



WORKING PAPER

**SPECIAL AFRICA-INDIAN OCEAN (AFI)
REGIONAL AIR NAVIGATION (RAN) MEETING**

Durban, South Africa, 24 to 29 November 2008

Agenda Item 6: Development of a set of comprehensive work programmes in the air navigation field, aimed at improving efficiency of the air navigation system (Efficiency Committee)

ESTABLISHMENT OF SUBREGIONAL SAR ARRANGEMENTS

(Presented by the Secretariat)

SUMMARY

This paper proposes a programme to develop subregionalized search and rescue (SAR) services provided by joint aviation/maritime rescue coordination centres (JRCCs) at strategic localities on the African continent.

Action by the meeting is in paragraph 4.

1. INTRODUCTION

1.1 The historical approach to search and rescue (SAR) system development has rested on the establishment of independent national SAR services and knitting these together to develop a loose conglomerate of providers around the globe. From a global systems perspective, this has not been very effective. Many States have only been able to provide skeletal services and extensive areas have been left without SAR support altogether. Africa, particularly, has been characterized by a patchwork of SAR services of varying effectiveness.

1.2 Both ICAO and the International Maritime Organization (IMO) now recommend the regionalized provision of SAR services as the means of most expeditiously achieving an effective global SAR system. Regional SAR service provision offers the opportunity of aeronautical and maritime agencies cooperating to provide SAR services over a geographic area determined in consideration of need and risk rather than within State borders that, from an operational perspective, are entirely arbitrary.

1.3 Regionalized SAR services offer many benefits to both beneficiaries of services and to the States that provide them. Duplication of effort and facilities would be minimized or avoided, service provision would be more uniform across larger geographic areas and, most importantly, proficient services can be provided near and within States with limited resources. The number of rescue coordination centres (RCCs) necessary to facilitate operations may be reduced, communication networks would be shared and databases consolidated, thereby allowing emergency response wherever aircraft fly in the region and regardless of territorial airspace. Further, the establishment, training and on-going proficiency of staff can be effectively managed. The end result of regional SAR development is that more is established with less.

2. DISCUSSION

ICAO guidance on subregional SAR service provision

2.1 The International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual (Doc 9731) states that “a regional approach can reduce cost and improve distribution of distress alerts, coverage and services”. For example, it is usually less operationally complex, and more economical and effective, for States within a region to share the use and support of terrestrial and satellite communication facilities and resource databases to support SAR. States can sometimes support each other with SAR mobile units (SRUs) to reduce the total number of units needed for adequate coverage and readiness. Training and other types of resources can be shared to everyone’s benefit (Chapter 1, 1.7.1).

Aviation SAR activity in Africa

2.2 In January 2002, after several catastrophic accidents on the African continent and in the realization that many African States were hard pressed to provide effective SAR services, the African Civil Aviation Commission (AFCAC) and ICAO, with the financial support of France, undertook to implement a large-scale project to upgrade SAR services in Africa. This project extended over five years. During this time, thirty-four State SAR systems were evaluated by a team of experts, many technical cooperation missions undertaken, extensive training arranged and a number of seminars and conferences convened.

2.3 The findings of the evaluation missions to States were analyzed in-depth by the ICAO Air Traffic Management (ATM) Section. These indicated a commonality in many shortcomings and deficiencies that included, most frequently, insufficient staffing levels and a severe shortfall in funding. These and other factors indicated that SAR services could be provided in a more cost-effective manner in Africa at the subregional level. The other persuasive factors included a relatively low level of operational activity and the existence of a number of inter-governmental organizations that offer a platform for inter-State cooperation. These include the East African Community (EAC), the Southern Africa Development Community (SADC) and the African air traffic management organisation, ASECNA.

2.4 In making its recommendations to the African States that were evaluated during the project, the ICAO evaluation team repeatedly recorded findings that “in advancing the process of SAR cooperation with neighbouring States, in cooperation with maritime authorities, activity should be directed to:

- a) effective establishment of a regional SAR Committee;
- b) establishment of a subregional RCC;
- c) urgent establishment of Letters of Agreement with neighbouring States;
- d) development of improved, detailed procedures to be followed in live SAR actions across territorial borders;
- e) regular tests of cross-border operational procedures; and
- f) organization of international SAR exercises.”

