



ICAO

International Civil Aviation Organization  
North American, Central American and Caribbean Office

# **NAM/CAR/SAM Search and Rescue (SAR) Implementation and Civil-military Coordination Meeting**

## **(SAR MTG)**

## **Final Report**

Port of Spain, Trinidad and Tobago, 25-28 October 2016

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## HISTORICAL

### **ii.1 Place and Date of the Meeting**

The NAM/CAR/SAM Search and Rescue (SAR) Implementation and Civil-military Coordination Meeting (SAR MTG) was held at the Trinidad and Tobago Civil Aviation Authority (TTCAA) in Port-of-Spain, Trinidad and Tobago, from 25 to 28 October 2016.

### **ii.2 Opening Ceremony**

Mr. Romy Gallegos, Regional Officer, Technical Assistance (TA) of the North American, Central American and Caribbean (NACC) Office of the International Civil Aviation Organization (ICAO) provided opening remarks and thanked the TTCAA for hosting the meeting. Mr. Rohan Garib, Deputy Director General, Air Navigation Services, and Mr. Francis Regis, Deputy Director General, Regulatory Affairs welcomed participants to Trinidad and Tobago and officially opened the meeting.

Trinidad and Tobago high-level military and civil authorities, Brigadier General Rodney Smart, Chief Defence Staff, Squadron Leader Marlon C. Dowrich, Trinidad and Tobago Air Guard, Commander Wayne Armour, Trinidad and Tobago Coast Guard, Aaron – Morrison, Assistant Director (Ag.), Mr. Ronald Alfred, Director of Maritime Services participated in the opening ceremony.

### **ii.3 Officers of the Meeting**

The SAR MTG Meeting was held with the participation of the SAR Rapporteur, Mr. Rohan Garib, Trinidad and Tobago. Mr. Gallegos, Regional Officer, Technical Assistance (TA) of the ICAO NACC Regional Office, served as Secretary of the meeting.

### **ii.4 Working Languages**

The working languages of the meeting were English and Spanish. The draft conclusions and decisions of the meeting were available to participants in both languages.

### **ii.5 Schedule and Working Arrangements**

It was agreed that the working hours for the sessions of the meeting would be from 09:00 to 17:00 hours daily with adequate breaks.

**ii.6            Agenda**

**Agenda item 1            Global and Regional Search and Rescue (SAR) Matters**

- 1.1    States obligations under ICAO’s SAR provisions
- 1.2    Global and regional status of the Space System for Search of Vessels in Distress (COSPAS) – Search and Rescue Satellite-Aided Tracking (SARSAT) coordination
- 1.3    SAR national plans
- 1.4    Implementation of Emergency Locator Transmitter (ELT) and other electronic tools for aircraft surveillance

**Agenda item 2            SAR Agreements**

- 2.1    SAR agreements
- 2.2    Regional implementation of SAR exercises
- 2.3    SAR coordination and emergency response for natural disasters

**Agenda item 3            Civil/Military Coordination**

- 3.1    The Convention on International Civil Aviation (Doc 7300) and ICAO provisions regarding civil/military coordination
- 3.2    Unmanned Aircraft System (UAS): regulatory framework and operational challenges
- 3.3    States Letters of agreement (LOA) for civil/military coordination
- 3.4    Need for Civil/Military Coordination (ICAO Doc 9554 – Manual concerning safety measures relating to military activities potentially hazardous to civil aircraft operations and Circular 330 – Civil/Military Cooperation in Air Traffic Management)
- 3.5    Regional initiatives to enhance civil/military coordination

**Agenda item 4            Airspace Organization and Management (AOM)**

- 4.1    ICAO provisions for Flexible Use of Airspace (FUA)
- 4.2    States initiatives for the reduction of the permanently segregated volumes of Special Use of Airspace (SUA)
- 4.3    Joint Civil/Military Operational initiatives to reduce fuel burn and CO2 gas emissions of civil aviation (implementation of Performance-Based Navigation (PBN), Automatic Dependent Surveillance – Broadcast (ADS-B), Controller-Pilot Data Link Communication (CPDLC), etc.)
- 4.4    Air Traffic Service (ATS) Contingency plans

**Agenda item 5            Other Business**

**ii.7                    Attendance**

The Meeting was attended by 16 States from the NAM/CAR/SAM Regions, and one International Organization, totalling 46 delegates as indicated in the list of participants.

**ii.8                    Draft Conclusions and Decisions**

The Meeting recorded its activities as Draft Conclusions and Decisions as follows:

**DRAFT**

**CONCLUSIONS:**            Activities requiring endorsement by the Directors of Civil Aviation of North America, Central America and Caribbean (NACC/DCA).

