

International Civil Aviation Organization

ICAO

WORKING PAPER (WP/09)**ASIA AND PACIFIC (APAC)
THIRTIETH MEETING OF THE
METEOROLOGY SUB-GROUP (MET SG/30)**

Bangkok, Thailand, 20 - 24 July 2026

Agenda Item 4: Regional Guidance Material**PROPOSED UPDATES TO THE ROBEX HANDBOOK**

(Presented by the Secretariat)

SUMMARY

This paper presents proposed amendments for inclusion in the Twentieth Edition (July 2026) of the APAC ROBEX Handbook. The amendments arise from MET/IE WG actions and State-notified updates and include revisions to METAR and TAF bulletins, OPMET monitoring guidance and ROBEX Focal Point information. The proposed changes will improve the accuracy of ROBEX documentation and support the effective implementation of the APAC OPMET exchange system. The Meeting is invited to endorse the amendments for publication and consider any additional updates.

1. INTRODUCTION

1.1 The APAC Regional Operational Meteorological Bulletin Exchange (ROBEX) scheme supports the exchange of operational meteorological (OPMET) information within the Asia/Pacific Region and between ICAO regions.

1.2 The ROBEX Handbook provides the operational procedures, bulletin specifications and contact information necessary for the implementation of the scheme.

1.3 Several amendments originating from open and completed MET/IE WG action items, together with State-notified updates, have been identified for inclusion in the Twentieth Edition of the ROBEX Handbook (July 2026). This paper presents those amendments for review and endorsement.

2. DISCUSSION**2.1 Updates to METAR and TAF Bulletins**

2.1.1 Amendments are proposed to several METAR and TAF bulletins to reflect changes agreed by MET/IE WG/24 and updates submitted by States.

2.1.2 The proposed changes include:

- Revision of bulletin schedules and availability times for selected South Pacific bulletins;

- Reallocation of Niue and Tonga aerodromes to newly established METAR and TAF bulletins;
- Reallocation of Singapore aerodromes WSSL and WSAP to a different METAR bulletin;
- Addition of NZOH aerodrome information to New Zealand METAR and TAF bulletins;
- Updates to Thailand bulletin availability times;
- Updates to Indonesian TAF validity periods and dissemination address information; and
- Editorial correction of minor typos.

2.1.3 These amendments improve the accuracy of bulletin content and ensure the Handbook reflects current operational practices.

2.1.4 Detailed METAR and TAF Bulletin (ROBEX Handbook Table A and Table B) amendments are provided in **Appendices A and B**.

2.2 Updates to OPMET Monitoring Guidance

2.2.1 Amendments are proposed to monitoring procedures and performance-index guidance based on outcomes from MET/IE WG/22, WG/23 and WG/24.

2.2.2 The revisions:

- Clarify the use of the latest ROBEX monitoring data provided by the Secretariat;
- Improve the description of OPMET performance monitoring procedures; and
- Update performance-index specifications, including removal of obsolete references.

2.2.3 These changes will promote consistent monitoring practices and improve interpretation of OPMET performance results across the Region.

2.2.4 Detailed OPMET monitoring amendments are provided in **Appendix C**.

2.3 Updates to ROBEX Focal Point Information

2.3.1 Amendments are proposed to clarify the role and purpose of ROBEX Focal Points and the use of focal point contact information.

2.3.2 Updates have also been received for focal point information maintained by Hong Kong China, Fiji, Indonesia and Thailand.

2.3.3 Maintaining accurate focal point information supports timely coordination and effective resolution of ROBEX operational issues.

2.3.4 Detailed ROBEX Focal Point amendments are provided in **Appendix D**.

2.4 Conclusion and Recommendation

2.4.1 The proposed amendments reflect decisions and action items from MET/IE WG/24, together with updates notified by States and minor editorial corrections. These changes will ensure that the ROBEX Handbook remains accurate, current and aligned with regional operational requirements.

2.4.2 The amendments will improve the accuracy of METAR and TAF bulletin information, strengthen OPMET monitoring guidance, and maintain current ROBEX focal point information, thereby supporting the effective implementation of the APAC ROBEX scheme.

2.4.3 It is recommended that the Meeting endorse the amendments contained in Appendices A–D for incorporation into the ROBEX Handbook Twentieth Edition (July 2026). Following endorsement, the Secretariat will update and publish the revised edition of the Handbook.

2.4.4 In addition to the amendments presented in this paper, the Meeting will consider separate ROBEX Handbook amendment proposals submitted by States under Agenda Item 4. Subject to endorsement by the Meeting, all approved amendments will be consolidated by the Secretariat and incorporated into the ROBEX Handbook Twentieth Edition (July 2026).

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) endorse the amendments contained in Appendices A–D; and
- c) consider any additional amendments for incorporation in future editions of the ROBEX Handbook.

— END OF SECTION —

MET SG/30
Appendix A to WP/09

APPENDIX A
Updates to METAR Bulletins

Basis for amendment: MET/IE WG/24 Action Items 24-02, 24-05, 24-15 and 24-16, updates notified by Thailand, and editorial corrections (VABYPYX).

(Note: Proposed updates are indicated with ~~strike through~~ and **highlighted text**)

