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North American, Central American and Caribbean Office (NACC)

Seventh Central American Air Navigation Experts Working Group Meeting (CA/ANE/WG/7)

Ninth Central Caribbean Working Group Meeting (C/CAR/WG/9) ICAO NACC Regional Office, Mexico City, Mexico, 5 to 9 March 2012

Agenda Item 3: Air Navigation Matters

3.3 Specific Developments in Air Navigation

### SEARCH AND RESCUE CAPACITY ASSESSMENT

(Presented by the Secretariat)

	SUMMARY					
This working p	aper presents the status of compliance of the SAR					
capacity assessm	ent by the CAR States.					
	References:					
• Report of th	e NACC/DCA/4 Meeting (San Pedro Sula, Honduras,					
20 to 24 June	e 2011)					
• Air Navigation Plan, Volume I, Basic, Part VII- of Search and						
Rescue Services (SAR)						
Strategic	This information paper is related to Strategic					
Objective	Objective A.					

# 1. Background

1.1 Search and Rescue service issues were discussed at the Fourth NACC/DCA Meeting. Several States have provided information on the status of their SAR capacity in compliance with the recommendations of said meeting.

#### 2. Analysis

- 2.1 The provision of services and satisfactory operation of SAR facilities depend on the implementation degree attained by each State. In this regard, it is considered essential that the State organizations responsible for SAR services have in place plans, programmes, qualified personnel and equipment ensuring active and efficient coverage of said services round the clock.
- 2.2 Despite the efforts made by their respective administrations, some States experience difficulties to comply with the Air Navigation Plan, Volume I, Basic, Part VII- Search and Rescue Services (SAR) and in particular with the implementation and operation of Rescue Coordination Centres (RCCs) corresponding to their jurisdiction, in accordance with the Table SAR 1 of the ANP Volume II FASID. Moreover, other administrations are in the stage of reorganizing both the administrative area and SAR resources and facilities.

- 2.3 Considering the need to harmonise the SAR system, the NACC/DCA/4 Meeting included a performance-based work programme to improve SAR services in the CAR Regions. This includes the need to assess the SAR capacity of the State concerning the implementation of the Emergency Locator Transmitter (ELT) on 406 MHz, the implementation of domestic procedures for aircraft searches, risk management practice and Safety Management Systems (SMS) for SAR services, requirements, personnel and inspectors profiles, SAR training programmes and the establishment of SAR Agreements.
- 2.4 To date, only Dominican Republic, Guatemala, Honduras, Mexico and Trinidad and Tobago have presented information corresponding to their SAR capacity, which limits the necessary information for a full SAR assessment of the CAR Region. In order to support this work, the ICAO NACC Regional Office is organizing an Evaluation of SAR Capability Meeting/Workshop in June 2012.
- 2.5 SAR capacity is the key to the efficient provision of SAR services, as well as for providing a basis for responsiveness to other types of emergencies at or near the airport. The list of questions depicted in the SAR Matrix included in the **Appendix** to this Working Paper, as part of the SAR quality assurance programme, would be a useful tool for Caribbean States to use as a gauge of the capacity of individual State SAR systems and to sustain government support of SAR services.
- 2.6 The purpose of this document is to assess in a simple and objective way the State's SAR capacity during the implementation process of a quality management system for SAR services.

## 3. **Suggested Action**

- 3.1 The Meeting is invited to:
  - a) note the information presented in this working paper;
  - b) provide information on SAR capacity of each State, using the form included in the Appendix to this working paper; and
  - c) promote the participation of SAR specialists at the Evaluation of SAR Capability Meeting/Workshop in June 2012.

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# APPENDIX SEARCH AND RESCUE LIST OF QUESTIONS IN EACH FIELD

The following key indicators must be used to evaluate the level of implementation of SARPs:

- A Not implemented
- **B** Initial implementation
- C Meets Annex 12 requirements (or other relevant ICAO / IMO provisions) in some areas
- **D** Meets Annex 12 requirements (or other relevant ICAO / IMO provisions) in most areas
- **E** Fully meets Annex 12 requirements (or other relevant ICAO / IMO provisions).