2.5 Evidence taken from senior levels within civil aviation and maritime administrations and inter-governmental organizations, including EAC and SADC, indicated a positive disposition to the concept of increased subregional cooperation in the provision of civil aviation SAR services within the regions of the project’s activities. In an increasing number of cases, this agreement in

principle has been given practical effect in the development of a Memoranda of Understanding (MoU) between States.

2.6 As a sequel to the project's findings, ICAO, in cooperation with AFCAC, organized an international SAR conference at Saly-Portudal, Senegal, in October 2004. Over 120 participants from fifty States, international organizations and private companies participated. Delegates to the conference developed a Declaration that stated, as its primary conclusion, that:

“Optimal organisation, management and regulation of SAR services has a profound and positive effect on the cost and the efficiency of SAR service provision” and that, in particular, “the extent of required resources can be reduced if the following principles are applied:

- a) implementing sound SAR needs assessments based on risk;
- b) signing and updating domestic and international SAR agreements;
- c) implementing preventive SAR and appropriate regulatory measures;
- d) using material assets on a shared basis;
- e) using staff on an incremental basis;
- f) establishing subregionalized SAR provision; and
- g) establishing joint aviation/maritime operational centres, possibly multi-functional.”

Joint aviation/maritime SAR organisation

2.7 The IAMSAR Manual elaborates at length on the economies of scale and operational benefits to be derived from harmonization of procedures and close cooperation between aviation and maritime SAR services. The establishment of joint rescue coordination centres (JRCCs) is recommended insofar as they may facilitate:

- a) harmonization of aviation/maritime procedures;
- b) interoperability of life-saving equipment;
- c) reciprocal understanding of maritime/aviation technical specificities by counterpart RCC personnel;
- d) cost-efficient use of accommodation and RCC equipment on a shared basis; and
- e) development of a pool of experienced SAR mission coordinators skilled across both aviation and maritime domains.

2.8 Close cooperation between aeronautical and maritime SAR agencies is essential. Rescue of survivors from aircraft accidents at sea commonly requires use of marine craft and crews; SAR actions over the high seas usually require search activity by aircraft. It is critical to life-saving that agencies in both the aeronautical and maritime domains work harmoniously, cost effectively and efficiently together.

2.9 In April 2002, ICAO and IMO agreed on a Statement of Cooperation that noted the common interests of the organizations in facilitating civil aviation and maritime global SAR services respectively, and emphasized the need for harmonization of aviation and maritime SAR procedures. It

further noted the organizations' intentions to keep each other informed of technical cooperation activities in their member States and, wherever possible, to cooperate in implementation.

2.10 In October 2007, the Department of Transport of the Republic of South Africa (RSA), in collaboration with South African Search and Rescue (SASAR), hosted a Consultative Conference in Port Elizabeth on the integration of SAR services in the Southern African region to the theme "Southern Africa goes all out towards the integration of aeronautical and maritime search and rescue services". The conference attracted participation by the majority of States within the region and resolved that an approach be made to ICAO and IMO for assistance with a SAR training programme and, in particular, training for SAR Administrators and SAR Mission Coordinators. Cooperative discussions about a programme of support between ICAO, IMO and RSA are on-going.

Maritime SAR activity in Africa

2.11 A conference on Maritime Search and Rescue convened by IMO in Florence in 2000 adopted a resolution on arrangements for regional coordination of maritime SAR services in Africa that invited all African coastal States bordering the Atlantic and Indian Oceans to consent to the establishment of subregional RCCs. The territories of African countries bordering the Atlantic and Indian Oceans were proposed to be divided into five subregional areas serviced by RCCs located at Morocco, Liberia, Nigeria, South Africa and Kenya.

2.12 To establish the Regional Maritime Rescue Co-ordination Centres (MRCCs) in each of the five subregions, the IMO Secretariat identified a need to conduct advisory missions to Africa. These were intended to encourage the affected States to consent to the establishment of the proposed subregional RCCs and to offer advice on maximizing effectiveness and minimizing cost of SAR services by pooling facilities and coordinating subregionally.