**DECISIONS:**                Internal activities of the NACC Working Group (NACC/WG).

**ii.8.1                List of Draft Conclusions and Decisions**

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An executive summary of these conclusions/decisions is presented in **Appendix A** to this report.

**ii.9 List of Working and Information Papers and Presentations**

**WORKING PAPERS**

<b>Number</b>	<b>Agenda Item</b>	<b>Title</b>	<b>Date</b>	<b>Prepared and Presented by</b>
WP/01	1	Provisional Agenda and Schedule	21/10/16	Secretariat
WP/02	2.1	Letter of agreement	17/10/16	United States
WP/03	3.1	National Coordinatin Process	17/10/16	United States
WP/04	1	SAR Committee Report	18/10/16	Trinidad and Tobago

**INFORMATION PAPERS**

<b>Number</b>	<b>Agenda Item</b>	<b>Title</b>	<b>Date</b>	<b>Prepared and Presented by</b>
IP/01		List of Documentation		Secretariat
IP/02	1	Mass Rescue Operations (MRO) Working Group	7/10/16	Jamaica
IP/03	1.2	Sistema Espacial Para La Búsqueda De Aeronaves En Peligro (COSPAS) – Sistema De Seguimiento Por Satélite Para Búsqueda Y Salvamento (SARSAT)	10/10/16	Paraguay
IP/04	1.3	Planes Nacionales SAR	10/10/16	Paraguay
IP/05	2.1	Cartas de acuerdo	10/10/16	Paraguay
IP/06	2.2	Implementación regional de ejercicios SAR	10/10/16	Paraguay
IP/07	2.3	Coordinación SAR y respuesta de emergencia para desastres naturales	10/10/16	Paraguay
IP/08	5	Asistencia a las víctimas de accidentes de aviación y sus familiares	10/10/16	Paraguay
IP/09	1.3	Actualización del plan de operaciones SAR para la FIR Santo Domingo	14/10/16	Dominican Republic
IP/10	2.1	Acuerdos SAR domésticos y regionales firmados por República Dominicana	14/10/16	Dominican Republic
IP/11	2.3	Creación de una nueva brigada de mitigación para desastres naturales	14/10/16	Dominican Republic
Reference Document	3.3	Arrangement RCC PIARCO	27&10&16	Trinidad and Tobago

PRESENTATIONS			
Number	Agenda Item	Title	Presented by
1	1.2	COSPAS-SARSAT in BRAZIL	Brazil
2	1.3	SAR EXERCISE in BRAZIL	Brazil
3	1	Global Aeronautical Distress and Safety System (GADSS)	United States
4	1	Aeronautical Search and Rescue Update	Trinidad and Tobago
5	2.1	SAR Tracking System	COCESNA
6	5	SAR and Meteorological Services	Trinidad and Tobago
7	4.1	Flexible Use of Airspace	Trinidad and Tobago
8	5	SAR and ELT	Secretariat

**Refer to the Meeting web page:**

<http://www2010.icao.int/NACC/Pages/meetings-2016-sarimp.aspx>

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**Agenda Item 1            Global and Regional Search and Rescue (SAR) Matters**

***States obligations under ICAO's SAR provisions***

1.1            The Meeting reviewed and approved the Agenda without comments, noting that the Secretariat would introduce the Working/Information Papers submitted by Paraguay as the State did not attend to the Meeting.

1.2            Trinidad and Tobago introduced WP/04, SAR Committee Report, providing a summary of the improvements of SAR activity with regard to civil/military cooperation since the since the Second Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG/2) Meeting and the Twenty-sixth Directors of Civil Aviation of the Eastern Caribbean Meeting (E/CAR/DCA/26). The paper also urged all States, but in particular the E/CAR States, to collaborate by establishing Letters of Agreement (LoAs) with neighbouring States or adjacent airspaces, and noted the need to improve local civil/military coordination. For this reason, the Meeting formulated the following Draft Conclusion:

**DRAFT CONCLUSION**

**SAR 1/1**

**STATES PARTICIPATION IN THE CIVIL-MILITARY COORDINATION MEETINGS  
FOR THE SEARCH AND RESCUE (SAR) IMPLEMENTATION**

That, ICAO encourage the active participation of NAM/CAR/SAM States to attend SAR regional implementation and civil/military coordination meetings, as well as including relevant International Organizations participation and industry stakeholders and Search and Rescue Satellite-Aided Tracking (SARSAT) personnel.

