing the level of threat posed by the activities of the potential hazardous species, such as:
- PHZ – Primary Hazard Zone (area where the aerodrome has active control)
- SHZ – Secondary Hazard Zone (immediate vicinity of the aerodrome including approach/take off funnel)
- THZ – Tertiary Hazard zone (area beyond the Secondary Hazard Zone and up to 13 Km radius from aerodrome reference point (ARP)

- Determine a suggested value of probability of strike on past wildlife activity, dispersal data, strike data flight movement patterns *(Note:– New species may require a different risk assessment)*.
- Determine a suggested risk index value.
- Determine peak activity periods and location patterns
- Categorise the potential hazardous and least hazardous wildlife species
- Prepare a management plan for mitigating potential hazardous species visiting aerodrome areas

Set Goals and Targets

- Set goals and targets based on the data analysis, risk assessment of the probability of strike.
- Follow ICAO/State's reporting and recording guidance
- Encourage accountability on set goals and targets.
- States and aerodrome operators to follow-up corrective actions, to completion, through status reports

Set Standard Operating Procedures

- Set an on-going strategy for wildlife hazard reduction based on habitat on and in the vicinity of the aerodrome
- Follow set ICAO/State procedures on operational notifications by all stakeholders (refer to Asia Pacific Guidance for Establishment of National Procedure for Recording and Reporting Wildlife Strikes to Aircraft https://www.icao.int/APAC/Documents/APAC%20Guidance%20on%20National%20Procedures%20for%20Recording%20and%20Reporting.docx.pdf
- Set suitable dispersal methods and removal of food chains in aerodrome surrounding areas to reduce wildlife activity.
- Comply with ICAO/States procedures

Roles and Responsibilities

- Clearly define roles within WHM (including regular inspection and real time reporting)
- Define training and staff resources are competent in the functions required for WHM
- Ensure relevant stakeholder engagement and involvement for reduction of wildlife hazards and enhance Aviation Safety (for example, through a WHM committee).

Roles and Responsibilities of Aerodrome WHMP Stakeholders

Role	Responsibility
Airport Manager/Chief Operations Officer/Aerodrome Safety Manager	• Oversee the implementation of and continuous review and improvements of the WHMP. • Review of wildlife strike rate • Review and allot appropriate budget for WHM • Review and set WHM targets (safety performance indicators (SPI)/ safety performance targets (SPT) related to WHM) • Encourage and provide opportunities to attend knowledge sharing events and appropriate WHM conferences to keep abreast with State regulations, technology, procedures and best practices • Organise Aerodrome WHM Committee meetings.
Aerodrome wildlife hazard manager	• Development of WHM for aerodrome • Review and implementation of WHM • Conduct competent assessment and engage staff for WHM • Ensure operations staff are trained and competent in the functions required for WHM • Knowledge share and keep updated with new technologies and methodologies relevant to WHM • Frequent liaisons with airline operators, governments, councils and other stakeholders to engage integrated wildlife hazard management for aerodrome • Prepare a training syllabus and topic for WHM staff • Train the trainer to conduct training among WHM staff • Ensure stake holder awareness workshop/meeting
Aerodrome Ground safety officers	• Ensure waste management plan and awareness of waste management plan and hazardous situation to airport stakeholders.
WHM ~~Safety Control~~ Duty Manager	• Ensure day to day implementation of WHMP deployment • Ensure WHM control officers are trained and competent in all functions of WHM • Ensure real time reporting and recording of WHM is followed appropriately.

Role	Responsibility
	• Ensure proper metrics and indicators are being followed in reporting and recording Wildlife activities and strikes. • Conduct field patrol to identify the potential hazardous site within aerodrome area and initiate treatment measure • Conduct daily patrol during wildlife warning period at aerodrome • Ensure WHM procedures are carried out adhering the SOPs • Prepare a work flow for WHM reporting
Wildlife Safety Control Officers	• Prepare the training material and conduct awareness training to WHM staff • Ensure all training is complete • Attend knowledge sharing awareness sessions to ground level staff and community surrounding aerodrome • Ensure circulation of daily WHM reports to Operations team
Aerodrome maintenance team	• Take prior approval from WHM manager for soil excavation/building construction at aerodrome area • Ensure periodical vegetation/slit clearance from open/storm water drains • Ensure drain outlets are properly cordoned off to prevent animal entry • Ensure boundary fence/walls are with appropriate height with attached barbed mesh to prevent animal entry • Ensure pre monsoon/post monsoon checks are carried out for potential wildlife attractant within airside
Airport Planner	• Ensure airport land is allotted for major projects are well away from critical area
Airport Projects Taeam	• Ensure adequate wildlife control measures are engaged to prevent bird/wildlife attraction to site. • Ensure WHM manager is consulted about the bird hazard mitigation measures adopted at project site and get his approval • Ensure all projects are informed to WHM manager
Air Traffic Control	• Ensure compliance with air traffic manuals and procedures

Role	Responsibility
	• Accurate notification of wildlife hazards and reporting strikes and near misses to relevant authorities. • Timely notification of updated hazard information to airborne aircraft • Understand wildlife species risk • Be informed of WHM
Airline Operators	• Ensure airline operations staff and maintenance engineers to report all wildlife strikes, activity or hazardous conditions to operations/relevant WHM staff. Preserve remains and/or request a DNA sample. • Provide/ inform aerodrome operations evidences of strikes, damage, carcasses, feathers and any other traces of wildlife strikes to Aerodrome WHM officers • Provide copies of strike records to aerodrome WHM officers for cross reference and data validations • Provide information to pilots operating to/from the aerodrome.
Airport Tenants	• Comply with airport waste management policies • Regular monitoring and maintenance • Report of wildlife nesting and roosting within buildings and hangars to relevant WHM staff.
Local town planners and government authority officers	• To consider potential wildlife attraction with new land developments
Civil Aviation Authority	• Ensure CAAs WHM Inspectors are competent in WHM • Ensure audit checklists reflect WHM reports • Encourage use of technology and smart applications instead of manual forms • Ensure all regulatory changes are appropriately communicated to relevant stakeholders in aviation. • Report Wildlife strikes to ICAO using ECCAIRS, no PDF.

Note:– Please refer to Asia/Pacific Regional Guidance on Aerodrome Operations Personnel Competency Requirement Framework at
https://www.icao.int/APAC/Documents/APAC%20Regional%20Guidance%20on%20AOPC.pdf

6.4 Review of the WHMP

6.4.1 It is recommended to maintain and update wildlife hazards, risks, and monitor the progress against the WHMP actions and targets.

6.4.2 Periodic reviews (e.g. annual review) of the WHMP should be based on data and assessment findings. Continuous improvements actions must be recommended to the management to keep the WHMP framework to work at the airports.

- Ensure all procedures, roles and responsibilities are current to the WHMP.
- Regular reviews of internal WHM reports can assist airports to evaluate the efficacy of WHMP.
- Reviews of reports can help identify gaps and highlight required changes.

7 WILDLIFE HAZARD ASSESSMENT

7.1 The strike risk is different at every aerodrome and is influenced by the specific hazards present. Climate, biodiversity and extent of wildlife attractants on and off aerodrome, seasonal changes, aircraft operations and the efficacy of the WHMP all will determine the risk. Addressing the risk that are common to most aerodromes will provides a beginning point for an aerodrome to establish the hazards. Hazards are commonly present in habitats with activities that attract wildlife species.

7.2 Habitats and Activities: Aerodromes are attractive to wildlife as they satisfy all their instincts, such as, food, water and shelter. Features common to many aerodromes are:

- Grass insects, reptiles, and ground mammals
- Tranquillity – safe area for few species to burgeon and breed
- Thermals for gaming, mating and grooming of juveniles
- Drains
- Runway and taxiway strips
- Airside/Landside landscaping
- Vegetation and densely forested areas
- Waste management
- Airport infrastructure projects excavation (exposes ground insects also disturbs underground mammals to look for safer areas, generally they move to safety critical areas)
- Wetlands, natural and artificial
- Grass
- Buildings development infrastructure

7.3 For details on monitoring and managing these hazards refer to Wildlife Risk Assessment and Monitoring and Detecting Wildlife Hazards in sections 8 and 9 respectively.

8 WILDLIFE RISK ASSESSMENT

8.1 Risk assessments determine the wildlife species risks. Understanding these risks are the key elements which streamline action plans. Prioritising and targeting potential hazardous to least hazardous species, locations and times, aerodromes should allocate resources to manage wildlife hazards as required.

8.2 To quantify the risk presented at any given aerodrome, it is necessary to perform periodic risk assessment of wildlife species at the aerodrome annually or when the bird activity or strike rates goes beyond the set target.

8.3 Wildlife species risk assessment at aerodromes are to be ranked according to the risk posed to aircraft by some factors below

- Bird movement log on aerodrome area data
- Numbers and size of species
- Activity on categorised aerodrome areas
- Flocking behaviour
- Size of the wildlife and movement patterns
- Strike history

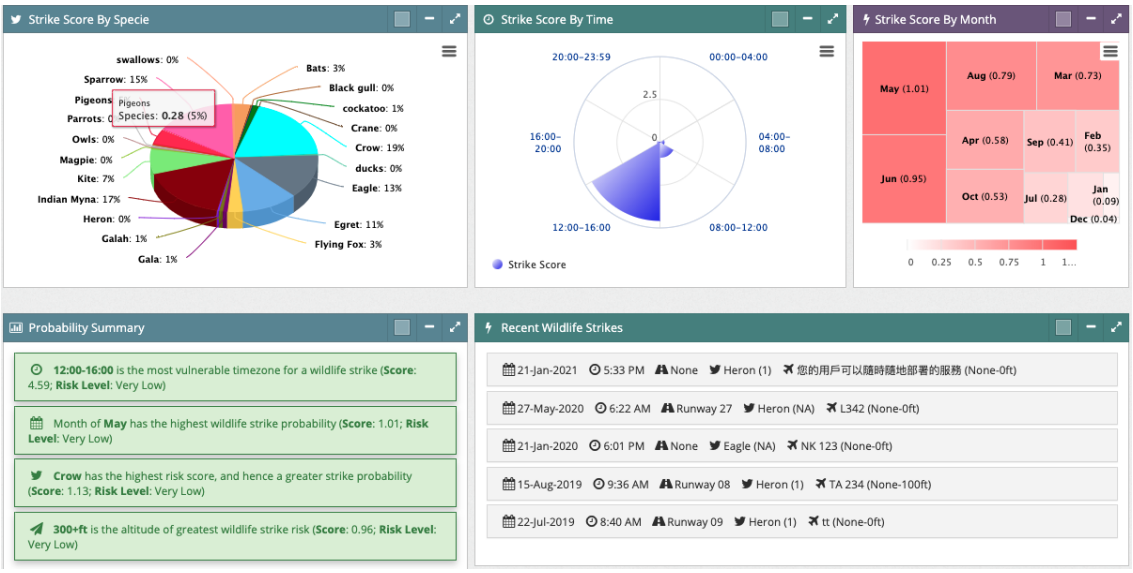
8.4 Reporting and recording of data are a fundamental requirement to understand wildlife strike risk assessment. An important step in managing wildlife hazard is to assess the level of risk that each species of animal presents to aircraft operations at the aerodrome. This risk assessment is more than simply surveying the species found in and around the aerodrome; it involves assessing the extent of damage that may result (the *consequence*) and the associated likelihood of that risk occurring with the given species and the operator/operation in consideration. This allows the aerodrome operator to prioritize its actions to target the highest risks. The risk assessment should whenever possible, identify all relevant factors that cause different wildlife species to present a risk to aviation safety; this may include physical environmental attractants, species specific behavioural traits, food sources or other attractants. Identification of these factors will greatly aid in the formulation of an effective Wildlife Hazard Management Programme.

