

International Civil Aviation Organization

Tenth Meeting of the Air Traffic Management Sub-Group (ATM/SG/10) of APANPIRG

Video Teleconference, 17 – 21 October 2022

Agenda Item 4: Air Navigation Service Deficiencies

ATM AND AIRSPACE SAFETY DEFICIENCIES LIST

(Presented by the Secretariat)

SUMMARY

This paper presents a list of Air Navigation Deficiencies noted by the Thirty-Second Meeting of Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/32) in the Air Traffic Management (ATM) and Airspace Safety fields, supplemented by proposed Deficiencies identified since APANPIRG/32) for review by the meeting. The list is based on the uniform methodology for the identification, assessment and reporting of such deficiencies as described in Part V of the *APANPIRG Procedural Handbook*.

1. INTRODUCTION

- 1.1 Under the Terms of Reference of APANPIRG, one of its primary objectives is to identify and address specific deficiencies in the air navigation field. In meeting this objective, APANPIRG facilitates the development and implementation of action plans by States to resolve identified deficiencies, where necessary. Consequently, APANPIRG and its Sub-groups regularly review deficiencies in their respective fields and develop recommendations for remedial actions.
- 1.2 APANPIRG Air Navigation Services (ANS) deficiencies are identified in accordance with the *Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies*, together with the related Asia/Pacific Supplement to the Uniform Methodology, as detailed in the APANPIRG Procedural Handbook.
- 1.3 The Twenty-First Meeting of APANPIRG (APANPIRG/21, September 2010) reviewed the updated List based on information provided by concerned States to ATM/AIS/SAR/SG/20 (July 2010, Singapore). The meeting urged States that had not taken firm corrective action to eliminate the deficiencies, and adopted the following Conclusion.

Conclusion APANPIRG21/53 –Elimination of ATM Air Navigation Deficiencies

That, States concerned

- a) be urged to take urgent actions to correct the deficiencies in the ATM/AIS/SAR fields identified in Attachment A to the Report on Agenda Item 4;
- b) notify details of the problems/difficulties to the Regional Office; and
- c) designate a point of contact in each State to deal with deficiencies and provide details to the Regional Office by 22 October 2010.

2. DISCUSSION

2.1 The current List of APANPIRG Air Navigation Deficiencies in the ATM and Airspace Safety fields is at **Attachment A** to this paper.

AIM Deficiencies

2.2 The following States have Deficiencies recorded for non-implementation of World Geodetic System 1984 (WGS-84):

Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Marshall Islands, Micronesia, Nauru, Palau, Samoa, and Vanuatu.

2.3 The following States have Deficiencies recorded for non-compliance with AIP format standards of ICAO Annex 15:

Kiribati and Nauru.

2.4 The following States have Deficiencies recorded for non-implementation of AIS Quality Management System as required in Annex 15 Chapter 3:

Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, Kiribati, Lao PDR, Maldives, Marshall Islands, Micronesia, Myanmar, Nauru, Nepal, Palau, Philippines, Samoa, Solomon Islands, Sri Lanka, Timor-Leste and Vanuatu.

Aeronautical Data Area of Responsibility Deficiencies

2.5 The following State has a Deficiency recorded for non-compliance with the aeronautical data area of responsibility requirements of Annex 15 Chapter 2:

Bangladesh.

Designation of Restricted Areas Deficiencies

2.6 The following States have Deficiencies recorded for non-compliance with Annex 2 requirements for designation of Restricted Areas:

Australia and India.

2.7 Indonesia has informed the ICAO Regional Office that a Danger Area has been established to replace the previous Restricted Area in international airspace. It is therefore proposed that the Deficiency recorded against Indonesia in this regard be proposed for removal from the list at APANPIRG/32.

Airspace Classification Deficiencies

2.8 The following States have Deficiencies recorded for non-implementation of airspace classification requirements of Annex 11 Chapter 2:

China, Macao China, Nauru and the Solomon Islands.

ATS Message Addressing

2.9 The following States had a Deficiency recorded for non-compliance with procedures specified in ICOA Doc 4444 PANS-ATM Section 11.4:

Bangladesh, India, Malaysia, Maldives, Nepal and the United States.

SAR Deficiencies

2.10 The following States and Administrations had a Deficiency recorded for non-implementation of the Asia/Pacific Air Navigation Plan Vol II Part I Section 3 Specific Regional Requirements for implementation of the Asia/Pacific Search and Rescue (SAR) Plan:

Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, Cook Islands, DPR Korea, French Polynesia, Kiribati, Lao PDR, Macao China, Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nauru, Nepal, New Caledonia, Palau, Pakistan, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga and Vanuatu.