Table A: Collection and Dissemination of METAR (SA) Bulletins									
1		2			3	4	5		
ROC		METAR Bulletin			Bul. Time	Available	DISSEMINATION TO		
Name	CCCC	BUL No.	CCCC	Aerodrome			RODB/ROC	AFTN Address	
ASIA/PAC REGION									
Bangkok	VTBB	SAAE31	VTBD	BANGKOK/Don Mueang Intl Airport	HH+00/30		BANGKOK	VTBBYPYX	
			VTBS	BANGKOK/Suvarnabhumi Intl Airport	HH+00/30		BRISBANE	YBBBYPYX	
			VTBU	RAYONG/U-Taphao Intl Airport	HH+00/30		NADI	NFFNYPYX	
			VTCC	CHIANG MAI/Chiang Mai Intl. Airport	HH+00/30		SINGAPORE	WSZZYPYM	
			VTSP	PHUKET/Phuket Intl Airport	HH+00/30		TOKYO	RJTDYPYX	
			VTSS	SONGKHLA/Hat Yai Intl Airport	HH+00/30		Beijing	ZBBBYPYX	
							Colombo	VCCCYPYX	
							Delhi	VIDPYPYX	
							Hong Kong	VHZZYPYX	
							Incheon	RKSIYPYX	
					Jakarta	WIIIIYMYX WIZZMCMC			
					Kolkata	VECCYPYX			
					Kuala Lumpur	WMZZYPYR			
					Mumbai	VABBYPYX			
			SAAE32	VDPP	PHNOM PENH	HH+00/30		BANGKOK	VTBBYPYX
		VDSA		SIEM REAP ANGKOR	HH+00/30	BRISBANE		YBBBYPYX	
		VDSV		SIHANOUK	HH+00/30	NADI		NFFNYPYX	
		VDTI		TECHO INTERNATIONAL	HH+00/30	SINGAPORE		WSZZYPYM	
		VLVT		VIENTIANE (Wattay)	HH+00/30	TOKYO		RJTDYPYX	
		VYMD		MANDALAY INTERNATIONAL	HH+00/30	Beijing		ZBBBYPYX	
		VYNT		NAYPYITAW INTERNATIONAL	HH+00/30	Colombo		VCCCYPYX	
		VYYY		YANGON INTERNATIONAL	HH+00/30	Delhi		VIDPYPYX	
						Hong Kong		VHZZYPYX	
						Incheon		RKSIYPYX	
					Jakarta	WIIIIYMYX WIZZMCMC			
					Kolkata	VECCYPYX			
					Kuala Lumpur	WMZZYPYR			
					Mumbai	VABBYPYX VABYPYX			
									
			SAAE34	VVCI	CAT BI	HH+00/30		BANGKOK	VTBBYPYX
		VVCR		KHANH HOA/Cam Ranh	HH+00/30	NADI		NFFNYPYX	
		VVCT		CAN THO	HH+00/30	BRISBANE		YBBBYPYX	
VVDN	DA NANG	HH+00/30		SINGAPORE	WSZZYPYM				
VVNB	HA NOI/Noi bai	HH+00/30		TOKYO	RJTDYPYX				
VVPB	HUE/Phu Bai	HH+00/30		Beijing	ZBBBYPYX				
VVPQ	KIEN GIANG/Phu Quoc	HH+00/30		Colombo	VCCCYPYX				
VVTS	HO CHI MINH/Tan Son Nhat	HH+00/30		Delhi	VIDPYPYX				
VVVD	Van Don Int'l	HH+00/30		Hong Kong	VHZZYPYX				
			Incheon	RKSIYPYX					
			Jakarta	WIIIIYMYX WIZZMCMC					

MET SG/30
Appendix A to WP/09

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1		2			3	4	5	
ROC		METAR Bulletin			Bul. Time	Available	DISSEMINATION TO	
Name	CCCC	BUL No.	CCCC	Aerodrome			RODB/ROC	AFTN Address
		SATH31	VTBO	TRAT/Khao Sming	HH+00	2200-1100	Kolkata	VECCYPYX
			VTCH	MAE HONG SON	HH+00	0000-1100	Kuala Lumpur	WMZZYPYR
			VTCL	LAMPANG	HH+00	2300-1300	Mumbai	VABBPYX VABYPYX
			VTCL	NAN	HH+00	2200-1300	BANGKOK	VTBBYPYX
			VTCP	PHRAE	HH+00	0000-1000	BRISBANE	YBBBYPYX
			VTCT	CHIANG RAI/Chiang Rai Intl Airport	HH+00		NADI	NFFNYPYX
			VTPB	PHETCHABUN	HH+00	0000-1000	SINGAPORE	WSZZPYM
			VTPH	PRACHUAP KHIRI KHAN/Hua Hin	HH+00	2200-1100	TOKYO	RJTDYPYX
			VTPM	TAK/Mae Sot	HH+00	0000-1100	Beijing	ZBBBYPYX
			VTPO	SUKHOTHAI	HH+00	2200-1100		
			VTTP	PHITSANULOK	HH+00	222300-1300		
		SATH32	VTSE	CHUMPHON/Tab Gai	HH+00	2300-1100	BANGKOK	VTBBYPYX
			VTSE	NAKHON SI THAMMARAT	HH+00	2200-1500	BRISBANE	YBBBYPYX
			VTSG	KRABI	HH+00		NADI	NFFNYPYX
			VTSM	SURAT THANI/Samui	HH+00	2200-1500	SINGAPORE	WSZZPYM
			VTSR	RANONG	HH+00	232200-1100	TOKYO	RJTDYPYX
			VTST	TRANG	HH+00	2200-1300	Beijing	ZBBBYPYX
			VTST	TRANG	HH+00	2200-1300		
			VTST	TRANG	HH+00	0000-1000		
		SATH33	VTUD	UDON THANI	HH+00	2200-1500	BANGKOK	VTBBYPYX
			VTUI	SAKON NAKHON/Ban Khai	HH+00	2200-1100	BRISBANE	YBBBYPYX
			VTUK	KHON KAEN	HH+00		NADI	NFFNYPYX
			VTUL	LOEI	HH+00	2200-1200	SINGAPORE	WSZZPYM
			VTUO	BURI RAM	HH+00	2200-114300	TOKYO	RJTDYPYX
			VTUQ	NAKHON RATCHASIMA	HH+00	2200-1400	Beijing	ZBBBYPYX
			VTUU	UBON RATCHATHANI	HH+00			
			VTUV	ROI ET	HH+00	2200-1400		
			VTUW	NAKHON PHANOM	HH+00	2200-1400		
Beijing	ZBBB	SACI31	ZBAA	BEIJING/Capital	HH+00/30		BANGKOK	VTBBYPYX
			ZBAD	BEIJING/Daxing	HH+00/30		BRISBANE	YBBBYPYX
			ZBTJ	TIANJIN/Binhai	HH+00/30		NADI	NFFNYPYX
			ZBYN	TAIYUAN/Wusu	HH+00/30		SINGAPORE	WSZZPYM
			ZGGG	GUANGZHOU/Baiyun	HH+00/30		TOKYO	RJTDYPYX
			ZMCK	ULAANBAATAR/Chinggis Khaan	HH+00/30		Hong Kong	VHZZYPYX
			ZSHC	HANGZHOU/Xiaoshan	HH+00/30		Jakarta	WIIIMYX WIZMZBB
			ZSPD	SHANGHAI/Pudong	HH+00/30		Karachi	OPZZYPYX
			ZSSS	SHANGHAI/Hongqiao	HH+00/30		Mumbai	VABBPYX
			ZWWW	URUMQI/Diwopu	HH+00/30		Incheon	RKSIYPYX
			ZYTL	DALIAN/Zhoushuizi	HH+00/30		Ulaanbaatar	ZMUBMYX
			ZYTX	SHENYANG/Taoxian	HH+00/30			
		SACI32	ZGKL	GUILIN/Liangjiang	HH+00		BANGKOK	VTBBYPYX
			ZGNN	NANNING/Wuxu	HH+00		BRISBANE	YBBBYPYX
			ZGOW	SHANTOU/Waisha	HH+00		NADI	NFFNYPYX
			ZGSZ	SHENZHEN/Baoan	HH+00		SINGAPORE	WSZZPYM
			ZLXY	XI'AN/Xianyang	HH+00		TOKYO	RJTDYPYX
			ZMUB	ULAANBAATAR / Buyant-Ukhaa	HH+00		Hong Kong	VHZZYPYX
			ZPPP	KUNMING/Wujiaba	HH+00		Jakarta	WIIIMYX