8.5 Part of the risk assessment is to evaluate the expected severity of the impact or damage resulting from a strike event. This ranking will depend on the size/mass of the animal and its tendency to flock or congregate. Heavier animals have a greater capacity to damage an aircraft and impact its flight performance. As a guide, birds that tend to flock and weigh more than 1.8 kg can cause the most severe damage to aircraft. Birds (or bats) that are solitary and weigh less than 50 g might be expected to cause the least severe damage. Flocking behaviour might mean that a strike event could include multiple impacts, or it could increase the likelihood or the consequence of a given strike.

8.6 From an aerodrome perspective, risk assessments are mostly informed by understanding the likelihood that species will be involved in a strike. This is because the effect of the strike, while dependant on the attributes of a specific species (mass of individual and abundance/numbers) is also a factor of which aircraft is involved and how it is being operated; these are considerations generally beyond the ability of an aerodrome to assess and rightly sits with the aircraft operator/airline to assess and manage. The examples below use a scale with 5 levels but fewer or more levels could be used. The likelihood can be assessed qualitatively on a scale, for example, from Very Low to Very High. Species that are distracted

by aircraft noise or that learn to avoid aircraft could be rated as Low or Very Low. Birds that flock in large numbers to certain habitats in the flight path could be rated a High or Very High. Solitary animals might be rated as Medium but other behavioural factors might have to be considered. This likelihood might also vary with the season or other conditions such as grass height or presence of standing water or rain and weather conditions.

8.7 Wildlife Strike Evaluation Dashboard Sample Reports (Example only)



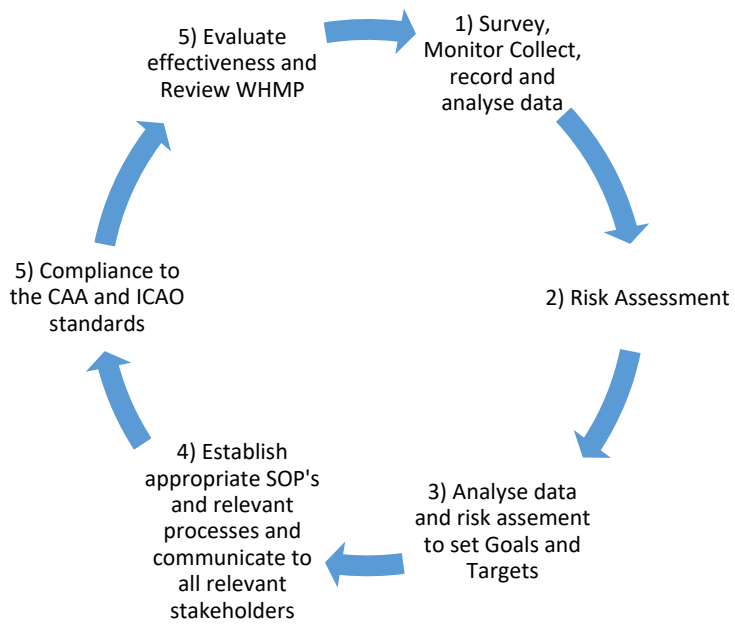
Notes:–

1) *The likelihood is based on the average of flight movements, recorded and reported wildlife activity and wildlife strike.*

2) *A more thorough discussion of the assessment of risk can be found in ICAO's Safety Management Manual (SMM) (Doc 9859).*

9 MONITORING AND DETECTING WILDLIFE HAZARDS

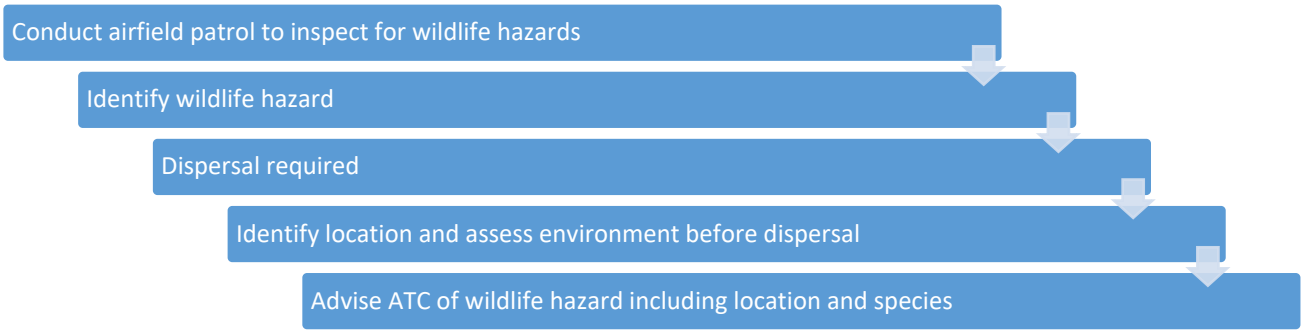
9.1 Recommended approach to developing a Wildlife Hazard Management Programme



9.2 Key to managing wildlife hazards at aerodromes are the Standard Operating Procedures (SOPs) included in the Aerodrome WHMP. The SOPs provide aerodrome WHM personnel with a systematic and replicable approach to identify, manage and monitor potential hazards and to engage active control management.

9.3 Recommended documents of SOPs

9.3.1 Procedure to monitor and record wildlife/bird movement data through the day with standard sampling method should be established.



9.4 Pilot Notification

9.4.1 Procedures for pilot notification in response to any significant wildlife concentration or activity both on and in the vicinity of the aerodrome should be established. Refer to *ICAO Asia Pacific Guidance for Establishment of National Procedure for Recording and Reporting Wildlife Strikes to Aircraft*

(https://www.icao.int/APAC/Documents/APAC%20Regional%20Guidance%20on%20AOPC.pdf). Notification must include:

ID	Activity	Action Taken	Responsible team
1	Species Activity		
2	Location (Area)		
3	Size of the species(Big/Medium/Small)		
4	Flocking behaviour (Single/Multiple/Numerous)		
5	Duration (Time)		
6	Resolution		
7	Escalation		

9.5 Research Priorities

9.5.1 Research projects should be designed to assess the efficacy of novel management practices and control actions on reducing wildlife hazards. Proper experimental design is critical to the successful evaluation of novel practices, and aerodrome operators should whenever possible consult with local biologists when considering their research priorities.

9.6 Identifying Root Causes of Wildlife Hazard

9.6.1 It is critical to understand the behaviour and basic requirements of each hazardous species of wildlife. Remember, each animal has a basic requirement for energy and nutrients, including water. They must maintain their bodies core temperature, they must breed and reproduce, and they must avoid being predated by another animal. When identifying root causes of wildlife hazards, consider each species and its basic requirements including the food chain. Then, observe the aerodrome and surrounding areas to determine how the different habitats may aid the species in fulfilling its requirements.

9.6.2 This stage of the risk assessment should, wherever possible, involve a trained wildlife professional who is familiar with ecology and animal behaviour. Ideal habitats for hazardous wildlife may not be readily apparent, and the attractiveness of aerodrome habitats may vary seasonally. Consider all stages of an animal's requirements throughout the annual cycle. Breeding seasons, annual migrations, seasonal weather patterns, and food availability are all factors that can contribute to temporal changes in wildlife hazard.

9.7 Sample WHMP Activity Table

WHMP ID	Activity	Action	Responsible team	Targeted Implementation date	Actual implementation date	Comments
1	Vegetation. Composition of grass management, pesticides for insect management					
2	Water bodies management					

3	Agriculture fields around aerodrome vicinity management					
4	Buildings provide sites for nesting, roosting and perching.					
5	Open water access to water, breeding and roosting sites					
6	Food waste disposals					
7	Water retention, drainage					
8	Structures/Shelters					
9	Landfill/Garbage disposal sites					
10	Sewage Treatment and Wastewater Plants					
11	Reservoirs, lakes, Ponds, Rivers and Salt Marshes					
12	Gravel Pits and Quarries					
13	Nature Reserves					
14	Possible Future Hazards in the Vicinity of the Aerodrome Safeguarding					
15	Landscaping at Aerodromes					
16	Perimeter Fence/Drain outlets					
17	Airport projects/Excavation sites					

9.8 Routine Patrolling

9.8.1 Routine patrolling is the core of the WHMP and should include site tours or inspections, observations, interventions and record keeping. Regular surveillance of the aerodrome is necessary to spot hazardous wildlife. The use of binoculars, spotting scopes and possibly night vision equipment by trained staff allows for optimum observation. The wildlife control operators should determine high-risk areas and spend disproportionately more time in those areas. The frequency of patrols will be highly dependent on local conditions and the behaviour of wildlife. In some locations or during some seasons, daily patrols may suffice. Under certain situations patrols may be required every 30 minutes or even more frequently. Runway safety inspections may be incorporated or performed in parallel with wildlife hazard management patrols. Patrols should be carried out in a random pattern rather than a regular route so that wildlife do not 'learn' or become accustomed to the timing of patrols.

9.9 Summary of routine patrolling activities

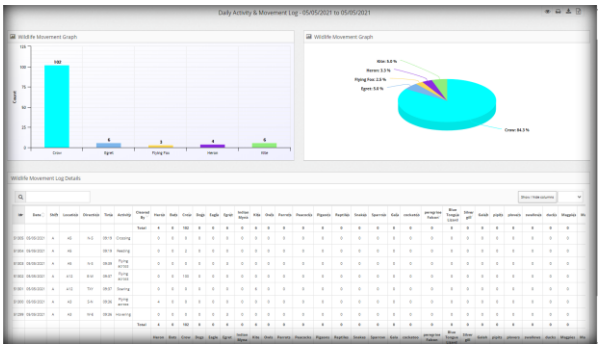
ID	Activity	Action	Responsible team	Targeted Implementation date	Actual implementation date	Comments
1	Monitoring Wildlife					
2	Continuous Recording and Reporting wildlife Activity					

ID	Activity	Action	Responsible team	Targeted Implementation date	Actual implementation date	Comments
3	Determine number of patrols					
4	Recording Daily Activities					
5	Daily Activity Report					
6	Equipment Maintenance					

9.9.1 Wildlife control officers are responsible for the collecting of data for wildlife counts, activity, strikes and dispersals. Standardised data collection is essential for data analysis. To ensure consistent data collection it is highly recommended the use of technology and smart applications. This data visibility will provide adoption of effective procedures and maturity level assessments towards training and knowledge while provide a 360-degree visibility of wildlife patterns within aerodromes.