Such aspects must be responded with simple 'Yes / No'.

The response 'not evaluated' does not necessarily imply the existence of a shortcoming, and 'not applicable' might cover important shortcomings. Additionally comments can be included, as required.

Code	Reference	Aspect to be evaluated	Implementation	Comment
		ORGANISATIO	N	
Legislative A	acts governing natio	onal SAR activities		
Org.act.1	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 and 5	Are there legislative acts governing SAR activities?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.act.2	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 and 5	If there are legislative acts governing SAR activities, are they up-to-date?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.act.3	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 and 5	Do the above acts organise SAR services in such a way that tasks and responsibilities are precisely and efficiently distributed?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
SAR Plan – A	Administrative SAR	Units		

Code	Reference	Aspect to be evaluated	Implementation	Comment
Org.1	Annex 12 Chap 2 para 2.2 Doc 9731 Vol I Chap 2 para 2.3.15	Are SRR and FIR boundaries coincident?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.2	Annex 12 Chap 2 para 2.3 Doc 9731 vol I Chap 2 Para 2.3	Is the State equipped with a RCC?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.3	Annex 12 Chap 2 para 2.3 Doc 9731 vol I Chap 2 Para 2.4	Is the State equipped with one or several RSC?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.4	Annex 12 Chap 3 para 3.2 Doc 8733	Has a SAR point of contact (SPOC) been designated?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.5	Annex 12 Chap 2 para 2.4	Are there radio/coastal stations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.6	Annex 12 Chap 2 para 2.4	If the answer is positive, are radio/coastal stations known and listed?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
National SA	AR Plan			