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**Agenda Item 2            SAR Agreements**

**2.1    SAR agreements**

2.1.1            Under WP/02, United States highlighted the importance of Letter of Agreements (LoAs). The State spoke of the need to find appropriate arrangements in order to codify SAR processes between facilities, without the need for lengthy coordination, legal evaluation and SAR matters delegation to the operational level that meets the intent of ICAO Annex 12 — *Search and Rescue*. States noted the need to engage their neighbours to ensure coordination and communication. Jamaica mentioned its concern regarding the need for small States, with limited resources, to also work with its neighbours and other entities to comply with ICAO Annex 12 requirements.

2.1.2            El Salvador was recently evaluated under the ICAO Universal Safety Oversight Audit Programme (USOAP), and commented to be committed to work along with COCESNA to ensure that appropriate documentation is prepared and meets the organization's needs and complies with the ICAO Annexes. COCESNA mentioned that their procedure allows to SAR activity and coordination take place at the operational level, thus freeing a layer of bureaucracy. This should be considered as best practice by other States, if feasible.

2.1.3            A discussion of the ICAO Audit Protocol Questions (PQs) ensued, with the Secretariat referring to Air Navigation Services (ANS) PQs noting that although the PQs do not reference LoAs as mandatory, it will be sought as a source document for compliance to the ICAO Standards. Trinidad and Tobago presented a copy of a draft LoA, that it is preparing with France and with Guyana on SAR cooperation matters. The Secretariat suggested, and the meeting agreed, to place the document into the meeting record and upload onto the ICAO meeting website as a reference document.

2.1.4            United States and other States requested ICAO to assist States providing LoA guidance during visits or in other forums. The Secretariat noted that because of the divergent nature of the legal systems in each State, there is no "one size fits all" approach to this issue. Each State also has different levels of inter-agency coordination and legal review in order to enter into any type of agreement with another State or Organization; however, the Secretariat considered that the following Draft Conclusion and Decision is needed in order to allow future solutions to the LoA implementation issue:

**DECISION  
SAR 1/2**

**LETTER OF AGREEMENT (LOA) TEMPLATES DEVELOPMENT**

That, the Meeting agreed to work intersessionally to possibly develop templates that States may use, ensuring SAR Agreements/Arrangements are in accordance with neighboring States/Organizations.

**DRAFT CONCLUSION**

**SAR 1/3**

**LEVEL OF AWARENESS OF THE SAR ACTIVITY**

That,

- a) ICAO consider methods for raising the level of awareness of SAR activity in States, as well as the need for senior decision-makers participation to familiarize themselves with SAR and effect policy change;
- b) States implement LoAs as an expedient method to arrange for operational matters related to SAR activities;
- c) ICAO assists with reviewing USOAP protocol questions regarding LoA requirements and compliance with the SARPs; and
- d) the Meeting consider working with other ICAO Regional Groups (ANI/WG) to prepare a formal paper on SAR activity and the need for implementation assistance for consideration at the next NACC/DCA meeting in September 2017.

2.1.5 The Meeting noted Information Paper (NI/10) presented by the Dominican Republic, which mentioned that although no country in the world is self-sufficient in SAR matters, it is important to agree into LoAs with other neighboring and regional entities for mutual cooperation on SAR matters. Dominican Republic commented that it has signed arrangements/agreements with Aruba, Haiti, Netherland Antilles, and United States.

2.1.6 Paraguay submitted an Information paper under this item, and was introduced into the record by the Secretariat.

**2.2 Regional Implementation of SAR Exercises**

2.2.1 Paraguay submitted NI/06 under this Agenda item and was introduced into the record by the Secretariat.

**2.3 SAR Coordination and Emergency Response for Natural Disasters**

2.3.1 Dominican Republic introduced NI/11, highlighting that the Dominican Armed Forces have established units within their structure that have the responsibility of assisting the civilian authorities with resources to mitigate the effects of natural disasters. The brigade has responded to recent events in Ecuador and participated under operation “*Mano amiga*” after the Hurricane Matthew in Haiti.

2.3.2 Paraguay submitted NI/07 under this Agenda item and was introduced into the record by the Secretariat.

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**Agenda Item 3                      Civil/Military Coordination**

**3.1            *The Convention on International Civil Aviation (Doc 7300) and ICAO provisions regarding civil/military coordination***

3.1.1            Under WP/03, United States noted that, through analysis of recent aviation and maritime accidents, many States have difficulty with efficient coordination and cooperation between civil and military authorities in the conduct of SAR activity. This lack of coordination may be due to both administrative procedure as well as operational response.