9.10 Data Analysis Sample Reports

9.10.1 Daily Activity Report



9.10.2 Monthly Activity Report

10. MANAGING POTENTIAL WILDLIFE HAZARDS

10.1 Habitat management is probably the most important method of preventing or reducing wildlife strikes on and around an aerodrome. The airfield habitat should be less attractive to the animals than the surrounding areas. If there are off-aerodrome sites that attract birds these may need dealing with as these can create flight paths of birds moving from one area to another (e.g. from an overnight roost to a feeding location). In such circumstances the aerodrome should, in conjunction with local regulator(s) seek to reduce the attractiveness of these off aerodrome sites also. Habitat management can be the most effective method to reduce wildlife hazard at an aerodrome. This section outlines some general concepts and considerations. The management of habitats on the aerodrome will be quite different from that on land adjacent and near to the aerodrome. Some considerations are part of the long-term development of the aerodrome and should be included in the Aerodrome Master plan. Other issues are more related to regular maintenance and upkeep of aerodrome landsite key to habitat management is avoiding conditions that attract wildlife such as food, water, shelter, and resting and breeding are to be conducted on a regular basis. Modifications to the aerodrome's habitat/environment to eliminate or exclude food, water and shelter can limit the attractiveness of an aerodrome to birds and other wildlife. Habitat management provides the foundation for an aerodrome's wildlife hazard management programme because it offers ecologically based, long-term measures for reducing the number of hazardous wildlife at the aerodrome. If direct action against wildlife is chronically necessary, it is usually because habitat management has not yet been fully implemented or further measures are not cost-effective.

10.2 Passive and Active Management

10.2.1 Passive and Active Management is a continuous management, modifying of habitats to indirectly remove or reduce wildlife.

10.3 Passive Management

10.3.1 Wildlife is attracted to the aerodrome environment for food, shelter and water. Passive management is habitat management. This reduces the wildlife population by making the environment less attractive to wildlife providing longer term risk reduction. All aerodromes must adhere to passive management.

10.4 Types of Passive Management

Grass Management	Grass height management
Drains and Drainage	Removing water, or excluding access to water is recommended
Built Environment	Remove disused buildings, aircrafts and other building materials. Avoid posts, signs and poles that wildlife may perch on. Manage apron lighting enclosures to discourage nesting and manage runway lighting to reduce insect attraction. Ensure perimeter fences are regularly monitored for damage. Regularly monitor buildings and other infrastructure for nests and roosts.

Landscaping	Identify suitability of flora species used in the aerodrome's landscaping. Do not include plants bearing fruits or flowers attractive to wildlife. Regular pruning must be done to get rid of dense growth. If sprinklers are to be used ensure they are monitored and do not leave them unattended as water will be a source of attractant for wildlife.
Waste Management	Poor waste management will be a major significant risk to an aerodrome and vicinity. All bin lids must always be closed to restrict wildlife attraction and access, avoid waste overflow and ensure frequent waste removal. Provide guidance and training to all food and storage operations.
Vector management	Grass land in critical area to be monitored for pests and insects and appropriate management action to be initiated to control their presence
Termite/Ant hill/Rodent	Appropriate management measures to be adopted to control the ant hills and rodents in critical area

10.5 Active Management

10.5.1 Sometimes nothing can be done to change a habitat on an aerodrome. To reduce attractiveness of the aerodrome, active management techniques are to be deployed to manipulate wildlife behaviours. For examples, Black Kites are attracted to the thermals of the runways, so an intervention must be used to keep the Black Kites away from the runways. Aerodromes can consider a wide range of acoustic, pyro techniques or air-sirens to provide enough stimulus to make the birds fear for safety and leave the runways.

Continuous Monitoring	Frequent patrols
Dispersals	Aerodromes to consider a wide range of methods and not bank on one option as wildlife are very smart and often desensitise themselves to these methods

10.6 Types of Dispersal Tools:

- Acoustic devices with distress and alarm calls.
- Raptor kites and balloons
- Reflecting tape
- Predator models
- Pyrotechnics
- Trapping and remote release

- Stock Whip
- Physical deterrence

Note:– Trapping and release of wildlife must be conducted following State's and local body's rules and regulations in a humane manner.

10.7 Removal

10.7.1 When efforts to manipulate wildlife behaviour from returning to the area have failed, the risk they pose is too great for safe aircraft operations, then further intervention techniques will need to be deployed. Removal techniques will vary based upon the risk the wildlife poses to aerodrome safety and staff as well as species behaviour. Removal of wildlife or a group of wildlife may be the only option. This can involve trapping and releasing them in a new location. Aerodrome operators must ensure that they are compliant with all regulations regarding the wildlife species in question, and that they carry out removals in a manner as humane as possible. In some cases, wildlife establishes breeding and nesting sites which can create a strike hazard. Wildlife defending their nests and young ones can become oblivious to aircraft traffic. The young hatchlings and juvenile wildlife are inexperienced and lack awareness of the environment, making them prone to strikes. Removing nests will deter and limit the establishment of breeding. Permits from environment authorities are required for native and endangered wildlife species.

10.8 Ethical Responsibility

10.8.1 Wildlife management at aerodromes is a critical part of safe aircraft operations. Furthermore, aerodrome operators have an ethical responsibility to contribute to the conservation of wildlife and biodiversity. Some of the species that present a high risk to aviation safety might be critically endangered or threatened. It is the responsibility of the aerodrome operator to deliver solutions that maintain aviation safety whilst conserving the species in question. Culling wildlife is not an option as often the empty space of the culled wildlife is replaced by another.

11. TRAINING

11.1 The significance of wildlife and habitat management plans/programmes must be recognized as a major safety priority of all aerodromes regardless of size, aircraft movements or the lack of a perceived threat.

11.2 Aerodromes should have specific comprehensive wildlife and habitat management training programs. Staff tasked for wildlife and habitat management should be trained and assessed as fully competent to perform their duties. It is important that the role is comprehensively explained to staff and that they fully understand their roles and responsibilities.

11.3 Aerodromes with fully qualified and trained staff are better prepared and positioned to deal with wildlife threats.

11.4 Standardisation of training: training should be conducted professionally by appropriately qualified personnel using approved material drawn from appropriate standards and guidance material. Training content and programmes should be approved by a wildlife manager with guidance from a subject matter expert to ensure that the program content is enough, and all mandatory safety and operational requirements are met.

11.5 Blended learning approach: Aerodromes should have a targeted WHMP that supports the roles of each person responsible for managing or implementing the programme. Training should be delivered from a theoretical, practical, and procedural aspect and include a familiarisation programme by an organisation recognised by the CAA.

11.6 Liaison plan: the wildlife team will require training on the importance and significance of coordination in respect of all wildlife stakeholders.

11.7 Objectives of the training programme: It is important for aerodromes to outline the objectives of a tailored wildlife and habitat management plan/programs. It is not sufficient for staff to undertake any role within the aerodrome wildlife team without appropriate wildlife and habitat training.

11.8 Summary of Training Programmes

Airside Training	All employees operating airside at aerodromes will have received appropriate airside training to ensure that they can perform their airside duties in a safe and efficient manner. Airside training will include radio telephony procedures and practical assessments
Environmental Training	Awareness of environmental factors is very important for aerodromes and are an ever-increasing influence on aerodrome procedures. Wildlife teams must be fully aware of all environmental issues and how they can contribute to the sustainability policy at aerodromes. The following guidelines should apply at aerodromes. • Understanding of environmental sustainability. • Environmental evaluation and analysis of wildlife plan. • Use of best practice environmental techniques
Practical/on the Job Training	It is not enough to provide theoretical training for this role as much knowledge will be gained from carrying out the task under a proficient and competent person. The programme should be sufficiently enough to ensure effective delivery and should have a sign off process on the proficiency of the person across all the practical, procedural and skills required to manage and implement the plan/programme. It is critical that each aspect of the procedures required for wildlife habitat and management are well practiced and understood by the wildlife team.
Wildlife Management Control Measures	It is critical that the wildlife team receives comprehensive training on the different techniques that can be used in the wildlife management programme. This must include all procedures and practices that are at the disposal of the aerodrome. Each team member must receive full training on all aspects of the programme to include familiarization with all equipment that is available to the team.
Runway Incursion Prevention Training	Due to the nature of the role and the requirement to operate close to runways (never inside the runway strip unless with

	ATC permission) staff must have completed runway incursion prevention training.
Post Incident Training	Where a wildlife management person is involved and found to have failed to follow procedures, the option to re- train may exist. It is important that the area of weakness is identified, and remedial action taken. All incidents on the airfield are investigated by aerodrome authorities, sometimes in cooperation with ATC.
Research Plan	it is very important that aerodromes employ the best possible practices available to them when developing wildlife plans. Detailed accurate information based on proven research is an important element in ensuring that best practice principles apply. Where possible, aerodromes should have a dedicated resource that will ensure that advances in the field of wildlife management and habitat management, (whether that be scientific, procedural or proven improved control techniques) are reflected in the aerodrome's wildlife and habitat management plan/programme.
Refresher Training	Each aerodrome should have an effective refresher training programme that the wildlife team will complete on a regular basis. The training must include a dedicated wildlife management and habitat module which will reflect on statistical information, procedural reviews, staff feedback and a central piece by a subject matter expert at the aerodrome (internal or external) and by a senior manager responsible for the aerodrome management and habitat plan.

Note:– All training programmes should be reviewed prior to delivery to ensure that the programme is reflective of current best practice of wildlife management techniques.

11.9 Training awareness programme should be made available to the following groups:

- Air Traffic Services
- Airlines pilots and Engineers
- Ground handlers
- Food catering companies
- Waste removal companies
- Contractor's construction projects
- Other entities as deemed necessity

12. EVALUATION OF THE WHMP

12.1 Aerodromes should have a process to review and evaluate the wildlife habitat and wildlife management plan/programme to provide safety assurance that the plan/programme is fully effective and correctly implemented. The review should be completed on an annual basis but also must include an on-going review process to ensure that the plans/programmes are always current and fully functional. A review should consider the general workings of the plans/programmes with a view to efficiency and effectiveness. Reference to statistics from previous years (five) should form part of the review. Trend analysis of statistics is a key to ensuring there is an informed view as to the success and effectiveness of wildlife management plans/programmes.

12.2 Evaluation Process Overview

ID	Activity	Responsible team	Targeted Implementation date	Actual implementation date	Comments
1	Evaluation of the Aerodrome Wildlife & Habitat Management Plan/programme				
2	Are roles clearly defined and understood by all?				
3	Do aerodrome personnel understand their roles and responsibilities?				
4	Do programmes meet required standards in ALL respects?				
5	Is the programme effectively resources managed? Are procedures efficient and effective?				
6	Are programess current with all regulations and best practices?				
7	Is there an effective review process in place?				