MET SG/30
Appendix A to WP/09

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ROC		METAR Bulletin			Bul. Time	Available	DISSEMINATION TO	
Name	CCCC	BUL No.	CCCC	Aerodrome			RODB/ROC	AFTN Address
			ZSAM	XIAMEN/Gaoqi	HH+00		Kuala Lumpur	WZZMZZBB
			ZSFZ	FUZHOU/Changle	HH+00		Incheon	WMZZYPYX
			ZSNB	NINGBO/Lishe	HH+00		Wellington	RKSIYPYX
			ZSQD	QINGDAO/Liuting	HH+00			NZZZYPYX
			ZUUU	CHENGDU/Shuangliu	HH+00			
			ZUTF	CHENGDU/Tianfu	HH+00			
			ZBSJ	SHIJIAZHUANG/Zhengding	HH+00			
			ZWSH	KASHI/Kashi	HH+00			
		SACI41	ZBHH	HOHHOT/Baita	HH+00		BANGKOK	VTBBYPYX
			ZGHA	CHANGSHA/Huanghua	HH+00		BRISBANE	YBBBYPYX
			ZHCC	ZHENGZHOU/Xinzheng	HH+00		NADI	NFFNYPYX
			ZHHH	WUHAN/Tianhe	HH+00		SINGAPORE	WSZZYPYM
			ZJHK	HAIKOU/Meilan	HH+00		TOKYO	RJTDYPYX
			ZJSY	SANYA/Phoenix	HH+00		Hong Kong	VHZZYPYX
			ZLLL	LANZHOU/Zhongchuan	HH+00		Jakarta	WIIIMYX WZZMZZBB
			ZSNJ	NANJING/Lukou	HH+00		Karachi	OPZZYPYX
			ZSOF	HEFEI/Luogang	HH+00		Mumbai	VABBYPYX
			ZUCK	CHONGQING/Jiangbei	HH+00		Incheon	RKSIYPYX
			ZYCC	CHANGCHUN/Longjia	HH+00		Ulaanbaatar	ZMUBMYX
			ZYHB	HARBIN/Taiping	HH+00		Wellington	NZZZYPYX
Brisbane	YBBN	SAAU31	YPAD	ADELAIDE/Adelaide Intl	HH+00/30		BANGKOK	VTBBYPYX
			YBBN	BRISBANE/Brisbane Intl	HH+00/30		BRISBANE	YBBBYPYX
			YBCS	CAIRNS/Cairns Intl	HH+00/30		NADI	NFFNYPYX
			YSCB	CANBERRA	HH+00/30		SINGAPORE	WSZZYPYX
			YPDN	DARWIN/Darwin Intl	HH+00/30		TOKYO	RJTDYPYX
			YBCG	GOLD COAST	HH+00/30		Beijing	ZBBBYPYX
			YMHB	HOBART	HH+00/30		Hong Kong	VHZZYPYX
			YMML	MELBOURNE/Melbourne Intl	HH+00/30		Incheon	RKSIYPYS
			YPPH	PERTH/Perth Intl	HH+00/30		Jakarta	WIIIMYX WZZZYPYX
			YSSY	SYDNEY/Sydney (Kingsford Smith) Intl	HH+00/30		Manila	RPLLYPYX
							Mumbai	VABBYPYX
							Wellington	NZZZYPYX
		SAAU32	YBAS	ALICE SPRINGS	HH+00/30		BANGKOK	VTBBYPYX
			YMAV	AVALON	HH+00/30		BRISBANE	YBBBYPYX
			YBWW	Brisbane West Wellcamp	HH+00/30		NADI	NFFNYPYX
			YBRM	BROOME/Broome Intl	HH+00/30		SINGAPORE	WSZZYPYX
			YBLN	Busselton	HH+00/30		TOKYO	RJTDYPYX
			YPXM	CHRISTMAS ISLAND	HH+00/30		Beijing	ZBBBYPYX
			YPCC	COCOS (KEELING) ISLAND Intl	HH+00/30		Hong Kong	VHZZYPYX
			YCFS	COFFS HARBOUR	HH+00/30		Incheon	RKSIYPYS
			YPKG	KALGOORLIE-BOULDER	HH+00/30		Jakarta	WIIIMYX WZZZYPYX
			YMLT	LAUNCESTON	HH+00/30		Manila	RPLLYPYX
			YPLM	LEARMONTH	HH+00/30		Mumbai	VABBYPYX
			YLHI	LORD HOWE ISLAND	HH+00/30		Wellington	NZZZYPYX
			YSNF	NORFOLK ISLAND Intl	HH+00/30			
			YPPD	PORT HEDLAND	HH+00/30			
			YBRK	ROCKHAMPTON	HH+00/30			
			YBSU	SUNSHINE COAST AIRPORT	HH+00/30			
		SAAU33	YGEL	GERALDTON	HH+00/30		BANGKOK	VTBBYPYX
			YGLA	GLADSTONE	HH+00/30		BRISBANE	YBBBYPYX