Code	Reference	Aspect to be evaluated	Implementation	Comment
Org.pla.1	Doc 9731 Vol I Chap 5 para 5.2	Is there a national SAR plan?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.pla.2	Doc 9731 Vol I Chap 5 para 5.2	If the answer is positive, is it up-to-date?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Organizatio	onal Authorities in ch	narge of SAR Services		
Org.aut.1	Doc 9731 Vol I Chap 1 <sup>er</sup> para 1.5 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.2	Has the State designated an Authority to be in charge of SAR services coordination?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.aut.2	Annex 12 Chap 2 Doc 8733 Doc 9731 Vol I Chap 1 <sup>er</sup> para 1.5 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.2	Does the above Authority have the legal means to discharge its responsibilities?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
SAR Commi	ittee / Civilian – mili	tary coordination		
Org.coo.1	Doc 9731 Vol I Chap 5 para 5.2 and 5.3 Doc 9731 Vol I Chap 6 para 6.3	Has a national SAR Committee been established?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Org.coo.2	Doc 9731 Vol I Chap 5 para 5.2 and 5.3 Doc 9731 Vol I Chap 6 para 6.3	Does the SAR national Committee hold regular meetings?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Org.coo.3	Doc 9731 Vol I Chap 5 para 5.2 and 5.3 Doc 9731 Vol I Chap 6 para 6.3	Does it include representatives of civilian and military Authorities?	☐ Yes☐ No ☐ Not applicable☐ Not evaluated	
Notification	of difference(s) to	ICAO Annex 12		
Org.not.1	Doc 7300 (Convention de Chicago) Article 38	Has the State notified any difference to ICAO Annex 12?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
SAR data pu	blished in AIP			
Org.aip.1	Annex 12 Chap 3 para 3.3 Doc 8733 Doc 9731 Vol I Chap 4 para 4.5	Does the State AIP include SAR data?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Aviation / m	naritime SAR coordi	nation		
Org.mar.1	Doc 9731	Are there maritime SAR services in the State?	☐ Yes ☐ No ☐ Not applicable ☐ Not evaluated	
Org.mar.2	Annex 12 Chap 3 para 3.2 Doc 8733	Has a coordination mechanism been established between the aviation and maritime SAR services?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Internation	al SAR agreements	s and Conventions		
Internationa	al SAR related Conv	entions		
Acc.conv.1	Not applicable	Has the State ratified the Convention on International Civil Aviation?	☐ Yes☐ No ☐ Not applicable☐ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Acc.conv.2	Not applicable	Has the State ratified the Safety of Life at Sea (SOLAS) Convention?	□Yes □ No	
			<ul><li>□ Not applicable</li><li>□ Not evaluated</li></ul>	
Acc.conv.3	Not applicable	Has the State ratified the International Convention on Maritime Search and	□Yes □ No	
		Rescue?	<ul><li>□ Not applicable</li><li>□ Not evaluated</li></ul>	
Internationa	al SAR agreements			
Acc.acc.1	Annex 12 Chap 3 para 3.1 Resolution A33- 14 Appendix O Doc 8733 Doc 9731 Vol I Chap 1 <sup>er</sup> para 1.6 and 1.7 Doc 9731 Vol I Chap 5 para 5.1 Doc 9731 Vol I Chap 6 para 6.3.6	Has the State signed SAR agreements with neighbouring States?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
	l procedures			
	Emergency plan	T	1	
Ops.airp.1	Annex 14 para 9.1 Doc 9731 Vol II Chap 7 para 7.7	Are international aerodromes equipped with appropriate emergency plans?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Ops.airp.2	Annex 14 para 9.1 Doc 9731 Vol II Chap 7 para 7.7	Are domestic aerodromes equipped with appropriate emergency plans?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Ops.airp.3	Doc 9731 Vol II Chap 7 para 7.7	Is there appropriate coordination between SAR and aerodrome services?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
National Em	ergency plan			
Ops.org.1	Not applicable	Has the State enforced regional or national emergency plans?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
National SAI	R Manual			
Ops.man.1	Doc 9731 Chap 5 para 5.2.11 to 5.2.18	Has the Authority responsible for SAR services developed a national SAR manual?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
RCC operation	ons plans			
Ops.cond.1	Annex 12 Chap 4 para 4.2 Doc 9731 Vol I Chap 5 para 5.2 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.5	Has a RCC operations plans been developed and updated?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Procedures ,	/ Alerting phase			
Ops.aller.1	Annex 12 Chap 5 para 5.2 Doc 9731 Vol II Chap 3 para 3.3 Doc 9731 Vol II Appendix E	Have special procedures dedicated to alerting phases been implemented?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Funding				