12.3 Summary of Evaluation Plan

ID	Activity	Action
1	Evaluation Plan Report	This comprehensive annual report should be prepared and compiled by an appropriately qualified person who has full knowledge of the plan/programme and the standards required for effective delivery. The completed report along with all recommendations must be forwarded to the aerodrome wildlife hazard management committee and the senior management responsible for the delivery of the plans/programmes.
2	Evaluation Inputs	The wildlife manager (or appropriate professional) tasked with performing the annual evaluation should undertake de-briefing from staff on general effectiveness and observations on all aspects of the plan/programme. The evaluation seeks non-performance or areas for improvement. Staff are often best positioned to provide valuable feedback on the plans/programmes.
3	Aerodrome Survey	A wildlife survey is a valuable tool for aerodromes to ensure their wildlife management and habitat plans/programmes are effective, meet all regulations and standards. The survey will be completed formally on an annual basis by a qualified professional. Evaluation of all operational, practical, procedural and technical aspects of wildlife and habitat management will form part of this survey. A comparison with previous year's findings and recommendations to ensure the survey delivers on the purpose of the survey.
4	Statistical Comparisons Year on Year	It's extremely important that accurate statistics are gathered and interpreted by a competent person to ensure that aerodromes can have effective control measures in a timely fashion. Reference should be made to previous statistical data over the last five years and recommendations and action points raised accordingly. Particular attention should be placed on the quality and accuracy of aerodrome wildlife statistics and how these statistics are interpreted so that trends are measured, and mitigation measures immediately put into place.
5	Review of Procedures	A full comprehensive review of all control procedures and practices to ensure that effective control measures are in place and are correctly followed and documented. A review of seasonal migration patterns is essential. Particular attention to identification of new species and control measures are required to deal with the species.
6	Equipment Serviceability	A full equipment audit shall be undertaken annually to establish serviceability and effectiveness of all equipment used to support wildlife management.
7	Research Review	Where possible, aerodromes should have a dedicated resource that will ensure that advances in the field of wildlife management and habitat management, whether that be scientific, procedural or proven improved control techniques are reflected in the aerodrome's wildlife and habitat management plan/programme.

ID	Activity	Action
8	Intelligence Gathering	The importance of gathering intelligence locally at the aerodrome and surrounding areas can contribute greatly to ensuring that control measures are effective. A plan for sharing information with local aerodromes or aerodromes with similar wildlife and habitat issues is a useful process of mutual benefit where control measures are compared and evaluated.
9	Wildlife Documentation Audit	An evaluation of all reports and records to ensure they meet appropriate standards as they must provide accurate information that can be understood and that will be of value in the evaluation process.

Note:– Emphasis should be placed on quality of all records, daily logs to ensure the best practice reporting is gathered so that this information can be fed back into the action in a timely fashion.

13. INTEGRATED APPROACH TO WILDLIFE MANAGEMENT

13.1 Managing wildlife strikes is on-going and complex problematic situation. Wildlife operate in their environments and collision between wildlife and aircrafts are dynamic and unpredictable events. A balanced and adaptive approach to wildlife hazard management in aviation can be achieved with integrating all direct and in-direct stakeholders. This implies that all operational sectors and industries should extend responsibility to positively engage in strike mitigation.

14. REFERENCE & SOURCES

ICAO, Annex 14, Volume I, Aerodrome Design and Operations

ICAO PANS-Aerodromes (Doc 9981)

ICAO Airport Service Manual (Doc 9137), Part 3- Wildlife Hazard Management

ICAO, Manual on Bird Strike Information System (IBIS) (Doc 9332)

ICAO, Airport Planning Manual (Doc 9184), Part 1, Master Planning

ICAO, Airport Planning Manual (Doc 9184), Part 2, Land Use and Environmental Control

Airport Council International (ACI), Wildlife Hazard Management Handbook

Civil Aviation Authority of Fiji, Guidance Material on Wildlife Hazard Management (GM – WHM)

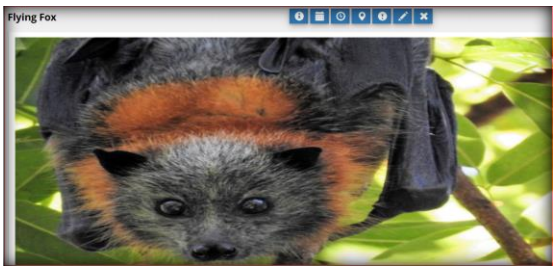
World Birdstrike Association Recommended Practices No.1 Standards for Aerodrome

Australian Airports Association, Managing Bird Strike Risk, Species Information Sheets, Airport Practice Note 6

Australian Airports Association, Wildlife Hazard Management at Airports, Airport Practice Note 9

APPENDIX 1

Overview of Species and Wildlife Hazard Management Plan (Example only)



Basic Information

Flying Fox (Pteropus) is one of the active species in XYZ airport. Typically, in XYZ airport, around >300 Flying Fox are spotted and observed per day. They have a life span of 1-1 years and a weight of 1.1 kg, typically their average clutch size is 1.

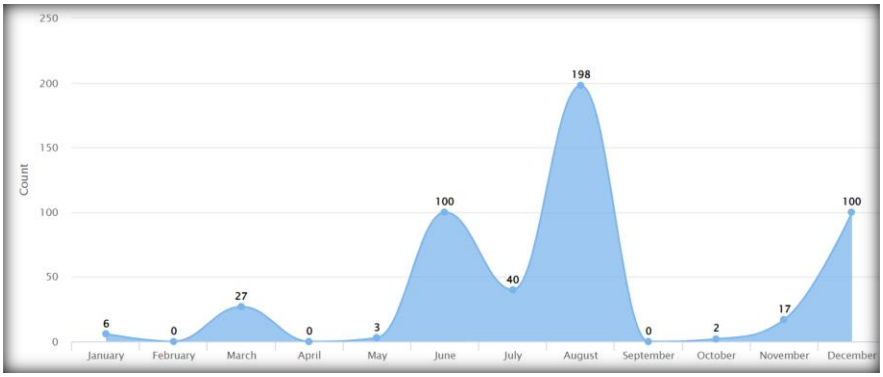
Attributes

Default Altitude: 300 m AMSL
Species Activity Time: XXXX
Wildlife Species ID : XXXXXX

Seasonality

Breeding season is typically around the months of Jan-Jan. During the breeding season, the average count of Flying Fox spotted per day is around 0, whereas in the other seasons, the frequency dips to 0 spotting per day.

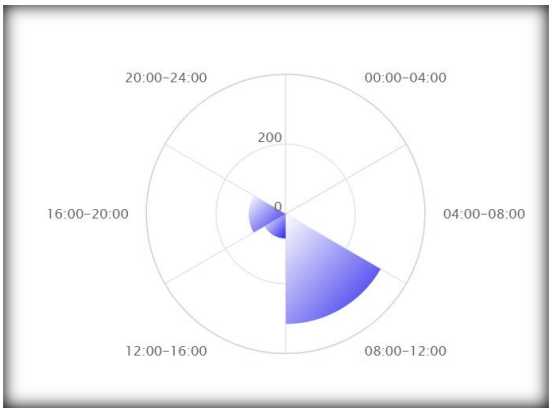
Below graph depicts the seasonality information over months:



Peak Activity Info

Species is typically very active at All Day and specifically around the time frames of 00-00 hrs. During peak activity time, average spotting is around 0 wildlife species per hr. whereas during other times, the frequency reduces to 11 wildlife species per hr.

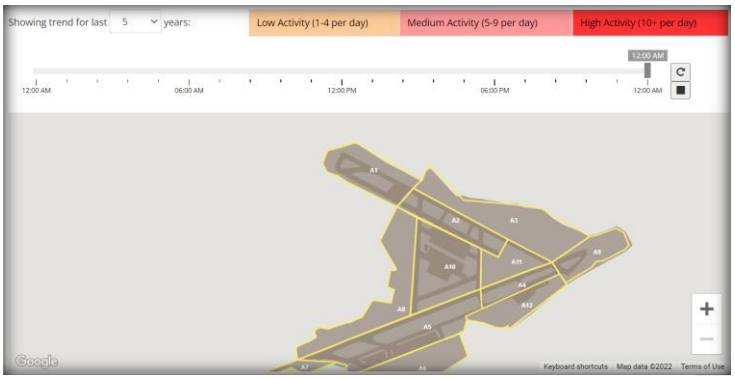
Showing trend for last [ ] years:



Area of Activity

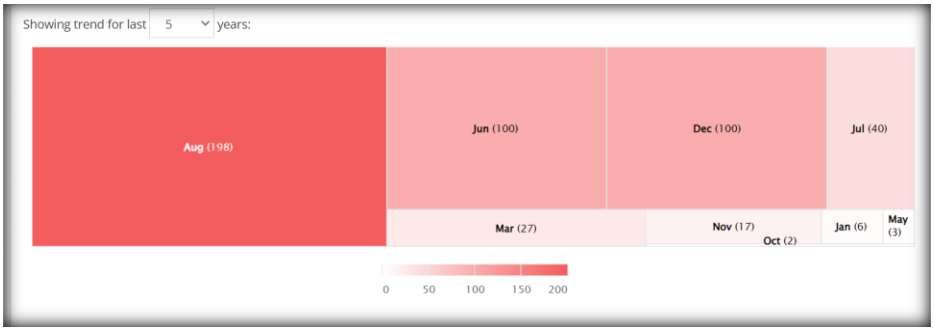
Flying Fox activity frequently occurs around the following areas of XYZ airport:
A2
A3
A4

On an average, there are 6 (29%) wildlife species activities per day spotted in these hot zones, and the remaining zones only account for 15 (71%) wildlife species activities. Below is a heat map of wildlife activity observed.



Hazard Info

Flying Fox has been categorized as Hazardous, with a risk index value of 1.



Typically, Bird Whistle and Bird Bomb have been used at XYZ airport. As scaring mechanisms most of the time to drive away the Flying Fox.

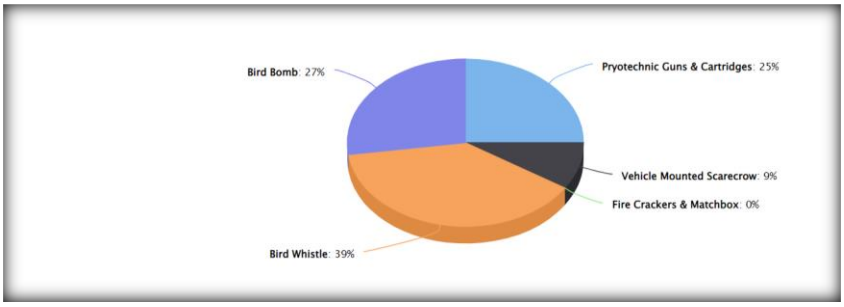
Pyrotechnic Guns & Cartridges: 25%

Vehicle Mounted Scarecrow: 9%

Firecrackers & Matchbox: 0%

Bird Whistle: 39%

Bird Bomb: 27%



Species Name: Flying fox
Scientific Name: Pteropus
Common Name: Flying fox
Species Size: Large

Hazard

Their large body mass and flocking behaviour present a considerable strike risk which is exacerbated by their nocturnal behaviour, making detection difficult. Airports themselves are rarely a source of attraction, however flocks of flying-foxes transiting through airport air space and aircraft flight paths, particularly during the nightly exodus from their daytime camps, are a serious hazard.

Flying foxes, also known as fruit bats, present a significant strike risk to aircraft because they:

- Can transit over airports in groups of hundreds or thousands of individuals.
- Have a relatively high body mass for their size;
- Are nocturnal, making visual detection by aircrew and aerodrome safety personnel difficult; and
- Are generally unresponsive to conventional active dispersal tools.

Attractants

Primarily fruits and nectar of native trees and shrubs, particularly eucalypts and fig species.
Repellents - no info available
Habitat: Rainforest, mangroves, paperbark swamps, open forests. Departs roost site (camp) at dusk to forage. Returning at any time prior to dawn.