MET SG/30
Appendix A to WP/09

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1		2			3	4	5	
ROC		METAR Bulletin			Bul. Time	Available	DISSEMINATION TO	
Name	CCCC	BUL No.	CCCC	Aerodrome			RODB/ROC	AFTN Address
			YHID	HORN ISLAND	HH+00/30		NADI	NFFNYPYX
			YPJT	PERTH/Jandakot	HH+00/30		SINGAPORE	WSZZYPYX
			YPWR	WOOMERA	HH+00/30		TOKYO	RJTDYPYX
			YSDU	DUBBO	HH+00/30		Beijing	ZBBBYPYX
			YSRI	RICHMOND, NSW	HH+00/30		Hong Kong	VHZZYPYX
			YSTW	TAMWORTH	HH+00/30		Incheon	RKSIYPYS
							Jakarta	WIIIIYMYX
							Manila	WZZZYPYX
							Mumbai	RPLLYPYX
							Wellington	VABBYPYX
								NZZZYPYX
		SAAU34	YBHM	HAMILTON ISLAND	HH+00/30		BANGKOK	VTBBYPYX
			YBMA	MOUNT ISA	HH+00/30		BRISBANE	YBBBYPYX
							NADI	NFFNYPYX
							SINGAPORE	WSZZYPYX
							TOKYO	RJTDYPYX
							Hong Kong	VHZZYPYX
							Incheon	RKSIYPYS
							Jakarta	WIIIIYMYX
							Wellington	WZZZYPYX
								NZZZYPYX
		SAAU35	YCIN	CURTIN	HH+00/30		BANGKOK	VTBBYPYX
			YFRT	FORREST	HH+00/30		BRISBANE	YBBBYPYX
			YPKU	KUNUNURRA	HH+00/30		NADI	NFFNYPYX
			YPGV	GOVE	HH+00/30		SINGAPORE	WSZZYPYX
							TOKYO	RJTDYPYX
							Hong Kong	VHZZYPYX
							Incheon	RKSIYPYS
							Jakarta	WIIIIYMYX
							Wellington	WZZZYPYX
								NZZZYPYX
		SAAU36	YAMB	AMBERLEY	HH+00/30		BANGKOK	VTBBYPYX
			YPEA	PEARCE	HH+00/30		BRISBANE	YBBBYPYX
			YPTN	TINDAL	HH+00/30		NADI	NFFNYPYX
			YBTL	TOWNSVILLE/Townsville Intl	HH+00/30		SINGAPORE	WSZZYPYX
			YWLM	WILLIAMTOWN	HH+00/30		TOKYO	RJTDYPYX
							Beijing	ZBBBYPYX
							Hong Kong	VHZZYPYX
							Incheon	RKSIYPYS
							Jakarta	WIIIIYMYX
							Manila	WZZZYPYX
							Mumbai	RPLLYPYX
							Wellington	VABBYPYX
								NZZZYPYX
		SATM31	WPDL	DILI/Presidente Nicolau Lobato Intl	HH+00/30		BANGKOK	VTBBYPYX
			WPDB	Lobato Intl SUAI//Commander-in-Chief of the FALINTIL – Kay Rala Xanana Gusmão Intl	HH+00/30		BRISBANE	YBBBYPYX
							NADI	NFFNYPYX
							SINGAPORE	WSZZYPYX
							TOKYO	RJTDYPYX
							Beijing	ZBBBYPYX
							Hong Kong	VHZZYPYX
							Incheon	RKSIYPYS
							Jakarta	WIIIIYMYX
							Manila	WZZZYPYX
								RPLLYPYX

MET SG/30
Appendix A to WP/09

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1		2			3	4	5	
ROC		METAR Bulletin			Bul. Time	Available	DISSEMINATION TO	
Name	CCCC	BUL No.	CCCC	Aerodrome			RODB/ROC	AFTN Address
							Mumbai Wellington	VABBYPYX NZZZYPYX
		SANG31	AYPY	PORT MORESBY Intl	HH+00	NR	BANGKOK	VTBBYPYX
			AYWK	WEWAK	HH+00		BRISBANE	YBBBYPYX
			AYVN	VANIMO	HH+00		NADI	NFFNYPYX
			AYNZ	NADZAB	HH+00		SINGAPORE	WSZZPYM
			AYMH	MOUNT HAGEN	HH+00		TOKYO	RJTDYPYX
			AYGN	GURNEY	HH+00		Beijing	ZBBBYPYX
			AYMO	MOMOTE	HH+00		Hong Kong	VHZZYPYX
			ANYN	NAURU I.	HH+00		Jakarta	WIIIIYMYX WIZZMIMI
			AGGH	HONIARA (ENDERSON)	HH+00		Wellington	NZZZYPYX
....								
Kuala Lumpur	WMKK	SAMS31	WBGG	KUCHING/Intl	HH+00/30		BANGKOK	VTBBYPYX
			WBKK	KOTA KINABALU/Intl	HH+00/30		BRISBANE	YBBBYPYX
			WBSB	BRUNEI/Intl	HH+00/30		NADI	NFFNYPYX
			WMKK	SEPANG/KL International Airport	HH+00/30		SINGAPORE	WSZZPYM
			WMKP	PENANG/Intl	HH+00/30		TOKYO	RJTDYPYX
			WSSS	SINGAPORE/Changi	HH+00/30		Beijing	ZBBBYPYX
			WSSL	SELETAR	HH+00/30		Colombo	VCCCYPYX
			WMSA	SUBANG/Sultan Abdul Aziz Shah	HH+00/30		Hong Kong	VHZZYPYX WIIIIYMYX
			WSAP	PAYA LEBAR	HH+00/30		Jakarta	WIZZMBMB
							Manila	RPLLYPYX
		SAMS38	WBGB	BINTULU	HH+00		BANGKOK	VTBBYPYX
			WBGR	MIRI	HH+00		BRISBANE	YBBBYPYX
			WBGS	SIBU	HH+00		NADI	NFFNYPYX
			WBKL	LABUAN	HH+00		SINGAPORE	WSZZPYM
			WBKS	SANDAKAN	HH+00		TOKYO	RJTDYPYX
			WBKW	TAWAU	HH+00		Beijing	ZBBBYPYX
			WMKD	KUANTAN	HH+00		Colombo	VCCCYPYX
			WMKL	PULAU LANGKAWI/Intl	HH+00		Hong Kong	VHZZYPYX
			WMKM	MALACCA	HH+00		Jakarta	WIIIIYMYX WIZZMBMB
			WMKJ	JOHOR BAHRU/Sultan Ismail	HH+00		Manila	RPLLYPYX
WSSL	SELETAR	HH+00	Mumbai	VABBYPYX				
WSAP	PAYA LEBAR	HH+00	Incheon	RKSIYPYX				
			Wellington	NZZZYPYX				
....								
Nadi	NFFN	SAPS31	NCRG	RAROTONGA Intl.	HH+00		BANGKOK	VTBBYPYX
			NFFN	NADI/Intl	HH+00		BRISBANE	YBBBYPYX
			NFNA	NAUSORI/Intl	HH+00		NADI	NFFNYPYX
			NFTF	FUA'AMOTU INTL.	HH+00		SINGAPORE	WSZZPYM
			NFTV	VAVA'U	HH+00		TOKYO	RJTDYPYX
			NGFU	FUNAFUTI/Intl	HH+00		Wellington	NZZZYPYX
			NGTA	TARAWA/Bonriki Intl	HH+00			
			NIUE	NIUE Intl	HH+00			
			NSFA	FALEOLO/Intl	HH+00			
			NVSS	SANTO/Pekoa	HH+00			
			NVVV	PORT VILA/Bauerfield	HH+00			
			PLCH	CHRISTMAS ISLAND	HH+00			