2.13 Progress to date in this IMO programme includes:

- a) Cape Verde, Morocco and Senegal have a maritime regional RCC (RMRCC) in operation with limited capabilities;
- b) an IMO mission to assist in identifying a suitable site for the Liberian R-MRCC was completed at the end of 2007;
- c) MRCC Lagos has been completed and is expected to be commissioned in the first half of 2008;
- d) RMRCC Cape Town has been completed and commissioned on 16 January 2007 and is operational; and
- e) RMRCC Mombasa has been completed and commissioned on 4 May 2006 and is operational.

Preparatory action

2.14 The Secretariat and Technical Cooperation Bureaus of ICAO and IMO are presently negotiating assistance with southern African States in response to their request for input of expertise. An early outcome of these preparations should be the establishment of an African Subregional Joint RCC Task Force.

3. CONCLUSION

3.1 Based on the above and considering the substantial benefits to be gained through establishment of JRCCs and cooperative activities in the provision of SAR services, the meeting is invited to adopt the following recommendation:

Recommendation 6/x — Establishment of subregional SAR arrangements

That the AFI Planning and Implementation Regional Group (APIRG):

- a) adopt as policy the general concept of subregional SAR provision from joint aviation/maritime RCCs as a key strategy in the improvement of the Africa-wide SAR system;
- b) support the establishment of a task force to progress the initiative taken at the Port Elizabeth Consultative Conference of October 2007 on the integration of SAR services in the Southern African region; and
- c) cooperate with ICAO and IMO in their continuing collaboration with African States to implement subregional, joint RCCs at strategic locations on the African continent.

4. ACTION BY THE MEETING

4.1 The meeting is invited to approve the draft Recommendation at paragraph 3.1 above.

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APPENDIX

REGIONAL PERFORMANCE OBJECTIVES/NATIONAL PERFORMANCE OBJECTIVES FOR SAR

ESTABLISHMENT OF SUBREGIONAL SAR ARRANGEMENTS				
Benefits				
Efficiency and Safety	• cost-efficient use of accommodation and RCC equipment on a shared basis • service provision more uniform across a geographic area defined by risk • proficient services provided near and within States with limited resources. • harmonization of aviation / maritime procedures • inter-operability of life-saving equipment • development of a pool of experienced SAR mission coordinators skilled across both aviation and maritime domains thus reducing coordination and fragmentation			
Strategy				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
N/A	• conduct Southern African regional SAR workshop	1Q 2009	TF	Not started
	• establish collaborative decision making process	1Q 2009	TF	
	• develop needs assessment and gap analysis	1Q 2009		
	• develop Southern African regional action plan	1Q 2009	TF	
	• conduct regional SAR Administrators training and SAR Mission Coordinators training	1Q 2009	TF	
	• determine regional organisation, functions and responsibilities, accommodation and equipment needs	2Q 2009	TF	
	• produce draft legislation, regulations, operational procedures, letters of agreement SAR plans and safety management policies for regional SAR provision using IAMSAR manual as guidance.	2Q 2009	TF	
	• determine future training needs and develop training plans	2Q 2009	TF	

	• develop ➤ alerting procedures ➤ resource databases ➤ interface procedures with aerodrome emergency procedures and generic disaster response providers ➤ RCC check lists ➤ staffing, proficiency and certification plans ➤ preventive SAR programmes ➤ quality programmes ➤ education and awareness programmes ➤ in-flight emergency response procedures	3Q 2009	TF	
	• conduct training as required	3Q 2009	TF	
	• conduct SAR exercises required	3Q 2009	TF	
	• monitor implementation process	as appropriate	TF	
linkage to GPIs	N/A			

Notes:

1. The above work plan requires to be duplicated for NW Africa, Eastern Africa, Western Africa (Lagos) and Western Africa (Liberia) in turn. The timing of work in these regions will be dependent on operational, demographic, financial and social factors which, presently, are indeterminate. The nature and duration of the planning and implementation activity for each sub-regional RCC is considered to be in the same order of the Southern African plan detailed above.

2. All work requires close cooperation with all States affected, ICAO, IMO, Cospas-Sarsat and other worldwide bodies as required.

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