Active Hazard Management

1) Monitor flight strips for individuals or flocks and report hazard to aircraft operators.
2) Remove trees and shrubs from airside and landside areas whose fruits and flowers attract flying-foxes.
3) Develop a landscaping policy that provides guidance on appropriate plant species use.
4) During high-risk periods encourage delayed take-offs and landings.
5) Monitor flying-fox camps in the vicinity of the aerodrome to identify local population trends.
6) Where possible, schedule flight operations to avoid peak activity. Successful flying-fox management requires a focus on detecting the hazard and communicating the details to all stakeholders.
7) Daily risk periods for flying-foxes are often concentrated around dusk during their regular camp fly-out. Knowing the time of acute risks can be used to avoid strikes by, e.g.:
    - Scheduling flights outside of known risk periods;
    - Delaying take-off and landing until the acute risk period has passed; and
    - Executing short or full length departures, where appropriate, based on the known height and location of the flying-foxes.

Passive Hazard Management

Because flying-fox strike risk tends to be primarily from over-flights, flying-fox management strategies should focus on detecting the hazard, communicating the details to all stakeholders, and monitoring the hazard. An assessment of the flying-fox hazard should be completed by a qualified and experienced person who can recommend aerodrome specific modifications.

Anticipate potential periods of increased flying-fox activity by:

- Establishing ongoing and long-term monitoring of flying-fox transit activity over the aerodrome to determine any predictable and repeatable trends in terms of time, height and expected hazard longevity; and
- Establishing ongoing and long-term monitoring of flying-fox roost population dynamics to predict periods of high and low activity. Roost populations often swell and subside throughout the year in response to season and food availability, and in some instances, roosts can be temporarily abandoned altogether. Therefore, understanding roost trends can better equip an aerodrome to predict periods of possible high or low risk.

Identify and remove all potential fruiting and flowering trees and shrubs from airside and landside landscaping that may be used by flying foxes. Plant species to exclude and avoid, include (but are not restricted to):

- Paperbarks and bottle-brushes;
- Grevilleas;
- Hakeas;
- Figs;
- Lillipillies and various other rainforest trees;
- Palms; and
- Fruit trees such as mango, pawpaw and various stone-fruit trees.

List of Aerodromes used for International Operations in APAC Region that are yet to be certified

S. No.	Sub-region	State / Admin	ICAO Code	Name of City	Name of Aerodrome	Type
1	SA	Afghanistan	OAHR	Herat	Herat Intl	UNK
2	SA	Afghanistan	OAKB	Kabul	Kabul Intl	RS
3	SA	Afghanistan	OAKN	Kandahar	Kandahar Intl	AS
4	SA	Afghanistan	OAMS	Mazar-e-Sharif	Mazar-e-Sharif	UNK
5	SEA	Brunei	WBSB	Brunei	Brunei Intl	RS
6	NA	China	RCYU	Hualien	Hualien	UNK
7	NA	China	RCMQ	Taichung	Cingcyuangang	UNK
8	NA	China	RCNN	Tainan	Tainan	UNK
9	SA	India	VICG	Chandigarh		UNK
10	SA	India	VOGO	Goa		UNK
11	SA	India	VOPB	Port Blair		UNK
12	SA	India	VAPO	Pune		UNK
13	SA	India	VISR	Srinagar		UNK
14	PAC	Kiribati	PLCH	Kiritimati	Christmas I.	RS
15	PAC	Kiribati	NGTA	Tarawa	Bonriki Intl	RS
16	SEA	Lao PDR	VLVT	Vientiane	Wattay Intl	RS
17	SEA	Lao PDR	VLLB	Luangprabang	Luangprabang Intl	RS
18	SEA	Lao PDR	VLSK	Kaisonphimvihan	Savannakhet Intl	RS
19	SEA	Lao PDR	VLPS	Pakse	Pakse Intl	RS
20	SEA	Malaysia	WMKD	Kuantan	Haji Ahmad Shah	RNS
21	SEA	Malaysia	WBKL	Labuan		RNS
~~22~~	~~SEA~~	~~Malaysia~~	~~WBKD~~		~~Lahad Datu~~**	~~UNK~~
23	PAC	Micronesia	PTPN	Pohnpei I.	Pohnpei Intl	RS
24	PAC	Micronesia	PTKK	Weno I.	FM Chuuk Intl	RS
25	PAC	Micronesia	PTYA	Yap I.	Yap Intl	RS
26	PAC	Micronesia	PTSA	Kosrae I.	Kosrae	UNK
27	PAC	Nauru	ANYN	Nauru I.	Nauru intl	RS
28	SEA	Philippines	RPVK	Kalibo, Aklan	Kalibo Intl*	RS
29	SEA	Philippines	RPLL	Manila	Ninoy Aquino Intl*	RS
30	SEA	Philippines	RPVP	Puerto Princesa City	Puerto Princesa Intl*	RS
31	SEA	Philippines	RPSP	Panglao	Bohol-Panglao Intl*	RS

32	SEA	Thailand	VTSG	Krabi		RS
33	SEA	Thailand	VTPH	Prachuap Khiri Khan	Hua Hin	RS
34	SEA	Thailand	VTSM	Surat Thani	Samui	RS
35	SEA	Thailand	VTSB	Surat Thani		RS
36	SEA	Timor Leste	WPDL	Dili	Presidente Nicolau Lobato Intl	RS
37	SEA	Timor Leste	WPDB	Suai	Commander-in-Chief of the FALINTIL – Kay Rala Xanana Gusmão Intl	RNS
38	PAC	Tuvalu	NGFU	Funafuti	Funafuti Intl	RS

* Airports granted with temporary aerodrome certificates.

** Lahad Datu Airport is deleted from the list as this was not used for international air transport operations as per information provided by Malysia at AOP/SG/6 meeting.

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Afghanistan							
Annex 14 Volume I	**Herat International Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Kabul International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Kandahar International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Mazar-e-Sharif Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>American Samoa (US)</u>							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Bangladesh</u>							
Annex 14 Volume I	**Hazrat Shahjalal International Airport, Dhaka**	**Runway/ Taxiway**	**ICAO mission April 2009**	Runway strip width insufficient (280m strip not available for the full length of runway);	runway strip in accordance with Annex 14, volume I will be provided	CAABD	Runway strip width 280m available for the full length of runway (mitigation measures for storm water drain on the western side strip under process. No obstructions on graded area)	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**<u>Brunei Darussalam</u>** **Brunei International Airport**	**Taxiway**	ICAO Mission of April 2011	non provision of enhanced taxiway centre line marking in accordance with Para 5.2.8 of Annex 14, Volume I Objects on taxiway strips; vegetation on pavement joints and maintenance of joints	Both Northern Parallel Taxiway and Southern Parallel Taxiway Centre line have been repainted yellow and enhanced with black borders on each side.	Airport Operator (DCA Aerodrome Division)		A A
		Apron		non provision of ICAO compliant signage in accordance with section 5.4 Annex 14, Volume I	Airfield signages have always been provided at BIA that follow ICAO standards and measurement. Recent replacement of old and faded labels have also been completed in 2018.	Airport Operator (DCA Aerodrome Division)		A
		Rescue and Fire Fighting (RFF):		non provision of direct access for the rescue and fire fighting vehicles from the fire station into the runway;	Duly noted that there is no direct access for fire fighting vehicles to the runway at the moment, but one will be concluded within the second phase of the Airfield Pavement	Airport Operator (DCA Aerodrome Division)	4th Qtr. 2022	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
					Rehabilitation Project.			
		Wildlife Hazards:		Establishing a national bird control committee in accordance with APANPIRG Conclusion 18/1.	Aerodrome Division headed by Head of Aerodrome to firstly establish an in-house committee and will cooperate with Regulatory Division	Airport Operator (DCA Aerodrome Division)	4th Qtr. 2021	B
	Brunei International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>China</u>							
Annex 14 Volume I	**Hualien Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Taichung Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Tainan Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of some of the aerodromes used for international operations yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~16 Dec. 2020~~ 8 March 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Cook Islands							
~~**Annex 14 Volume I PANS-Aerodromes PANS-AIM**~~	~~AIP~~	~~**Status of Certification of Aerodromes in AIP**~~	~~Effective from 1 Jan 2021~~	~~Status of certification of aerodromes yet to be published in AIP AD 1.5.~~			Published in AD 1.5 of AIP Cook Islands, Effective 12 Aug. 2021 [CLOSED]	~~A~~

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Guam (US)							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>India</u>							
Annex 14 Volume I	**Chennai International Airport**	**Runway**	**AGA mission January 2009**	Runway strip is insufficient 300m strip width is not available for the full length of runway 07/25 in accordance with 3.4.3 of Annex 14, Volume I.	280m strip width for full length of runway 07/25 will be made available.	AAI	Work in progress. Due to COVID-19 work is held up. PDC for straightening of B taxiway alone is 30-09-2020.	A
Annex 14, Volume I	**Mumbai International Airport**	**Runway**	**AGA mission January 2009**	Runway strip is insufficient 300m strip width is not available for the full length of runway 09/27 in accordance with 3.4.3 of Annex 14, Volume I.	280m strip width for full length of runway 09/27 will be made available	MIAL	31 Dec 2022. Due to presence of slum in beginning of RWY 09/27 south – RWY strip 280m not available. Due to presence of slum of either side at beginning of RWY 14/32 – RWY strip 280m not available.	A
Annex 14 Volume I	**Chandigarh Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I	**Goa Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I	**Port Blair Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**Pune Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I	**Srinagar Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	**AIP**	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of some of the aerodromes used for international operations yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 20 Nov. 2021

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**<u>Kiribati</u>** **Christmas Island Airport, Kiritimati**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Bonriki International Airport, Tarawa	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 20 Nov. 2021

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**<u>Lao PDR</u>** **Wattay International Airport**	**Taxiway**	**ICAO Mission of March 2011**	Provision of runway hold position lights in accordance with Para 5.3.19 of ICAO Annex 14, Volume I	Under consideration by Airports of Laos to purpose for support the budgets and installation		We have planned budgets and installation in 2025	A
		Rescue and Fire Fighting (RFF):		Provision of road holding position sign at all road entrances to a runway;	Completed the design and submit to DCA for Approval		It will be completed in December 2021	A
		Wildlife Hazards:		Establishing a national bird control committee in accordance with APANPIRG conclusion 18/1.	We are repairing plan for establish committee for approval from Ministry		It will be completed in December 2021	B
		Aerodrome Certification	Effective from 1 Jan 2021	Aerodrome yet to be certified.			Aerodrome Certification will be completed in 30th December 2021	A
	Luang Prabang International Airport	**Taxiway**		Provision of runway hold position lights in accordance with Para 5.3.19 of ICAO Annex 14, Volume I on new taxiways	Under consideration by Airports of Laos to purpose for support the budgets and installation		We have planned budgets and installation during 2021 to 2025	A
		Rescue and Fire Fighting (RFF)		Provision of road holding position sign at all road entrances to a runway	Completed the design and submit to DCA for Approval		It will be completed in December 2021	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
		Aerodrome Certification	Effective from 1 Jan 2021	Aerodrome yet to be certified.			Aerodrome Certification will be completed in 29th December 2022	A
	Savannakhet International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.			Aerodrome Certification will be completed in 28th December 2023	A
	Pakse International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.			Aerodrome Certification will be completed in 28th December 2024	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~24 May 2021~~ 29 June 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Malaysia							
Annex 14 Volume I	**Kuantan Haji Ahmad Shah Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Coordination among Ministry of Transport, Ministry of Defense and Airport Operator are being conducted to get the aerodrome certified	Ministry of Transport and Ministry of Defense	31 December 2021	A
	Labuan Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Coordination among Ministry of Transport, Ministry of Defense and Airport Operator are being conducted to get the aerodrome certified	Ministry of Transport and Ministry of Defense	31 December 2021	A
~~**Annex 14 Volume I PANS-Aerodromes PANS-AIM**~~	~~**AIP**~~	~~**Status of Certification of Aerodromes in AIP**~~	~~Effective from 1 Jan 2021~~	~~Status of certification of some of the aerodromes used for international operations yet to be published in AIP AD 1.5.~~	~~Coordination among CAAM and Airport Operator are being conducted to get all aerodromes used for international operations published in AIP AD 1.5.~~	~~CAAM~~	~~31 December 2021~~ Published in AD 1.5, AIP, effective 03 Mar. 2022 [CLOSED]	~~A~~