MET SG/30
Appendix A to WP/09

Table A: Collection and Dissemination of METAR (SA) Bulletins								
1		2			3	4	5	
ROC		METAR Bulletin			Bul. Time	Available	DISSEMINATION TO	
Name	CCCC	BUL No.	CCCC	Aerodrome			RODB/ROC	AFTN Address
			NFTL	HA'APAI	HH+00	0000-0600, 1200-2300 Monday- Saturday: 0000-0600, 1200, 1700-2300 Sunday: 0000, 0300, 0600, 1200, 1800, 2100		
		SAPS32	NLWW NWWW	WALLIS HIIHFO NOUMEA LA TANTOUTA	HH+00/30 HH+00/30			
		SAPS33	NTAA	TAHITI FAAA	HH+00/30			
		SAPS34	NIUE	NIUE Intl	HH+00/30			
		SAPS35	NFTV	VAVA'U	HH+00			
		SAPS36	NFTL	HA'APAI	HH+00			
....								
Wellington	NZKL						BANGKOK	VTBBYPYX
		SANZ33	NZOH	OHAKA	HH+00/30		BRISBANE NADI SINGAPORE TOKYO Beijing Hong Kong Incheon Jakarta	YBBBYPYX NFFNYPYX WSZZPYM RJTDYPYX ZBBBYPYX VHZZYPYX RKSIPYX WIIIMYX WIZZYPYX

— END OF SECTION —

MET SG/30
Appendix B to WP/09

APPENDIX B
Updates to TAF Bulletins

Basis for amendment: MET/IE WG/24 Action Items 24-02, 24-15 and 24-16, and editorial corrections (HUHHOT/, NAUSOR/).

(Note: Proposed updates are indicated with ~~strike through~~ and **highlighted text**)

Table B: Collection and Dissemination of TAF (FT) Bulletins									
1 ROC		2 TAF Bulletin						3 Dissemination	
Name	CCCC	BUL No.	CCCC	Aerodrome	Filing time	Start of validity	TAF validity	RODB/ROC	AFTN address
ASIA/PAC REGION									
....									
Beijing	ZBBB								
		FTCI32	ZGKL	GUILIN/Lianjiang	0535	0600	24	BANGKOK	VTBBYPYX
			ZGNN	NANNING/Wuxu	1135	1200	24	BRISBANE	YBBBYPYX
			ZGOW	SHANTOU /Waisha	1735	1800	24	NADI	NFFNYPYX
			ZGSZ	SHENZHEN/Baoan	2335	0000	24 (30)	SINGAPORE	WSZZYPYX
			ZLXY	XI'AN/Xianyang			24	TOKYO	RJTDYPYX
			ZMUB	ULAANBAATAR/Buyant-Ukhaa			30	Hong Kong	VHZZYPYX
			ZPPP	KUNMING/Wujiaba			24 (30)	Jakarta	WIIIMYX WIZZYPYX
			ZSAM	XIAMEN/Gaoqi			24	Karachi	OPZZYPYX
			ZSFZ	FUZHOU/Changle			24	Kuala Lumpur	WMZZYPYR
			ZSNB	NINGBO /Lishe			24	Mumbai	VABBPYX
			ZSQD	QINGDAO/Liuting			24	Wellington	NZZZYPYX
			ZUUU	CHENGDU/Shuangliu			24		
			ZUTF	CHENGDU /Tianfu			24		
			ZBSJ	SHIJIAZHUANG /Zhengding			24		
			ZWSH	KASHI/Kashi			24 (30)		
		FTCI41	ZBHH	HOHHOT HUHHOT/Baita	0535	0600	24	BANGKOK	VTBBYPYX
			ZGHA	CHANGSHA/Huanghua	1135	1200	24	BRISBANE	YBBBYPYX
			ZHCC	ZHENGZHOU /Xinzheng	1735	1800	24	NADI	NFFNYPYX
			ZHHH	WUHAN/Tianhe	2335	0000	24	SINGAPORE	WSZZYPYX
			ZJHK	HAIKOU /Meilan			24 (30)	TOKYO	RJTDYPYX
			ZJSY	SANYA/Phoenix			24	Hong Kong	VHZZYPYX
			ZLLL	LANZHOU/Zhongchuan			24	Jakarta	WIIIMYX WIZZYPYX
			ZSNJ	NANJING/Lukou			24	Karachi	OPZZYPYX
			ZSOF	HEFEI/Luogang			24	Mumbai	VABBPYX
			ZUCK	CHONGQING/Jiangbei			24	Incheon	RKSIYPYX
			ZYCC	CHANGCHUN /Longjia			24	Ulan Bator	ZMUBYPYX
			ZYHB	HARBIN/Taiping			24	Wellington	NZZZYPYX
Brisbane	YBBN	FTAU31	YPAD	ADELAIDE/Adelaide Intl	0235	0300	30	BANGKOK	VTBBYPYX
			YBBN	BRISBANE/Brisbane Intl	0535	0600	30	BRISBANE	YBBBYPYX
			YBCS	CAIRNS/Cairns Intl	0835	0900	24	NADI	NFFNYPYX
			YSCB	CANBERRA	1135	1200	24	SINGAPORE	WSZZYPYX
			YPDN	DARWIN/Darwin Intl	1435	1500	30	TOKYO	RJTDYPYX
			YBCG	GOLD COAST	1735	1800	24	Beijing	ZBBBYPYX
			YMHB	HOBART	2035	2100	24	Hong Kong	VHZZYPYX
			YMML	MELBOURNE/Melbourne Intl	2335	0000	30	Jakarta	WIIIMYX WIZZYPYX
			YPPH	PERTH/Perth Intl			30	Manila	RPLLYPYX
			YSSY	SYDNEY/Sydney (Kingsford Smith) Intl			30	Mumbai	VABBPYX
								Wellington	NZZZYPYX
		FTAU32	YBAS	ALICE SPRINGS	0535	0600	24	BANGKOK	VTBBYPYX