3.1.2            The Meeting was requested to consider implementing processes and procedures that may assist national authorities to more effectively coordinate and communicate when emergency response is needed. It was noted that by ensuring a sound administrative process, the national civil aviation authority, who is the lead agency for SAR activity, can obtain inputs of all appropriate SAR agencies and stakeholders within the national government.

3.1.3            Uruguay shared their best practices on civil/military communications, as their civil authorities share responsibilities with military authorities, and through the implementation of sound communication practices and procedures, they have a coherent and effective communication system.

3.1.4            Several States commented their lack of effective civil/military stakeholder communication process, in many cases blocking possible SAR efforts. The majority of the States quoted the large bureaucracy as the possible cause.

3.1.5            The Secretariat suggested that this issue should be given priority at future meetings and that possible small work teams could be developed to assist States in finding solutions to this issue.

**3.2            *Unmanned Aircraft System (UAS): regulatory framework and operational challenges***

3.2.1            UAS issues were not discussed at this meeting. The Secretariat noted that the NACC and SAM Regional Office, as well as ICAO Headquarters, will provide workshops on this issue in 2017.

**3.3            *States Letters of Agreement (LOA) for civil/military coordination***

3.3.1            The Meeting discussed possibly using templates for State Letters of Agreement (LoA) to be used by national authorities for the purpose of codifying SAR activity. Trinidad and Tobago presented their LoA procedure and document.

3.3.2 The Secretariat noted that although the use of standard templates would be useful, many national authorities are autonomous, in that their legal systems may or may not allow for the use of this type of tool. If a standard template were to be used, it would be advisable to ensure the national authority's legal offices are working closely to ensure that any agreement would be consistent with national law.

**3.4 *Need for Civil/Military Coordination (ICAO Doc 9554 – Manual concerning safety measures relating to military activities potentially hazardous to civil aircraft operations and Circular 330 – Civil/Military Cooperation in Air Traffic Management)***

3.4.1 No discussion/documentation was received for this item the Secretariat noted that for the next meeting it would request from ICAO Headquarters counterparts and all meeting participants information and would provide relevant discussion at the SAR Meeting 2017.

**3.5 *Regional initiatives to enhance civil/military coordination***

3.5.1 The Secretariat split the Meeting into small discussion groups to discuss not only coordination matters, but also more effective communication. The following feedback was provided:

- Trinidad and Tobago urges States to improve communications within their Regional Coordination Centers (RCCs)
- United States, COCESNA and other States suggested that by improving coordination, there should also be a unified front when dealing with the press/media
- States felt that during crisis situations, the media should be managed so as to assist and not hinder an emergency operation, and that the media can partner with national authorities and raise the level of awareness with respect to the SAR activity, ensuring that information disseminates in an appropriate manner
- COCESNA urged the Meeting to make appropriate use of a strong Public Relations office to deal with media matters, and the careful use of social media

**Agenda Item 4                      Airspace Organization and Management (AOM)**

4.1                      Although this issue is outside the scope of this meeting, the Trinidad and Tobago Civil Aviation Authority (TTCAA) presented P/07, Flexible Use of Airspace (FUA) concept with the intent to provide the Meeting some context with respect to civil/military coordination and the ability of all airspace users to coordinate and develop an airspace management concept for their respective national entities, whereby all user requirements are considered to the greatest extent possible.

4.2                      The presentation provided the Meeting insight as to how airspace users in the Piarco Flight Information Region (FIR) are able to collaborate and optimize the use of airspace, as well as the measures adopted to seamlessly coordinate civil and military operations.

4.3                      The Meeting was also informed on ICAO requirements in regard to the FUA concept, specifically, guidance material and guidelines on international airspace management, as well as the particular processes undertaken by Trinidad and Tobago to establish and implement the FUA concept for its national airspace.

4.4                      The Meeting took note of the effectiveness of the Collaborative Decision Making (CDM) Process used by all Trinidad and Tobago stakeholders and airspace users to create a dynamic and comprehensive programme. The Secretariat noted and requested this model should be considered as “Best practice” by States in accordance with the FUA implementation and the civil/military coordination.

4.5                      Trinidad and Tobago presentation also provided the Meeting with problems encountered when implementing FUA, such as considerations needed when designing Special Use Airspace (SUA), and consideration for an Airspace Management Team such as implementation of Performance-Based Navigation (PBN), Automatic Dependent Surveillance - Contract (ADS-C)/ Controller-Pilot Data Link Communication (CPDLC), and the resulting equipage issues with respect to civil and military aircraft.