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Marshall Islands							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Maldives</u>							
Annex 14, Volume I	**Velana International Airport**	**Runway/ Taxiways**	**AGA Mission Report April 2008**	Insufficient runway strip.	Runway strip available	Maldives Airports Company Pvt. Ltd	Apron is still within the runway strip. New master plan work is in progress, new runway construction on-going, estimated date of completion: December 2019. Exemption granted by the State to Aerodrome Operator till December 2019.	U

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Micronesia (Federated States of)</u>							
Annex 14 Volume I	**Pohnpei International Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	FM Chuuk International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Yap International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
	Kosrae Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Nauru</u>							
Annex 14 Volume I	**Nauru International Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~16 Dec. 2020~~ 8 March 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Niue (New Zealand)							
~~**Annex 14 Volume I PANS-Aerodromes PANS-AIM**~~	~~AIP~~	~~**Status of Certification of Aerodromes in AIP**~~	~~Effective from 1 Jan 2021~~	~~Status of certification of aerodromes yet to be published in AIP AD 1.5.~~			Published in AD 1.5 of AIP Niue, effective from 2 Dec. 2021 [CLOSED]	~~A~~

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~16 Dec. 2020~~ 8 March 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
~~**Annex 14 Volume I PANS-Aerodromes PANS-AIM**~~	**New Zealand** ~~AIP~~	~~**Status of Certification of Aerodromes in AIP**~~	~~Effective from 1 Jan 2021~~	~~Status of certification of aerodromes yet to be published in AIP AD 1.5.~~			Published in AD 1.5 of AIP New Zealand, effective from 7 Oct. 2021 [CLOSED]	~~A~~

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Northern Mariana Islands (US)							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Palau</u>							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~18 June 2021~~ 8 March 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Philippines							
Annex 14 Volume I	**Kalibo International Airport, Akla**	**Aerodrome Certification**	Effective from 1 Jan 2021	~~Aerodrome yet to be certified.~~ Permanent aerodrome certificate yet to be issued.			Temporary Aerodrome Certificate issued with validity from ~~28 December 2020 to 28 June 2021~~ 30 Dec. 2021 to 29 June 2022 as per AIRAC AIP AMDT 080/22, effective from 22 Apr. 2022.	A
	Puerto Princesa International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	~~Aerodrome yet to be certified.~~ Permanent aerodrome certificate yet to be issued.			Temporary Aerodrome Certificate issued with validity from ~~04 December 2020 to 04 June 2021~~ 06 December 2021 to 6 June 2022 as per AIRAC AIP AMDT 080/22, effective from 22 Apr. 2022.	A
	Bohol-Panglao International Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	~~Aerodrome yet to be certified.~~ Permanent aerodrome certificate yet to be issued.			Temporary Aerodrome Certificate issued with validity from ~~23 December 2020 to 23 June 2021~~ 25 Dec. 2021 to 25 Jun. 2022 as per AIRAC AIP AMDT 080/22, effective from 22 Apr. 2022.	A
	Ninoy Aquino International Airport RPLL	**Aerodrome Certification**	Effective from 8 March 2022	Permanent aerodrome certificate yet to be issued.			Temporary Aerodrome Certificate issued with validity from 31 October 2021 to 29 April 2022 as	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							per AIRAC AIP AMDT 080/22, effective from 22 Apr. 2022.	

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**Mongolia** **Buyant-Ukhaa Airport**	**Taxiway**	**ICAO Mission of July 2011**	provision of runway hold position lights in accordance with Para 5.3.19 of ICAO Annex 14, Volume I.	The runway hold position lights will be provided in accordance with Para 5.3.19 of ICAO Annex 14, Volume I.	Civil Aviation Authority of Mongolia	The RWY hold position marking and mandatory signs were provided to avoid runway incursions on the maneuvering area. Because of the existing International scheduled flights will be transferred to new airport in 2020, the additional runway hold position lights are unrequired to install.	A
		Apron: **Airfield signage**		Provision of ICAO compliant signage in accordance with section 5.4 Annex 14, Volume I and to cut the vegetation in front of the signs.	The signage will be provided in accordance with section 5.4 Annex 14, Volume I. The vegetation in front of the signs will be cut	Civil Aviation Authority of Mongolia	The work on cutting the vegetation in front of the signs was completed in 2017 within the totally 119560 m² area including, taxiway strip, glide path antenna and apron area, as per Aerodrome manual of, in scope of Aerodrome maintenance plan. [Note: Partially completed]	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 15 June 2021

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Myanmar</u>							
Annex 14 Volume I	**Yangon International Airport**	**Runway/ Taxiway**	**ICAO mission April 2010**	Provision of RESA in accordance with Section 3.5 of Annex 14, Volume I requirements;	RESA will be provided	Yangon Aerodrome Company Limited	(Risk Assessment conducted by the operator submitted on 10 Aug 2018.) RESA for RWY 21 was completed on 15 Nov 2018. _____ Revised date- **31 Dec 2021**	A
		Bird Hazard		Establishment of a national bird committee in accordance with APANPIRG Conclusion 18/1.	Establish National Bird Committee	Department of Civil Aviation	Guideline for Wildlife Hazard Management at Aerodromes, DCA-GM-AGA 08 has been developed and published on 29 Oct 2018) Revised date- **30 Nov 2021**	B

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 8 June 2021

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14, Volume I	**<u>Nepal</u>** **Tribhuvan International Airport**	**Runway/ taxiways**	**ICAO Mission of February 2008**	Insufficient runway strip, refer recommendations given in section 3.4 of Annex 14, Volume I.	Provide runway strip as per ICAO recommendations		Construction works to provide sufficient strip towards runway 20 already started with target of completion in 2023.	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**<u>Samoa</u>** **Faleolo International Airport**	**Runway Strip**	**ICAO Mission of Oct. 2015**	Insufficient Runway Strip				A
		Aerodrome Pavements		Lack of maintenance of aerodrome pavements in accordance with Annex 14, 10.2				U
Annex 14 Volume I PANS-Aerodromes PANS-AIM	**AIP**	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Solomon Islands							
Annex 14 Volume I	**Honiara International Airport/Henderson Field**	**Runway Strip**	**ICAO Mission of Oct. 2015**	Insufficient Runway Strip				A
		RESA		RESA at both ends of runway not provided				U
		Aerodrome Pavements		Lack of maintenance of aerodrome pavements in accordance with Annex 14, 10.2				U
Annex 14 Volume I PANS-Aerodromes PANS-AIM	**AIP**	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~16 Dec. 2020~~ 15 June 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Sri Lanka							
Annex 14 Volume I	**Bandaranaike International Airport**	**Runway/ Taxiway**	**ICAO mission April 2010**	Provision of 280m strip width for the full length of precision approach CAT I runway in accordance with the standard 3.4.3, Annex 14, Volume I; remove obstacles from runway strip; flush the strip with the adjacent runway shoulder.	runway strip in accordance with Annex 14, Volume I will be provided, obstacles from strip will be removed and flush strip with adjacent runway shoulder.	CAASL	Statistical analysis submitted by AASL has been accepted in 2021. Request made to submit the improved risk assessment with necessary amendments within 2022. ~~AASL has informed that the Runway Safety Team – BIA will carry out the safety study and submit the report by June 2018.~~ ~~Preliminary Report of the Safety Study of AASL was reviewed in April 2018.~~	A
				Establishment of a national bird committee in accordance with APANPIRG Conclusion 18/1.	National Bird Committee will be established.		A meeting to be held with all stakeholders to establish the Committee and to ratify the TOR by end of September 2022. ~~1st Draft of TOR of National Bird Control Committee of Sri Lanka has been compiled and ready for ratification.~~	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

~~**2 April 2022**~~ **6 June 2022**

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Thailand							
Annex 14, Volume I	**Phuket International Airport**	**Runway**	**AGA mission of July 2009**	RESA to satisfy Section 3.5 of Annex 14, Volume I requirements.	RESA will be provided at the end of both RWY09 and RWY27 to satisfy Section 3.5 of Annex 14, Volume I requirements. Remark: - Dimension of RESA RWY09 is 150x190 m. - Dimension of RESA RWY27 is 150x120 m.	Airports of Thailand Public Company Limited	The construction is expected to be completed in 2024. Airports of Thailand Public Company Limited already has had the contractor for this construction's project and the safety assurance and project management documentation has been approved by the Civil Aviation Authority of Thailand to ensure that the aerodrome can continue to operate safely during the project. Currently, the construction progress is 11.40% ~~The construction is expected to be completed in 2022.~~ ~~The construction plan and budget have been approved. Airports of Thailand Public Company Limited already has had the contractor for this~~	U

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							~~construction's project. Currently, the safety assurance and project management documentation is under consideration for approval by the Civil Aviation Authority of Thailand to ensure that the aerodrome can continue to operate safely during the project.~~	
				Runway strip width insufficient (280m runway strip for precision approach runways in accordance with Para 3.4.3 of Annex 14, Volume I.	300m runway strip width will be made available. Except 111.4m length at the beginning of RWY09 (60m strip length before RWY09 threshold plus 51.4m length beyond the threshold), the runway strip width will be extended 150m on the right side of RWY09 centre line and 90.27m on the left side of the runway centre line (due to the marsh near the runway).	Airports of Thailand Public Company Limited	The construction is expected to be completed in 2024. Airports of Thailand Public Company Limited already has had the contractor for this construction's project and the safety assurance and project management documentation has been approved by the Civil Aviation Authority of Thailand to ensure that the aerodrome can continue to operate safely during the project. Currently, the construction progress is 11.40%	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							~~The construction is expected to be completed by 2022.~~ ~~The construction plan and budget have been approved. Airports of Thailand Public Company Limited already has had the contractor for this construction's project. Currently, the safety assurance and project management documentation is under consideration for approval by the Civil Aviation Authority of Thailand to ensure that the aerodrome can continue to operate safely during the project.~~	
	Krabi Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Certify the aerodrome in accordance with aerodrome certification requirements	The Civil Aviation Authority of Thailand and Department of Airports	31 December 2022 ~~30 November 2021 It is currently under Phase 4 of aerodrome certification. Note – Aerodrome certification is divided into 5 phases as follows: Phase 1 Pre-application;~~	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							~~Phase 2 Formal Application;~~ ~~Phase 3 Document Evaluation;~~ ~~Phase 4 Demonstration and Audit; and~~ ~~Phase 5 Certification.~~	
	Hua Hin Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Certify the aerodrome in accordance with aerodrome certification requirements	The Civil Aviation Authority of Thailand and Department of Airports	30 June 2023 ~~30 November 2021~~ ~~It is currently under Phase 4 of aerodrome certification.~~ ~~Note - Aerodrome certification is divided into 5 phases as follows:~~ ~~Phase 1 Pre-application;~~ ~~Phase 2 Formal Application;~~ ~~Phase 3 Document Evaluation;~~ ~~Phase 4 Demonstration and Audit; and~~ ~~Phase 5 Certification.~~	A
	~~**U-Taphao Pattaya International Airport**~~	~~**Aerodrome Certification**~~	~~Effective from 1 Jan 2021~~	~~Aerodrome yet to be certified.~~	~~Certify the aerodrome in accordance with aerodrome certification requirements~~	~~The Civil Aviation Authority of Thailand and U-Tapao Airport Authority~~	~~30 July 2021~~ ~~It is currently under Phase 4 of aerodrome certification.~~ ~~Note - Aerodrome certification is divided into 5 phases as follows:~~	~~A~~