MET SG/30
Appendix B to WP/09

Table B: Collection and Dissemination of TAF (FT) Bulletins									
1 ROC		2 TAF Bulletin						3 Dissemination	
Name	CCCC	BUL No.	CCCC	Aerodrome	Filing time	Start of validity	TAF validity	RODB/ROC	AFTN address
			YMAV	AVALON	1135	1200	24	BRISBANE	YBBBYPYX
			YBWW	Brisbane West Wellcamp	1735	1800	24	NADI	NFFNYPYX
			YBRM	BROOME/Broome Intl	2335	0000	24	SINGAPORE	WSZZYPYX
			YBLN	Busselton			24	TOKYO	RJTDYPYX
			YPXM	CHRISTMAS ISLAND			24	Beijing	ZBBBYPYX
			YPCC	COCOS (KEELING) ISLAND Intl			24	Hong Kong	VHZZYPYX
			YCFS	COFFS HARBOUR			24	Jakarta	WIIIIIMYX WZZZYPYX
			YPKG	KALGOORLIE-BOULDER			24	Manila	RPLLYPYX
			YMLT	LAUNCESTON			24	Mumbai	VABBPYX
			YPLM	LEARMONTH			24	Wellington	NZZZYPYX
			YLHI	LORD HOWE ISLAND			24		
			YSNF	NORFOLK ISLAND Intl			24		
			YPPD	PORT HEDLAND			24		
			YBRK	ROCKHAMPTON			24		
			YBSU	SUNSHINE COAST AIRPORT			24		
		FTAU33	YSDU	DUBBO	0535	0600	18	BANGKOK	VTBBYPYX
			YGEL	GERALDTON	1135	1200	18	BRISBANE	YBBBYPYX
			YGLA	GLADSTONE	1735	1800	18	NADI	NFFNYPYX
			YHID	HORN ISLAND	2335	0000	18	SINGAPORE	WSZZYPYX
			YPJT	PERTH/Jandakot			18	TOKYO	RJTDYPYX
			YSRI	RICHMOND, NSW			18	Beijing	ZBBBYPYX
			YSTW	TAMWORTH			18	Hong Kong	VHZZYPYX
			YPWR	WOOMERA			18	Jakarta	WIIIIIMYX WZZZYPYX
								Manila	RPLLYPYX
								Mumbai	VABBPYX
								Wellington	NZZZYPYX
		FTAU34	YBHM	HAMILTON ISLAND	0500	0600	12	BANGKOK	VTBBYPYX
			YBMA	MOUNT ISA	1100	1200	12	BRISBANE	YBBBYPYX
					1700	1800		NADI	NFFNYPYX
					2300	0000		SINGAPORE	WSZZYPYX
								TOKYO	RJTDYPYX
								Beijing	ZBBBYPYX
								Hong Kong	VHZZYPYX
								Jakarta	WIIIIIMYX WZZZYPYX
								Manila	RPLLYPYX
								Mumbai	VABBPYX
								Wellington	NZZZYPYX
		FTAU35	YCIN	CURTIN	0100	0200	12	BANGKOK	VTBBYPYX
			YFRT	FORREST	0700	0800	12	BRISBANE	YBBBYPYX
			YPGV	GOVE	1300	1400	12	NADI	NFFNYPYX
			YPKU	KUNUNURRA	1900	2000	12	SINGAPORE	WSZZYPYX
								TOKYO	RJTDYPYX
								Beijing	ZBBBYPYX
								Hong Kong	VHZZYPYX
								Jakarta	WIIIIIMYX WZZZYPYX
								Manila	RPLLYPYX
								Mumbai	VABBPYX
								Wellington	NZZZYPYX
		FTAU36	YAMB	AMBERLEY	0235 (M-F)	0300 (M-F)	24	BANGKOK	VTBBYPYX
			YPEA	PEARCE	0535	0600	18	BRISBANE	YBBBYPYX
			YPTN	TINDAL	1135	1200	24	NADI	NFFNYPYX
			YBTL	TOWNSVILLE/Townsville Intl	1735	1800	24	SINGAPORE	WSZZYPYX