Safety Reporting Deficiencies (RASMAG)

- 2.11 The following States have a Deficiency recorded for non-provision of safety-related data: Afghanistan, Brunei Darussalam.
- 2.12 The following States have a Deficiency concerning responsibility to comply with the Annex 6 height-keeping monitoring requirements of Annex 6:

Afghanistan and Pakistan.

ATS Datalink Deficiencies (RASMAG)

2.13 The following States have a Deficiency recorded for non-compliance with the data link performance monitoring and analysis requirements of Annex 11;

India, and Maldives.

IFALPA Deficiencies

- 2.14 The APANPIRG Procedural Handbook states that International Organizations such as IFALPA are valuable sources of information that should be considered by APANPIRG, especially those that are safety related (excerpt follows):
 - 2.3 Appropriate International Organizations, including the International Air Transport Association (IATA) and the International Federation of Air Line Pilots' Associations (IFALPA) are valuable sources of information on deficiencies, especially those that are safety related...
- 2.15 ATM/SG/9 discussed the matter of IFALPA deficiencies at length (ATM/SG/9 WP/10 Attachments B and C).
- 2.16 The purpose of the inclusion of the IFALPA Annex 29 information in the ICAO ANS Deficiencies Working Paper has been to share information with States and promote resolution of issues identified, and the Annex 29 information provided has not yet led to any formal APANPIRG ANS Deficiency being raised. However, following up on the ATFM/SG/9 discussion ICAO APAC Regional Office discussed the matter further with IFALPA in a separate meeting, with the following outcomes:
 - it was not IFALPA's intention to 'name and shame';
 - IFALPA Annex 29 (ATM/SG/9 Attachments B and C) was intended to be an internal document for sharing information, especially in cases where the information was not promulgated in NOTAM;
 - local IFALPA member associations try to liaise with the local authority, but were often unsuccessful;

- the IFALPA Annex 29 information had been provided to ICAO since 2018 in response to a request by Regional Office;
- IFALPA supported and would cooperate with any change the work process to fit in with APANPIRG and State processes.
- 2.17 Noting the APANPIRG handbook provisions for the use of information provided by International Organizations for consideration for APANPIRG ANS Deficiencies, the following process will be put in place by ICAO APAC Regional Office:
 - 1. IFALPA and other recognized International Organizations are invited to provide information to the ICAO APAC Regional Office in specific ATM and/or Airspace Safety-related cases where:
 - a. there is systemic non-compliance with ICAO SARPS, PANS, Regional Supplementary Procedures and/or Regional Air Navigation Plan Volume I or Volume II provisions; and
 - b. the non-compliance is not addressed after the matter is raised with the aeronautical authority; or
 - c. multiple attempts to raise the matter with the aeronautical authority yield no response.
 - 2. ICAO Regional Office will then assess the information provided, follow up with the relevant Administration where necessary, and consider including it in the APANPIRG Deficiencies List in accordance with the procedures described in the APANPIRG Handbook.
 - 3. Cases where States are not responsive to related communications from the International Organization and ICAO, or where ICAO has determined that an APANPIRG ATM and Airspace Safety Deficiency is appropriate, will be reported to ATM/SG meetings through the relevant Working Paper.
 - 4. All APAC Administrations must ensure that AIP GEN 1.1 includes full, correct and current contact details for relevant aeronautical authorities, as described in ICAO Doc 10066 *Procedures for Air Navigation Services Aeronautical Information Services* (PANS-AIM) Section 5.2.1.1.1 and Appendix 2 App 2-3.

Note: ICAO Regional Office will provide POC details for State Focal Points for Air Navigation Deficiencies to IFALPA on request.

Points of Contact

2.18 The List of Contacts for Deficiencies currently on the ICAO Secure Portal website at https://portal.icao.int/DEF/Pages/default.aspx is at **Attachment B** for review as required.

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
 - a) review and update the list of ANS Deficiencies for review by APANPIRG/33;
 - b) if possible, identify actions to be taken to correct the identified deficiencies;
 - c) note the ICAO Regional Office follow up of the matter of IFALPA Annex 29 information and the ICAO process for considering whether there's a need for an APANPIRG ATM and Airspace Safety Deficiency based on information provided by International Organizations;
 - d) update the Deficiency Points of Contact List as required; and

e) discuss any relevant matters as appropriate.