4.6                      The Meeting noted how implementation of PBN, Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO) may affect search and rescue operations. It was also noted that air navigation routes are being redesigned to allow for more direct routing, and continuous descent and climb operations are implemented at airports, the direct correlation it has with safety, and the resulting impact it may have with Search and Rescue coordination in the case of an event.

4.7 The Meeting provided a comprehensive report of a flexible route trial between KLM Airlines, the TTCAA and the Piarco FIR. Not only were impacts to average flight time, but also fuel impacts and CO<sub>2</sub> emissions, there is a case to be made for safety and its impact in case of a SAR event. Trinidad and Tobago also noted ongoing CDO procedures at the Port-of-Spain International Airport with American Airlines.

**Agenda Item 5            Other Business**

5.1            Under P/06, Trinidad and Tobago presented information on the need for closer coordination between Rescue Coordination Centers (RCCs) and the National Meteorological Services. The presentation highlighted tools used by the Trinidad RCC for all stakeholders to provide real-time information in order to effectively engage stakeholders in the Collaborative Decision Making (CDM) process.

5.1.1            Trinidad and Tobago encouraged States to formulate and implement strong inter-agency Standard Operating Procedures (SOPs) at all levels, and a recurring theme of the meeting to ensure there are appropriate resources dedicated to SAR activities.

5.2            Paraguay submitted an Information Paper on the assistance to victims of aviation accidents and their families. The Secretariat noted the importance of this paper.

5.3            As a final discussion topic, the Secretariat introduced P/08 on the briefing given to the ICAO Council in April 2016, covering global SAR implementation in the areas of ICAO Annex 12 — *Search and Rescue*, statistics for SAR implementation in the regions, the work of the Space System for Search of Vessels in Distress (COSPAS) Search and Rescue Satellite-Aided Tracking (SARSAT) with Emergency Locator Transmitters (ELTs), and SAR activity relevant to Global Aeronautical Distress and Safety System (GADSS).

5.3.1            From the presentation, the following points were noted:

- USOAP and Central monitoring agency (CMA) results continue to show problems with Annex 12 implementation
- Regionally, the SAM Region is at 69.63% and the NAM/CAR Regions are at 53.25% Effective Implementation (EI) of the ICAO Standards and Recommended Practices for Annex 12
- A dedicated SAR resource has been contacted at ICAO Headquarters to assist SAR work
- Resources are sorely needed to achieve SAR implementation at all levels (ICAO, regionally, and States)

5.3.2 The presentation generated immense discussion, and resulted in the following points for future meetings:

- A proposal to elevate the SAR to a Task Force under the NACC/WG
- Ensure that the SAR become more hemispheric centric versus regionally centric
- Incorporate SAR under the “No Country Left Behind”(NCLB) Strategy
- Create a project for SAR activity under the Regional Projects (Multi-Regional Civil Aviation Assistance Programme (MCAAP) or Regional Safety Oversight Cooperation System (SRVSOP))

**APPENDIX A  
EXECUTIVE LIST OF CONCLUSIONS/DECISIONS**

<b>Number</b>	<b>Conclusion/Decision</b>	<b>Responsible for action</b>	<b>Deadline</b>
<b>C1/1</b>	<b>STATES PARTICIPATION IN THE CIVIL-MILITARY COORDINATION MEETINGS FOR THE SEARCH AND RESCUE (SAR) IMPLEMENTATION</b>		
	That, ICAO encourage the active participation of NAM/CAR/SAM States to attend SAR regional implementation and civil/military coordination meetings, as well as including relevant International Organizations participation and industry stakeholders and Search and Rescue Satellite-Aided Tracking (SARSAT) personnel.	States	
<b>D1/2</b>	<b>LETTER OF AGREEMENT (LOA) TEMPLATES DEVELOPMENT</b>		
	That, the Meeting agreed to work interessionally to possibly develop templates that States may use, ensuring SAR Agreements/Arrangements are in accordance with neighboring States/Organizations.	States	
<b>C1/3</b>	<b>LEVEL OF AWARENESS OF THE SAR ACTIVITY</b>		
	That,		
	a) ICAO consider methods for raising the level of awareness of SAR activity in States, as well as the need for senior decision-makers participation to familiarize themselves with SAR and effect policy change;	ICAO and States	
	b) States implement LoAs as an expedient method to arrange for operational matters related to SAR activities;	States	
	c) ICAO assists with reviewing USOAP protocol questions regarding LoA requirements and compliance with the SARPs; and	ICAO	
	d) the Meeting consider working with other ICAO Regional Groups (ANI/WG) to prepare a formal paper on SAR activity and the need for implementation assistance for consideration at the next NACC/DCA meeting in September 2017.	States	September 2017