MET SG/30
Appendix B to WP/09

Table B: Collection and Dissemination of TAF (FT) Bulletins									
1 ROC		2 TAF Bulletin						3 Dissemination	
Name	CCCC	BUL No.	CCCC	Aerodrome	Filing time	Start of validity	TAF validity	RODB/ROC	AFTN address
			YWLM	WILLIAMTOWN	2035 (M-F) 2335	2100 (M-F) 0000	24	TOKYO	RJTDYPYX
								Beijing	ZBBBYPYX
								Hong Kong	VHZZYPYX
								Jakarta	WIIIMYX
								Manila	RPLLYPYX
								Mumbai	VABBPYX
								Wellington	NZZZYPYX
		FTTM31	WPDL	DILI/Presidente Nicolau Lobato Intl	0535	0600	12	BANGKOK	VTBBYPYX
								BRISBANE	YBBBYPYX
			WPDB	Lobato Intl SUAI/Commander-in-Chief of the FALINTIL – Kay Rala Xanana Gusmão Intl	1135 1735 2335	1200 1800 0000	12	NADI	NFFNYPYX
								SINGAPORE	WSZZYPYX
								TOKYO	RJTDYPYX
								Beijing	ZBBBYPYX
								Hong Kong	VHZZYPYX
								Jakarta	WIIIMYX
								Manila	RPLLYPYX
								Mumbai	VABBPYX
								Wellington	NZZZYPYX
		FTNG31	AYPY AYWK AYVN AYNZ AYMH AYMO ANYN AGGH	PORT MORESBY Intl WEWAK VANIMO NADZAB MOUNT HAGEN MOMOTE NAURU I. HONIARA (ENDERSON)	0535 1135 1735 2335	0600 1200 1800 0000	24 24 24 24 24 24 24 24	BANGKOK	VTBBYPYX
								BRISBANE	YBBBYPYX
								NADI	NFFNYPYX
								SINGAPORE	WSZZYPYX
								TOKYO	RJTDYPYX
								Beijing	ZBBBYPYX
								Hong Kong	VHZZYPYX
								Jakarta	WIIIMYX
								Manila	RPLLYPYX
								Mumbai	VABBPYX
								Wellington	NZZZYPYX
....									
Nadi	NFFN	FTPS31	NCRG	RAROTONGA INTL.	0535 1135 1735 2335	0600 1200 1800 0000	24 24 24 24 24 24 24 24 24 24	BANGKOK	VTBBYPYX
			NFFN	NADI/Intl				BRISBANE	YBBBYPYX
			NFTF	FUA'AMOTU INTL.				NADI	NFFNYPYX
			NFTV	VAVA'U				SINGAPORE	WSZZYPYX
			NGFU	FUNAFUTI/Intl				TOKYO	RJTDYPYX
			NGTA	TARAWA/Bonriki Intl				Hong Kong	VHZZYPYX
			NIUE	NIUE Intl				Wellington	NZZZYPYX
			NVSS	SANTO/Pekoa					
			NVVV	PORT VILA/Bauerfield					
			PLCH	CHRISTMAS ISLAND					
			NFNA	NAUSORI/Intl					
			NSFA	FALEOLO/Intl					
		FTPS32	NLWW	WALLIS HIHIFO			24		
			NWWW	NOUMEA LA TANTOUTA					
		FTPS33	NTAA	TAHITI FAAA			30 24		
		FTPS34	NIUE	NIUE Intl			24		
Singapore	WSSS	FTSR31	WSSS	SINGAPORE/Changi	0535 1135 1735 2335	0600 1200 1800 0000	30 30 30 30	BANGKOK	VTBBYPYX
			WSAP	PAYA LEBAR				BRISBANE	YBBBYPYX
			WSSL	SELETAR				NADI	NFFNYPYX
			WAAA	MAKASSAR-/Sultan Hasanuddin				SINGAPORE	WSZZYPYX

MET SG/30
Appendix B to WP/09

Table B: Collection and Dissemination of TAF (FT) Bulletins									
1 ROC		2 TAF Bulletin						3 Dissemination	
Name	CCCC	BUL No.	CCCC	Aerodrome	Filing time	Start of validity	TAF validity	RODB/ROC	AFTN address
			WABB	BIAK/Frans Kaisiepo			24 30	TOKYO	RJTDYPYX
			WADD	BALI/I Gusti Ngurah Rai			24 (30)	Abu Dhabi	OMZZYPYX
			WARR	SURABAYA/Juanda			30 24	Bahrain	OBZZYPYX
			WIHH	JAKARTA/Halimperdana Kusuma			24	Beijing	ZBBBYPYX
			WIII	JAKARTA/Soekarno Hatta (COMM CENTER)			30	Beirut	OLLLYPYX
			WIMM	MEDAN/Kualanamu			24	Colombo	VCCCYPYX
								Hong Kong	VHZZYPYX
								Karachi	OPZZYPYX
								Manila	RPLLYPYX
								Mumbai	VABBYPYX
								Incheon	RKSIYPYX
								Tehran	OIIIIYPYX
								Wellington	NZZZYPYX
									
....									
Wellington	NZKL						24	BANGKOK	VTBBYPYX
		FTNZ33	NZOH	OHAKEA				BRISBANE	YBBBYPYX
								NADI	NFFNYPYX
								SINGAPORE	WSZZYPYX
								TOKYO	RJTDYPYX
								Beijing	ZBBBYPYX
								Hong Kong	VHZZYPYX

— END OF SECTION —

APPENDIX C

Updates to OPMET Monitoring Guidance

Basis for amendment: MET/IE WG/24 Action Items 24-13 and 24-14, MET/IE WG/23 Action Item 23-10 and MET/IE WG/22 Action Item 22-03.

(Note: Proposed updates are indicated with ~~strike through~~ and **highlighted text**)

13.3. OPMET Monitoring

13.3.1 Monitoring of Scheduled OPMET data

....

13.3.1.2 Monitoring Reference: The monitoring shall involve the recording and analysis of data provided by the AFTN/AMHS circuit. The two PIs should be monitored against the respective ROBEX Tables **by obtaining the latest ROBEX data provided by the Secretariat.**

....

APPENDIX F — OPMET Quality Control and Monitoring Procedures

....