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ATM and Airspace Safety Deficiencies List (Updated 08 October 2022)

	D	eficiencies		Corrective Action		
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
	WGS-84 Requirements of Paragraph 1.2.1 of Annex 15					
Afghanistan	WGS-84 - Not implemented	24/6/2014		Afghanistan	TBD	A
Bangladesh	WGS-84 - Not implemented	24/6/2014		Bangladesh	TBD	A
Bhutan	WGS-84 - Not implemented	2/7/1999	Data conversion completed, but not published	Bhutan	TBD	A
Brunei Darussalam	WGS-84 - Not implemented	24/6/2014		Brunei Darussalam	TBD	A
Marshall Islands	WGS-84 - Not implemented	24/6/2014		Marshall Islands	TBD	A
Micronesia	WGS-84 - Not implemented	24/6/2014		Micronesia	TBD	A
Nauru	WGS-84 - Not implemented		Conferring with consultant	Nauru	TBD	A
Palau	WGS-84 - Not implemented	24/6/2014		Palau	TBD	A
Samoa	WGS-84 - Not implemented	24/6/2014		Samoa	TBD	A
Vanuatu	WGS-84 – Not implemented	2/7/1999	Implemented at main airports	Vanuatu	1999	A
	AIP Format Requirements of Chapter 5 of Annex 15					
Kiribati	AIP Format - Not implemented	7/7/99	ATM/AIS/SAR/SG/18 (June 2009) was advised AIP in draft stage	Kiribati		A
Nauru	AIP Format - Not implemented	7/7/99	ATM/AIS/SAR/SG/18 (June 2008) was advised work soon to start	Nauru		A
	AIS Quality Management System Requirements of Paragraph 3.6.1 of Annex 15 Quality Management System - Not implemented					

	Г	Corre	Corrective Action			
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
Afghanistan	AIS Quality Management System - Not implemented	24/6/2014		Afghanistan	TBD	A
Bangladesh	AIS Quality Management System - Not implemented	24/6/2014		Bangladesh	TBD	A
Bhutan	AIS Quality Management System - Not implemented	24/6/2014		Bhutan	TBD	A
Brunei Darussalam	AIS Quality Management System - Not implemented	24/6/2014		Brunei Darussalam	TBD	A
Cambodia	AIS Quality Management System - Not implemented	24/6/2014		Cambodia	TBD	A
Kiribati	AIS Quality Management System - Not implemented	24/6/2014		Kiribati	TBD	A
Lao PDR	AIS Quality Management System - Not implemented	24/6/2014		Lao PDR	TBD	A
Maldives	AIS Quality Management System - Not implemented	24/6/2014		Maldives	TBD	A
Marshall Islands	AIS Quality Management System - Not implemented	24/6/2014		Maldives	TBD	A
Micronesia	AIS Quality Management System - Not implemented	24/6/2014		Micronesia	TBD	A
Myanmar	AIS Quality Management System - Not implemented	9/6/2016		Myanmar	TBD	A
Nauru	AIS Quality Management System - Not implemented	24/6/2014		Nauru	TBD	A
Nepal	AIS Quality Management System - Not implemented	24/6/2014		Nepal	TBD	A

	Deficiencies			Corrective Action		
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
Palau	AIS Quality Management System - Not implemented	24/6/2014		Palau	TBD	A
Philippines	AIS Quality Management System - Not implemented	24/6/2014		Philippines	TBD	A
Samoa	AIS Quality Management System - Not implemented	24/6/2014		Samoa	TBD	A
Solomon Islands	AIS Quality Management System - Not implemented	24/6/2014		Solomon Islands	TBD	A
Sri Lanka	AIS Quality Management System - Not implemented	9/6/2016		Sri Lanka	TBD	A
Timor-Leste	AIS Quality Management System - Not implemented	24/6/2014		Timor-Leste	TBD	A
Vanuatu	AIS Quality Management System - Not implemented	24/6/2014		Vanuatu	TBD	A
	Aeronautical Data Area of Responsibility - requirements of Paragraph 2.1.2 of Annex 2 to ensure that the provision of aeronautical data and aeronautical information covers its own territory and those areas over the high seas for which it is responsible for the provision of ATS					
Bangladesh	Aeronautical Data Promulgation Within the State's Area of Responsibility - Not implemented	29/03/2019 SAIOACG /9		Bangladesh	TBD	A
	Designation of Restricted Areas - requirements of Annex 2 (Definitions) to ensure that restricted areas are designated above the land areas or territorial waters of a State					