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							~~Phase 1 Pre-application;~~ ~~Phase 2 Formal Application;~~ ~~Phase 3 Document Evaluation;~~ ~~Phase 4 Demonstration and Audit; and~~ ~~Phase 5 Certification.~~ *Thailand updated the AP-AA/WG/4 that U-Tapao Airport was certified on 02 March 2022. Post AP-AA/WG/4, Thailand provided a copy of the Aerodrome Certificate granted to U-Tapao Airport to ICAO APAC Office.* [CLOSED]	
	Samui Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Certify the aerodrome in accordance with aerodrome certification requirements	The Civil Aviation Authority of Thailand and Bangkok Airways Public Company Limited	31 December 2022 ~~30 September 2021~~ ~~It is currently under Phase 5 of aerodrome certification.~~ ~~Note – Aerodrome certification is divided into 5 phases as follows:~~ ~~Phase 1 Pre-application;~~ ~~Phase 2 Formal Application;~~ ~~Phase 3 Document Evaluation;~~ ~~Phase 4 Demonstration and~~	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							~~Audit; and~~ ~~Phase 5 Certification.~~	
	Surat Thani Airport	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Certify the aerodrome in accordance with aerodrome certification requirements	The Civil Aviation Authority of Thailand and Department of Airports	31 December 2022 ~~30 November 2021~~ ~~It is currently under Phase 4 of aerodrome certification.~~ ~~Note - Aerodrome certification is divided into 5 phases as follows:~~ ~~Phase 1 Pre-application;~~ ~~Phase 2 Formal Application;~~ ~~Phase 3 Document Evaluation;~~ ~~Phase 4 Demonstration and Audit; and~~ ~~Phase 5 Certification.~~	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~4 May 2021~~ 17 May 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Timor-Leste							
Annex 14 Volume I	**Presidente Nicolau Lobato International Airport, Dili**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	Certification process restarted. AD operator has to correct couple of findings (noncompliance) requested by national regulator (AACTL)	ANATL* as AD operator *National AD and ATS provider	~~Initial target date was 30/June/2021. However due to COVID pandemic and AD operator budget problem the target date of competition will be probably extended up to 31/December/2021~~ Based on the newly revised PNLIA Certification Road Map, the completion of the certification process is estimated to be concluded by December 2022.	A
	Commander-in-Chief of the FALINTIL – Kay Rala Xanana Gusmão International Airport, Suai	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.	To be certify for its designed category (3C) the significant safety issue relating to AD strip (local houses and habitants must be relocated!) should be resolved. Currently AD is occasionally in use for domestic general aviation and helicopters only.	Gov. TL and ANATL as AD operator	Estimated date: 31 December 2022	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I PANS-Aerodromes PANS-AIM	**AIP**	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.	New TL AIP is published on 25/March/2021.	AACTL	In correlation with AD certification	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**<u>Tonga</u>** **Fua'amotu International Airport**	**Runway Strip**	**ICAO Mission of Oct. 2015**	Insufficient Runway Strip				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	**AIP**	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		**Deficiencies**			**Corrective Action**			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
Annex 14 Volume I	**<u>Tuvalu</u>** **Funafuti International Airport**	**Aerodrome Certification**	Effective from 1 Jan 2021	Aerodrome yet to be certified.				A
Annex 14 Volume I PANS-Aerodromes PANS-AIM	**AIP**	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated 16 Dec. 2020

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	<u>Vanuatu</u>							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of aerodromes yet to be published in AIP AD 1.5.				A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Updated ~~3 June 2021~~ 26 June 2022

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
	Viet Nam							
Annex 14 Volume I PANS-Aerodromes PANS-AIM	AIP	**Status of Certification of Aerodromes in AIP**	Effective from 1 Jan 2021	Status of certification of one of the aerodromes used for international operations yet to be published in AIP AD 1.5.	Certify aerodromes used for international operations	CAAV	**WORK IN PROGRESS** – CAAV has checked and recognized that Lien Khuong is a domestic aerodrome used for international operation under the Article 80 of the revised Civil Aviation Law of Vietnam. - CAAV published the status of certification of 13 domestic aerodromes in AIP, AD 1.5 in the AIP Amendment No 03/2020, issued on November 30th 2020 (including Lien Khuong aerodrome). ~~- CAAV is conducting the procedures to certify the aerodromes in Vietnam used for international operations (including Lien Khuong aerodrome).~~ Due to the impact of the Covid-19 pandemic, the procedure for upgrading, announcing Lien Khuong aerodrome as an international aerodrome has not been completed as planned. The CAAV has	A

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	**States/facilities**	**Description**	**Date first reported**	**Remarks**	**Description**	**Executing body**	**Target date of completion**	**Priority for action****
							adjusted the schedule as follows: – Completing the transition from the Aeronautical Information Service (AIS) to the Aeronautical Information Management (AIM) by the end of 2022. After the transition completed, the certifications of all operating aerodromes in Viet Nam will be published in AIP (including Lien Khuong aerodrome). – Completing the procedure for upgrading, announcing Lien Khuong aerodrome as an international aerodrome in accordance with the Civil Aviation Law by the end of 2022. – Completing publishing Lien Khuong aerodrome as an international aerodrome in AIP in the first quarter of 2023. **Target date of completion: ~~End of 2021~~** the first quarter of 2023.	

* Priority for action to remedy the shortcoming is based on the following safety assessments:

AIR NAVIGATION DEFICIENCIES IN AOP FIELD IN THE ASIA/PACIFIC REGION

"U" priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions. Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

"A" priority = Top priority requirements necessary for air navigation safety. Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

"B" priority = Intermediate requirements necessary for air navigation regularity and efficiency. Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

APANPIRG
AERODROMES OPERATIONS AND PLANNING SUB-GROUP (AOP/SG)

LIST OF AOP FOCAL POINTS [Updated on ~~8 December 2021~~ 29 June 2022]

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LIST OF AOP FOCAL POINTS

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AOP/SG WORK PROGRAMME AND TASK LIST
[Updated by AOP/SG/6]

The priorities assigned in the list have the following connotation:
High = Tasks of a high priority on which work should be expedited;
Medium = Tasks of medium priority on which work should be under taken as soon as possible but not to the detriment of the High tasks; and
Low = Tasks of medium priority on which work should be undertaken as time and resources permit but not to the detriment of High and Medium priority tasks.

TOR = Terms of Reference of the AOP Sub-Group

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
AOP/SG/1 (14 – 16 June 2017):								
AOP/SG/1/1	APANPIRG 18 Conclusion 18/62 APANPIRG 21 Conclusion 21/54	Safety	AOP Air Navigation Deficiencies Assist States to establish action plans with fixed target dates for resolution of safety related deficiencies	High	1) Monitor resolution of AOP air navigation deficiencies *Please refer to the Task AOP/SG/2/2*	AOP/SG	December 2021	*Moved to Task* AOP/SG/2/2 **[COMPLETED]**
AOP/SG/1/2	APANPIRG 27 TOR of AOP/SG	Safety, Capacity & Efficiency	Assist in and monitor the implementation of Airport Collaborative Decision Making (A-CDM) at aerodromes used for international operations in APAC Region through APA-CDM/TF.	High	Monitor the status of implementation of A-CDM at aerodromes used for international operations	AOP/SG and APA-CDM/TF	Nov. 2021	AOP/SG/5-WP/05: - Dissolution of the Task Force and remaining works will be taken care by other APANPIRG Contributory body (ATFM/SG) **[COMPLETED]**

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
AOP/SG/1/3	APANPIRG 27	Safety	Develop regional guidelines on aerodrome operations personnel competency (AOPC) requirements through AOPC Working Group	Medium	Develop regional guidance material	AOP/SG and AOPC SWG	May 2019	Refer to AOP/SG/4 WP/08 **[COMPLETED]**
AOP/SG/1/4	APANPIRG 27/34	Safety	Monitor States provide updated information about airport´s Obstacle Limitation Surface (OLS) in AIP	High	Monitor OLS of airports through AP-ADO/TF	States, AOP/SG	Continuous	Ongoing
					(Please refer to the Task AOP/SG/2/3)			
AOP/SG/2 (27 - 29 June 2018):								
AOP/SG/2/1	APANPIRG/18 Conclusion 18/1 APANPIRG Conclusion 21/2 RAN meeting –Asia/PAC/3, rec 4/6	Safety	Wildlife strike hazard reduction programme	High	Establish Wildlife Hazard Management Working Group (WHM WG)	AOP/SG, ICAO APAC Office	Continuous	Established AP-WHM/WG. Ongoing ~~AOP/SG/5 WP/06:~~ - ~~Developed Draft APAC Guidance on Development and Implementation of Aerodrome WHMP~~ AOP/SG/6 – WP/07: - Draft Conclusion AP–WHM/WG/4–1: State Action Plan for Establishment and Implementation of WHMP - Generic Template (Appendix D to AOP/SG/6 Report)

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
								- Developed Asia Pacific Regional Guidance on Development and Implementation of Wildlife Hazard Management Programme (Appendix E to AOP/SG/6 Report) **[COMPLETED]**
AOP/SG/2/2	Beijing Declaration 2018 APANPIRG APAC ANP, Doc 9673, Volume I		1) Assist States in implementation of ICAO aerodrome certification requirement and resolution of air navigation deficiencies;	High	Establish an Asia/Pacific Aerodrome Assistance Working Group (AP-AA WG) Monitor resolution of AOP air navigation deficiencies	AOP/SG; ICAO APAC Office	31 October 2018 Continuous	Established AP-AA/WG. **[COMPLETED]** Ongoing

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
AOP/SG/2/3	TOR of AOP/SG Asia Pacific Air Navigation Plan		(1) Review and monitor provisions of facilities, installations and services at international aerodromes: - visual aids; - rescue and firefighting services and emergency planning; - measurement and reporting by States of the surface condition and unevenness on runway; - preventive maintenance programme; - runway safety programme. (2) Review and monitor the content of the Table AOP I - 1 and, where necessary, after coordination with users and operators, and introduce the respective changes to the APAC ANP and Table AOP II – 1 through the established ICAO procedures.	High	Establish Asia/Pacific Aerodrome Design and Operation Task Force (AP-ADO/TF) Tasks to be carried out by AP-ADO/TF	AOP/SG; ICAO APAC Office	31 October 2018 Continuous Continuous	Established AP-ADO/TF. **[COMPLETED]** Ongoing Ongoing
AOP/SG/3 (24 - 26 June 2019):								
AOP/SG/3/1	55th DGCA Action Item 55/42	Safety	Certification of aerodromes used for international operations by 2020 (Beijing Declaration's Commitment)	High	Monitor the progress of certification and report to DGCA through APANPIRG	AOP/SG through AP-AA/WG	By 2020	Ongoing ~~304 out of 342 aerodromes have been certified (89%) (AOP/SG/5-WP/09)~~