2 OPMET Monitoring

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2.2.1 Definitions

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ICAO APAC OPMET Performance Indices:

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– METAR Timeliness = on average 95% ANP required and available METAR observation reports (not including SPECI and missing METAR observation reports; no NIL, ~~no AMD observations~~; including COR observations) is received **within 5 minutes before the observation time and maximum 6 minutes + 10 minutes** after the observation time (MM observation time(s) from the YYGGgg-Group in the bulletin Abbreviated Header = DDHHMM based on monitoring): ~~$RX-Time \leq HH:(MM + 6')$ and $HH:(MM - 5') \leq RX-Time \leq HH:(MM + 10')$~~ .

....

– TAF Timeliness = on average 95% ANP required and available TAF (excluding NIL, **missing TAF reports** and TAF reports with BBB = AMD; inclusive BBB = COR reports) is received within 60 minutes before the start period of validity of TAF (TAF validity period = GGGG based on monitoring): $(GGGG - 60') \leq RX-Time \leq (GGGG + 0')$

....

....
2.2.2.4.3 The aerodrome OPMET Performance (re-)considers the operational hours on a daily basis.

....

– ANP Aerodrome METAR Timeliness: RXTime and/or Obs
 $\Delta t = HHMM$ in the observation Report-Date-Time Group – RXTime (HH:MM:SS).

An aerodrome METAR received earlier than 5 minutes before the HHMM from the Group (DDHHMM) - YYGGgg is too early $\Delta t > 5'$: reports. Per monitoring day (=YY in YYGGgg of the AHL), for all Obsx of the aerodrome, the number of METAR observations for day = YY received on time, i.e. RXTime (HH:MM:SS) no earlier than 5 minutes before the observation time HHMM(00) in the AHL Group - YYGGgg ($\Delta t \leq 5'$):

$\Delta t = RXTime (HH:MM:SS) - HHMM$ in the observation Report-Date-Time Group.

....

— END OF SECTION —

APPENDIX D

ROBEX Focal Point Information

Basis for amendment: MET/IE WG/24 Action Items 24-02 and 24-16, MET/IE WG/23 Action Item 23-10, MET/IE WG/22 Action Item 22-09, and updates notified by Hong Kong China and Thailand.

(Note: Proposed updates are indicated with ~~strikethrough~~ and **highlighted text**)

13.4 ROBEX Focal Points

....

13.4.2 ROBEX Focal Points serve as the primary points of contact for matters related to the operation and management of the ROBEX scheme. They facilitate coordination between States, National OPMET Centres (NOCs), Regional OPMET Centres (ROCs), Regional OPMET Data Banks (RODBs), and the ICAO APAC Office on matters including OPMET exchange arrangements, ROBEX bulletin changes, quality control and monitoring issues, operational disruptions, and other ROBEX-related activities. Contact details are included in **Appendix I** to support timely operational and administrative coordination and should be kept current by the relevant State authorities.

APPENDIX I — ROBEX FOCAL POINTS

Note: The persons listed in this Appendix have been designated by their respective State authorities as ROBEX Focal Points. They are responsible for facilitating communication and coordination relating to the operation, monitoring, maintenance, and development of the ROBEX scheme and associated OPMET exchange arrangements.

STATE/ ADMINISTRATION	NAME/DESIGNATION AND ADDRESS	Tel/Fax/e-mail
.... HONG KONG CHINA	Mr. Patrick Lam Senior Aeronautical Communications Supervisor, Telecommunications Unit of Air Traffic, Management Division Room 315, 3/F, Office Building, Civil Aviation Department Headquarters 1 Tung Fai Road, Hong Kong International Airport, Lantau, Hong Kong, China	Tel: +852 2910 6200 Fax: +852 2910 1160 e-mail: hhlam@cad.gov.hk
	Mr. Marco Kok Senior Scientific Officer Hong Kong Observatory 134A Nathan Road, Kowloon, Hong Kong, China	Tel: +852 2926 8437 Fax: +852 2375 2645 e-mail: mhkok@hko.gov.hk
Fiji	Mr. Ivan Wong Head of Operations – ATM Fiji Airports Private Mail Bag Nadi Airport	Tel: +679 9906128 E-mail: IvanW@fijiairports.com.fj

MET SG/30
Appendix D to WP/09

STATE/ ADMINISTRATION	NAME/DESIGNATION AND ADDRESS	Tel/Fax/e-mail
	Mr. William L. Reece Aeronautical Technical Officer – ATM Fiji Airports Private Mail Bag Airports Fiji Limited P.O. Box 9210 Nadi Airport	Tel: +679 9906105 (6) 731198 Fax: +679 e-mail: WilliamR@fijiairports.com.fj williamr@afl.com.fj
....		
INDONESIA	Mr. Fani Setyawan Scientist Officer of Centre for Aeronautical Meteorology Mrs. Herlina Head of Sub Division for Dissemination of Aeronautical Meteorological Information Indonesian Agency for Meteorology Climatology and Geophysics Jalan Angkasa I No.2 Kemayoran, Jakarta, Indonesia - 10720 Mrs. Ni Ketut Feny P Staff of Sub Division for Dissemination of Aeronautical Meteorological Information Indonesian Meteorological Climatological and Geophysical Agency Jalan Angkasa I No.2 Kemayoran, Jakarta, Indonesia - 10720	Tel : +62 (21) 4246321 Fax : +62 (21) 6546315 e-mail: fani.setyawan@bmkg.go.id herlina@bmkg.go.id ; herlina_270963@yahoo.com Tel : +62 (21) 424 6321 Fax : +62 (21) 6546315 e-mail : fenypermatasari@bmkg.go.id ; fenypermatasari@gmail.com
....		
THAILAND	Mrs. Jittima Asawachaiporn Mr. Bunpot Kujaphun Director, Aeronautical Information and Flight Data Management Centre Aeronautical Radio of Thailand Ltd., 102 Soi Ngamduplee, Tunkmahamek Sathorn, Bangkok 10120 Mr. Wanchalearm Petsuwan Computer Technical Officer Thai Meteorological Department 4353 Sukhumvit Road Bangna, Bangkok 10260	Tel: +66 (2) 2859083 Fax: +66 (2) 2878538 e-mail: jittima.as@aerothai.co.th bunpot.ku@aerothai.co.th Tel: +66 (2) 399 4596 Fax: +66 (2) 744 6240 e-mail: wpetsuwan@hotmail.com
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