Code	Reference	Aspect to be evaluated	Implementation	Comment
Fin.mec.1	Doc 9731 Vol I Chap 5 para 5.4	Has the State implemented a SAR activities funding mechanism?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Fin.mec.2	Doc 9731 Vol I Chap 5 para 5.4	Does this mechanism ensure adequate funding of SAR services complying with international standards?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equipments	;			
Compliance	with the Air Naviga	tion Plan		
Equ.afi.1	Doc 8733	Are available equipments in line with the available equipment list of the CAR/SAM Air navigation plan?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Navigation r	neans of the SAR u	nits		
Equ.nav.1		Are SAR Units equipped with on-board radio direction-finding stations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Survival equ	ipments			
Equ.surv.1	Annex 12 Chap 2 para 2.6 Doc 9731 Vol I chap 2 para 2.5 Doc 9731 Vol II chap 6 para 6.4 and 6.5 Doc 9731 Vol II appendix G	Are SAR Units equipped with functional survival equipments?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
RCC / RSC e	quipments			
Equ.rcc.1	Doc 9731 Vol I Chap 2 para 2.3 Doc 9731 Vol I Chap 5 para 5.2 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.7	Are RCC / RSC equipped with SAR technical documentation (IAMSAR Manual and other technical documentation)?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.rcc.2	Doc 9731 Vol I Chap 2 para 2.7 Doc 9731 Vol II Chap 1 para 1.11	Are RCC / RSC equipped with computers and SAR dedicated software?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Communica	tions			
Equ.com.1	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with air traffic services?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.2	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with RSC?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.3	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with position fixing and radio direction-finding stations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.4	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with radio/coastal stations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Equ.com.5	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with Cospas-Sarsat mission control centres?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.6	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with Rescue teams operations centres?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.7	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with adjacent RCCs?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.8	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with adequate communication means with MET or MET Watch office?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.9	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with MF communication means with SAR Units when employed on SAR operations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.com.10	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with HF communication means with SAR Units when employed on SAR operations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment
Equ.com.11	Annex 12 Chap 2 para 2.4 Doc 9731 Vol I Chap 4 Doc 9731 Vol II Chap 2	Is the RCC equipped with VHF communication means with SAR Units when employed on SAR operations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
COSPAS / SA	ARSAT			
Equ.cosp.1	Doc 8733 Doc 9731 Vol II Chap 2 para 2.15	Is the State managing and updating a database of Cospas-sarsat users registered on its territory?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Equ.cosp.2	Annex 6, Parts I, II and III; Annex 10, Vol III, Part II, Chapter 5; Annex 10, Vol V, Chapter 2, para 2.1	Has the State adopted a regulation making the carriage of 406 MHz beacons compulsory?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Removal of	wreckage			
Equ.epav.1	Annex 12 Chap 4 para 4.5	Is the State equipped with removal of wreckage facilities?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Human Res	ources			
SAR personn	nel			
Rh.per.1	Doc 9731 Vol I Chap 5 para 2.3.11 and 5.4.9 to 5.4.16	Is SAR personnel sufficient and properly trained in the State?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Training				

Code	Reference	Aspect to be evaluated	Implementation	Comment
Current tra	aining plan(s)			
Rh.for.1	Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Is a training plan currently applied to coordinating SAR mission staff?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Rh.for.2	Doc 9731 Vol II Chap 5	Is a training plan currently applied to pilots involved in SAR missions?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Rh.for.3	Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Is a training plan currently applied to staff involved in rescue missions?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Scheduled	training plans			
Rh.for.4	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Has a training plan been scheduled for coordinating SAR mission staff?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Rh.for.5	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Has a training plan been scheduled for pilots involved in SAR missions?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	
Rh.for.6	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Has a training plan been scheduled for staff involved in rescue missions?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated	

Code	Reference	Aspect to be evaluated	Implementation	Comment			
Qualification / certification procedure							
Rh.for.7	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Has a standard Qualification / certification procedure for SAR staff been implemented?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated				
Training venue(s)							
Rh.for.8	Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Have training venues been certified?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated				
English language proficiency							
Rh.ang.1	Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Are RCC and RSC staff proficient in the use of the English language?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated				
		QUALITY CONTROL / E	XERCISES				
Quality control procedure							
Qua.proc.1	Annex 12 Chap 5 para 5.11 Doc 9731 Vol I Chap 5 Doc 9731 Vol I Chap 6 Doc 9731 Vol II Chap 8 para 8.6	Has the State established a quality control mechanism for its SAR services?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated				
Exercises							

Code	Reference	Aspect to be evaluated	Implementation	Comment			
Qua.ex.1	Annex 12 Chap 4 para 4.4 Doc 8733 Doc 9731 Vol I Chap 3 para 3.3 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	Does the State organize SAR exercises on a regular basis?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated				
Qua.ex.2	Doc 8733 Doc 9731 Vol I Chap 3 para 3.3 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.8	If the answer is yes, are the SAR exercises conducted in conformity with ICAO recommendations?	□ A □ B □ C □ D □ E □ Not applicable □ Not evaluated				
SAR actions							
Qua.pha.1	Annex 12 Chap 5 para 5.11 Doc 9731 Vol II Chap 1 <sup>er</sup> para 1.7 Doc 9731 Vol I Chap 5 and 6	Are reports established and critical analysis conducted about passed SAR actions?	<b>□</b> B				