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
								AOP/SG/6-WP/08: - 321 out of 354 aerodromes have been certified (90.68%)
AOP/SG/4 (10 – 13 November 2020):								
AOP/SG/4/1	Draft Conclusion AOP/SG/4-10	Safety	States/Administrations to develop and implement GRF Implementation Action Plan	High	Monitor the GRF Implementation Action Plan developed by States/Administrations	States AOP/SG	28 February 2021	Ongoing AOP/SG/5-WP-12: ~~- 25 States/ Administrations submitted GRF Implementation Action Plan~~ - Developed GRF Implementation Monitoring Tool AOP/SG/6-IP-12: - 15 States implemented GRF - 13 States have yet to submit their GRF Implementation Action Plan to ICAO APAC Office

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
AOP/SG/4/2	AOP/SG/4 Report on WP/12	Safety	States to arrange necessary resources to recruit, train and retain qualified and experienced technical staff to effectively perform safety oversight of aerodromes to enhance USOAP Effective Implementation score to at least 75% in AGA area by 2022	High	Provide technical assistance to States with limited resources and low AGA EI	States AP-AA/WG	~~By 2022~~ Continuous	AOP/SG/5-IP/11: - Fiji: iPack – Aerodrome Restart (2021) AOP/SG/6-IP/09: - Timor-Leste: iPack – Aerodrome Restart (2021)
AOP/SG/4/3	AOP/SG/4 Report on WP/11	Safety	Assist States in certification of aerodromes used for international operations	High	Provide technical assistance to States with aerodromes yet to be certified through Aerodrome Assistance Go-Team and other appropriate methods as agreed with the States concerned	AP-AA/WG assisted by ACI	By ~~2022~~ 2025	AOP/SG/5-IP/11: - Thailand (ICAO RO/COSCAP-SEA TA for Aerodrome Certification)
AOP/SG/5 (29 June – 2 July 2021):								
AOP/SG/5/1		Safety, Capacity & Efficiency, ENV	Aerodromes Seminar	Medium	Asia/Pacific Aerodromes Seminar (duration 2 – 3 Days) hosted by States/Industries Theme topic of the Seminar to be proposed by the host in consultation with ICAO	States/ Industries (Supported by the Secretariat)	December 2022	AOP/SG/6-WP-17: Action initiated.

Task No.	Ref	Associated ICAO Strategic Objective	Task	Priority	Action Proposed	Action by	Target Date	Status
AOP/SG/6 (27 – 30 June 2022):								
AOP/SG/6/1	Task AP-ADO/TF/3/2	Safety	GRF Seminar	Medium	Organise a GRF Webinar	On behalf of AP-ADO/TF by China (Lead), ACI & ICAO	Q3, 2022	Tentative date of GRF Webinar – ~~22~~ 29 Sep. 2022

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NOTES ON THE AMENDMENT OF ABOVE TABLE TO ENDORSE AS AOP/SG WORK PROGRAMME

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

~~Text to be deleted is shown with a line through it.~~ text to be deleted

New text to be inserted is highlighted with grey shading. new text to be inserted

~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading. new text to replace existing text

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ASIA PACIFIC GENERIC GUIDANCE MATERIALS AND CUSTODIANS

Procedure for periodic review and update of the Asia/Pacific Generic Guidance Materials in the area of Aerodromes and Ground Aids

1. INTRODUCTION

1.1 In accordance with the TORs and task lists of the various Working Groups and Task Forces of AOP/SG, a number of Generic Guidance Materials (GGMs) were developed by these Working Groups/Task Forces and approved by AOP/SG and APANPIRG. All Generic Guidance Materials are published on ICAO APAC Website at eDocuments Webpage under AGA heading for use/reference by States/Administrations and can be accessed using URL: https://www.icao.int/APAC/Pages/eDocs.aspx.

1.2 The list of Asia/Pacific GGMs developed by various Working Groups and Task Forces and approved by AOP/SG and APANPIRG including the details of the Custodians is provided in **Attachments A to D**.

2. PROCEDURE

2.1 The Working Groups/Task Forces identify a custodian of the individual Asia/Pacific GGM from State(s)/ International Organization(s)/Industries with the responsibility to review and update the respective Asia/Pacific GGM(s) in coordination with ICAO APAC Office whenever it becomes necessary.

2.2 For periodic review and update of the Asia/Pacific GGMs in the area of AGA in future, the following process should be followed by the Custodians and the Secretariat:

a) The Secretariat would inform to the respective custodian(s) of the Asia/Pacific GGM(s) once ICAO approved amendments to ICAO SARPs and PANS-Aerodromes (Doc 9981), revisions to Airport Services Manuals and other relevant ICAO documents that may necessitate the review and update of the GGM(s);

b) The Secretariat/Custodian(s) exchange information about newly developed States/Industries good practices relevant to Asia/Pacific GGM(s) as soon as they become aware of their availability;

c) The custodian of the respective GGM coordinates with the relevant subject matter experts of the respective Working Group/Task Force and the Secretariat to initiate the review of the GGM;

d) Once the review and revision of the GGM is completed the custodian would present the revised GGM through the Working Paper at the respective WG/TF meeting for its endorsement with a draft conclusion for adoption by the AOP/SG; and

e) After the adoption of the draft conclusion by the AOP/SG the revised GGM(s) should be uploaded by the Secretariat on the ICAO APAC Website on eDocuments Webpage under AGA heading.

Attachment A

List of GGMs developed by AP-AA/WG and approved by AOP/SG with details of the custodians

S. No	APAC Generic Guidance Materials	Edition/Version, Date	States involved in the Development of Generic Guidance Materials	Custodian (Responsible party for future review and updates)
1	Asia Pacific Regional Guidance on AIP – AD 1.5 Status of Certification of Aerodromes	Version 1.0, Dec 2020	Secretariat	**Secretariat** apac@icao.int pshakya@icao.int
2	Generic Aerodrome Certification Procedure	Version 1.0, Dec 2020	Thailand (lead) and Philippines	**Thailand** - Mr. Teeravee Yongwattanajiaranon (Ling) teeravee.y@caat.or.th
3	Generic Procedures for Accepting Non-compliance in Aerodromes	Version 1.0, Dec 2020	Nepal (lead) and Malaysia	**Nepal** - Mr. Babu Ram Paudel paudelbabu@gmail.com
4	Generic Training Programme and Training Plan for Aerodrome Inspectors	Version 1.0, 2 July 2021	India	**India** - Mr. Amit Srivastava amits.dgca@nic.in
5	Generic Aerodrome Inspector Handbook	Version 1.0, 2 July 2021	Thailand (lead) and Bangladesh	**Thailand** - Mr. Teeravee Yongwattanajiaranon (Ling) teeravee.y@caat.or.th
6	Generic Aerodrome Manual	Version 1.0, 2 July 2021	India	**India** - Mr. Sudhir Singh sudhir_singh@hotmail.com and Mr. Amit Srivastava amits.dgca@nic.in
7	Generic Aerodrome Certification Specific Operating Regulations	Version 1.0, 2 July 2021	Malaysia (lead), India and Nepal	**Malaysia** - Mr. Mahyuddin Bin Sajuri mahyuddin@caam.gov.my
8	Generic Organization Structure of the Aerodrome Regulatory Unit	Version 1.0, 2 July 2021	Malaysia (lead), India and Nepal	**Malaysia** - Mr. Mahyuddin Bin Sajuri mahyuddin@caam.gov.my
9	Generic Surveillance Programme by Aerodrome Operators	Version 1.0, 2 July 2021	Malaysia (lead), India and Nepal	**Malaysia** - Mr. Mahyuddin Bin Sajuri mahyuddin@caam.gov.my
10	Generic Surveillance Programme for Certified Aerodromes	August 2022	Malaysia (lead), India and Nepal	**Malaysia** - Mr. Mahyuddin Bin Sajuri mahyuddin@caam.gov.my

Attachment B

List of GGMs developed by AP-WHM/WG and approved by AOP/SG with details of the custodians

S. No	APAC Generic Guidance Materials	Edition/Version, Date	States involved in the Development of Generic Guidance Materials	Custodian (Responsible party for coordination for future review and updates)
1	Composition of National Wildlife Hazard Management Committee	Sep. 2019	Nepal, Bhutan, Lao PDR	**Nepal** Mr. Deo Chandra Lal Karna, d_karna@hotmail.com
2	Terms of References of National Wildlife Hazard Management Committee	Sep. 2019	Nepal, Bhutan, Lao PDR	**Nepal** Mr. Deo Chandra Lal Karna, d_karna@hotmail.com
3	Asia Pacific Guidance for Evaluation of Aerodrome Wildlife Hazard Management Programme	First Edition, 2 July 2021	WBA, Australia, Bangladesh, India, Thailand and ACI	**WBA** Ms. Lalita Vaswani lalita@worldbirdstrike.com
4	Asia Pacific Guidance for Establishment of National Procedure for Recording and Reporting Wildlife Strikes to Aircraft	First Edition, 2 July 2021	Philippines, Sri Lanka, Nepal, WBA, IFALPA	**WBA** Ms. Lalita Vaswani lalita@worldbirdstrike.com
5	Asia Pacific Guidance on Development and Implementation of Airport Wildlife Hazard Management Programme	First Edition, August 2022	Australia, Fiji, India, WBA, AAPA	**WBA** Ms. Lalita Vaswani lalita@worldbirdstrike.com

Attachment C

List of GGMs developed by AOPC/SWG and approved by AOP/SG

S. No	APAC Generic Guidance Materials	Edition/Version, Date	States involved in the Development of Generic Guidance Materials	Custodian (Responsible party for coordination for future review and updates)
1	Asia/Pacific Regional Guidance on Aerodrome Operations Personnel Competency Requirement Framework	Version 1.0 – December 2020	Bangladesh, Cambodia, China, Macao, China (Lead), Maldives, Myanmar Singapore, ACI	Mr. Pedro Cavem (Yangon International Aerodrome, Myanmar) Email: Pedro.Cavem@yangon.aero

Attachment D

List of GGMs developed by WA/SWG and approved by APANPIRG

S. No	APAC Generic Guidance Materials	Edition/Version, Date	States involved in the Development of Generic Guidance Materials	Custodian (Responsible party for coordination for future review and updates)
1	Sample APAC Regulations for Water Aerodromes	First Edition (unedited version) — March 2015	Indonesia, Maldives (Lead), Sri Lanka, New Zealand and USA	CAA Maldives Ms. Fathimath Ramiza Email: ramiza@caa.gov.mv
2	Asia Pacific Regional Guidance on Requirements for the Design and Operations of Water Aerodromes for Seaplane Operations	First Edition — January 2019	Indonesia, Maldives (Lead), Sri Lanka, New Zealand and USA	CAA Maldives Ms. Fathimath Ramiza Email: ramiza@caa.gov.mv

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