	D	Deficiencies				
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
Australia	Designation of Restricted Areas Above the Land Areas or Territorial Waters of a State - Not implemented	29/03/2019 SAIOACG /9	Danger areas within international airspace that is part of a State's responsibility is acceptable	Australia	December 2022	A
India	Designation of Restricted Areas Above the Land Areas or Territorial Waters of a State - Not implemented	29/03/2019 SAIOACG /9	Danger areas within international airspace that is part of a State's responsibility is acceptable	India	TBD	A
	Airspace Classification Requirements of Paragraph 2.6 of Annex 11					
China	Airspace Classification - Not implemented	7/7/99	Difference to Annex 11 is published in AIP, China.	China	APANPIRG/1 9 updated, implementatio n planned by end 2010.	A
Macau, China	Airspace Classification - Not implemented	05/09/2018		Macau, China	TBD	A
Nauru	Airspace Classification - Not implemented	7/7/99		Nauru	TBD	A
Solomon Islands	Airspace Classification - Not implemented	7/7/99		Solomon Islands	TBD	A
	ATS Message Addressing Requirements of Doc 4444 PANS- ATM Section 11.4 (Message Types and their Application)		Note: the threshold for a Deficiency is 5% or more DEP messages reported to have not been sent, and where the analysed data provided evidence of a systemic (either systems or human factors) failure to send the message			

		Deficiencies	Corrective Action			
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
Bangladesh	DEP message transmission	05/09/2018	DEP messages inconsistently transmitted	Bangladesh	TBD	A
			Conclusion APANPIRG/27/12 and ICAO correspondence			
India	DEP message transmission	05/09/2018	DEP messages inconsistently transmitted Conclusion APANPIRG/27/12 and ICAO correspondence	India	TBD	A
Malaysia	DEP message transmission	05/09/2018	DEP messages inconsistently transmitted Conclusion APANPIRG/27/12 and ICAO correspondence	Malaysia	TBD	A
Maldives	DEP message transmission	09/08/2019	DEP messages inconsistently transmitted Conclusion APANPIRG/27/12 and ICAO correspondence	Maldives	TBD	A
Nepal	DEP message transmission	09/08/2019	DEP messages inconsistently transmitted Conclusion APANPIRG/27/12 and ICAO correspondence	Nepal	TBD	A
USA	DEP message transmission	05/09/2018	DEP messages inconsistently transmitted	USA	TBD	A
			Conclusion APANPIRG/27/12 and ICAO correspondence			

	Г	Deficiencies				
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
	SAR capability: Requirements of Annex 12 as defined in the Regional Air Navigation Plan Volume II Part I – GENERAL PLANNING ASPECTS Section 3 SPECIFIC REGIONAL REQUIREMENTS, failure to reach 90% or more implementation of the Asia/Pacific SAR Plan					
Afghanistan	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/6 56%	Afghanistan	2019	U
Bangladesh	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/6 67%	Bangladesh	2019	U
Bhutan	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 34%	Bhutan	2019	U
Brunei Darussalam	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/4 63%	Brunei	2019	U
Cambodia	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 76%	Cambodia	2019	U
Cook Islands	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/5 44%	Cook Islands	2019	U
DPR Korea	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 66%	DPR Korea	2019	U
Fiji	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/6 89% APSAR/WG/7 93%	Fiji	2019	U
French Polynesia	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/5 82%	French Polynesia	2019	U
Kiribati	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 26%	Kiribati	2019	U
Lao PDR	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 57%	Lao PDR	2019	U
Macau, China	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 85%	Macao, China	2019	U

		Deficiencies	Corr	Corrective Action		
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
Malaysia	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/6 77% APSAR/WG/7 76%	Malaysia	2019	U
Maldives	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/6 71%	Maldives	2019	U
Marshall Islands	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/5 17%	Marshall Islands	2019	U
Micronesia	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/5 17%	Micronesia	2019	U
Mongolia	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/5 73%	Mongolia	2019	U
Myanmar	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 67%	Myanmar	2019	U
Nauru	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 0%	Nauru	2019	U
Nepal	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/5 56% APSAR/WG/7 56%	Nepal	2019	U
New Caledonia	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/5 71% APSAR/WG/7 75%	New Caledonia	2019	U
Pakistan	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/6 87% APSAR/WG/7 88%	Pakistan	2019	U
Palau	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/5 17%	Palau	2019	U
Papua New Guinea	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 30% APSAR/WG/7 54%	Papua New Guinea	2019	U
Philippines	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/6 88%	Philippines	2019	U
Samoa	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 0%	Samoa	2019	U
Solomon Islands	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 0%	Solomon Islands	2019	U

	Deficiencies			Corrective Action		
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
Sri Lanka	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/6 78% APSAR/WG/7 80%	Sri Lanka	2019	U
Thailand	Asia/Pacific SAR Plan	17/05/2019	APSAR/WG/5 78%	Thailand	2019	U
Timor-Leste	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 0%	Timor-Leste	2019	U
Tonga	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 70%	Tonga	2019	U
Tuvalu	Asia/Pacific SAR Plan	28/05/2022	APSAR/WG/7 0%	Tuvalu	2024	U
Vanuatu	Asia/Pacific SAR Plan	6/07/2015	APSAR/WG/4 0%	Vanuatu	2019	U
	Non Provision of Safety-related Data Requirement of Paragraph 3.3.5.1 of Annex 11 (provision of data for monitoring the height-keeping performance of aircraft) and APANPIRG Conclusion 16/6 – Non Provision of safety related data by States					
Afghanistan	Non-provision of safety related data	12/07/2019	Failure to submit Kabul LHD data for January-December 2018 and 2020. Afghanistan had submitted data for the period January to July 2021, but no further LHD reports were received after August 2021.	Afghanistan	RASMAG/27	U
Brunei Darussalam	Non-provision of safety-related data	25/08/2022	Failure to submit RVSM approval status validation data for two consecutive years (2020, 2021)	Brunei Darussalam	RASMAG/28	U
	State Responsibility to comply with the Annex 6 Height-Keeping Monitoring Requirement Annex 6 Part I Section 7.2.9 (10 th Ed.) and Part II Section					

		Corrective Action				
States/facilities	Description	Date first reported	Remarks	Executing body	Target date	Priority **
	2.5.2.10 (9 th Ed.)					
Afghanistan	Non-compliance with LTHM requirement (remaining monitoring burden more than 30%)	RASMAG/ 23	Remaining monitoring burden of 85% (RASMAG/26) Information received by MAAR and reported at RASMAG/27 indicated the monitoring burden may have fallen below 30%. However, the deficiency is retained as the source of the information is not known to be authorized by the aeronautical authority in Afghanistan.	Afghanistan	RASMAG24	A
Pakistan	Non-compliance with LTHM requirement (remaining monitoring burden more than 30%)	RASMAG/ 22	Remaining monitoring burden of 61% (RASMAG/26)	Pakistan	RASMAG24	A
	Data Link Performance Monitoring and Analysis Requirements of Paragraph 2.28 and/or 3.3.5.2 of Annex 11 not met					
India	Post-implementation monitoring not implemented	13/07/2017	Performance monitoring and analysis was reported for the Chennai and Kolkata FIRs, but was not reported for the Mumbai FIR.	India	TBD	A
Maldives	Post-implementation monitoring not implemented	29/5/2015	Problem Reports not provided to CRA. Performance monitoring and analysis not reported to FIT.	Maldives	TBD	A

^{**} Note: In accordance with the APANPIRG Handbook - Asia/Pacific Supplement to the Uniform Methodology for the Identification, Assessment and Reporting of Air Navigation Deficiencies, priority for Air Navigation Deficiencies is guided by the principle that a deficiency with respect to an ICAO Standard is accorded a "U" status, while a non-compliance with a Recommended Practice or a PANS is considered as "A" or "B" subject to additional expert evaluation. The final prioritization of deficiencies is the prerogative of APANPIRG.



LIST OF FOCAL POINT FOR AIR NAVIGATION DEFICIENCIES

Updated: 10 August 2022

STATE/ADMINISTRATION	FOCAL CONTAC	T PERSON
Australia	Name:	Mr. Neil Bain
	Designation:	ATS Specialist Team Leader
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STATE/ADMINISTRATION	FOCAL CONTACT	PERSON
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Macao, China	Name:	_
	Designation:	
	Address:	
	Tel:	
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Alternate	Name:	Mr. Lam Tat Ming
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STATE/ADMINISTRATION	FOCAL CONTAC	T PERSON
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India	Name:	Mr. A. P. Gajbe
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		Airports Authority of India Safdarjung Airport, New Delhi -110003
	T.1.	
	Tel:	+91 (11) 2465 2236
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Indonesia	Name:	Mr. Wahyudi Nugroho
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·	Name:	Mr. Tian Kusdinar
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