Guyana Civil Aviation  
Aeronautical Search and Rescue Plan

FOREWORD
This plan is published for the guidance of persons who will be involved in Aeronautical Search and Rescue Operations and will definitely be of interest to others associated with civil aviation and maritime operations, since maritime forms an integral part of this SAR Plan.

This document contains information on aeronautical SAR organisation, coordination, operations and procedures which form the basis of Aeronautical Search and Rescue in Guyana. It is prepared using guidelines from the International Civil Aviation Organisation (ICAO) Guidance Material of International Aeronautical and Maritime Search and Rescue Manual, ICAO Annex 12, Guyana National SAR plan and the Civil Aviation Act 2016.

This Manual shall be used in conjunction with the above-mentioned documents to guide SAR personnel in the performance of their duties. In so far as practicable, associated checklists have been included for operational use to simplify documentation of the operational aspects of SAR and to provide quick reference to its users. It is a live document and shall be updated every six (6) months or whenever amendments are necessary.

Air Navigation Services personnel and other persons who will be involved in aeronautical search and rescue are required to familiarize themselves with this document.

Lt. Col. (Ret’d) Egbert Field  
Director General, GCWA
20th October 2019
DOCUMENT CONTROL

Introduction

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AMENDMENT PROCEDURE

The Director Air Navigation Services (DANS) shall be responsible for the upkeep of this live document which reflects procedures used in Aeronautical Search and Rescue. A review shall be carried out at least once every six (6) months in order to ensure that the information contained in this document is current. When necessary, changes to information may warrant earlier amendments. All suggestions regarding this manual shall be made to the Director Air Navigation Services at:

Director Air Navigation Services  
Control Tower Complex  
Cheddi Jagan International Airport  
Timehri,  
East Bank Demerara,  
Guyana, South America.  
Telephone: 592 261 2217  
Fax: 592 261 2279  
Email: dans@gcaa-gy.org

A record of all suggestions including the originator and nature shall be filed by the DANs for future reference. Amendments shall be approved by the Director General Guyana Civil Aviation Authority before publication.
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</table>
TABLE OF CONTENTS

FORWARD i
DOCUMENT CONTROL iii
AMENDMENT PROCEDURE v
RECORD OF AMENDMENT AND CORRIGENDA vi

CHAPTER 1: GENERAL 1-12

BACKGROUND 3-12
INTRODUCTION 4-12
SEARCH AND RESCUE SERVICES 4-12
SCOPE OF AERONAUTICAL SAR 4-12
AREA of RESPONSIBILITY 4-12
AERONAUTICAL SAR AUTHORITY 6-12
AERONAUTICAL SAR RESPONSIBILITY 6-12
LOCATION OF RCC 7-12
SAR ORGANISATION 7-12
FUNCTIONS OF SAR ORGANISATIONS 8-12
SAR RESOURCES 9-12
OPERATIONAL LETTERS OF AGREEMENT 10-12

International
National
OTHER ARRANGEMENTS 10-12
COSPAS/SARSAT ARRANGEMENT 11-12
SAR CONSULTATIVE COMMITTEE 12-12
SAR SECRETARIAT 12-12
MEETINGS 12-12
TESTING OF PLAN 12-12

CHAPTER 2: COORDINATION 1-8

SAR COORDINATION 3-8
SAR COORDINATOR 3-8
Responsibilities 3-8
THE SAR MISSION COORDINATOR (SMC) 4-8
Responsibilities 4-8

ON SCENE COORDINATOR (OSC) 5-8
Responsibilities 6-8

RESCUE COORDINATION CENTRE 6-8
CHAPTER 3: OPERATIONS AND PROCEDURES

CONCEPT OF OPERATIONS 3-36
PHASES OF EMERGENCY 5-36
UNCERTAINTY PHASE 5-36
ALERT PHASE 5-36
DISTRESS PHASE 6-36
TABLE 1 – Progression of Emergency 7-36
ACTIVATION OF SAR SYSTEM 17-36
AIRCRAFT WRECKAGE AT SEA 17-36
PROCEDURES 17-36
NOTIFICATION BY AIR TRAFFIC SERVICES 18-36
NOTIFICATION MESSAGE 18-36
UNCERTAINTY PHASE 19-36
ACTIONS BY ATS 19-36
ALERT PHASE 20-36
ACTIONS BY FIC/RCC 22-36
DISTRESS PHASE 23-36
ACTION BY ATS 23-36
ACTION BY FIC/RCC 23-36
RESCUE COORDINATION CENTRE PROCEDURES 24-36
DURING THE AWARENESS STAGE 24-36
DURING THE INITIAL STAGE 25-36
DURING THE PLANNING STAGE 26-36
DURING THE OPERATIONS STAGE 27-36
SEARCH PATTERNS 28-36
RESCUE PLANNING AND OPERATIONS 29-36
SIGHTING OF THE SEARCH OBJECT AND PROCEDURES 29-36
DELIVERY OF RESCUE PERSONNEL AND EQUIPMENT 30-36
RESCUE BY AIRCRAFT 32-36
RESCUE BY MARITIME FACILITIES 32-36
RESCUE BY LAND FACILITIES 32-36
CARE FOR SURVIVORS 33-36
DEBRIEFING OF SURVIVORS 33-36
HANDLING OF THE DECEASED 34-36
REQUIREMENTS AT THE CRASH SITE 34-36
MAJOR RESCUE OPERATIONS 35-36
DURING OF THE CONCLUSION STAGE 35-36
SUSPENDING A SAR OPERATION 36-36
WASH UP 36-36
CHAPTER 4: COMMUNICATIONS

GENERAL
COMMUNICATIONS PROCEDURES
COMMUNICATIONS PROCEDURES AT THE DISTRESS SCENE
COMMUNICATIONS PROCEDURES to CONFIRM an ACCIDENT and to ACTIVATE the AERONAUTICAL SAR PLAN
MEANS OF COMMUNICATIONS and OPERATIONAL FREQUENCIES of the AERONAUTICAL SAR SYSTEM
INTERNATIONAL EMERGENCY FREQUENCIES
AIRCRAFT EMERGENCY EQUIPMENT
VISUAL COMMUNICATIONS

APPENDICES:
GCAA Organisation Chart Air navigation Service Provider Chart E
SAR AGENCIES ROLES AND RESPONSIBILITIES
Guyana Defence Force
Guyana Police Force
Guyana Fire Service
Ministry of Public Health
Ministry of Agriculture
Civil Defence Commission
Aircraft Owners Association of Guyana
Guyana Geology and Mines
Maritime Administration Department
Ministry of Public Infrastructure

LETTERS OF AGREEMENT
Georgetown and French Guyana
Georgetown and Brazil
Min. Public Infrastructure and Guyana Defence Force
Min. Public Infrastructure and Guyana Police Force
Min. Public Infrastructure and Guyana Fire Service
Min. Public Infrastructure and Min. of Public Health
Min. Public Infrastructure and Min. of Agriculture
Min. Public Infrastructure and Civil Defence Commission
Min. Public Infrastructure and Aircraft Owners Association of Guyana
Min. Public Infrastructure and MARAD
Min. Public Infrastructure and GGMC
Min. Public Infrastructure and Air Services Ltd.
Min. Public Infrastructure and Trans Guyana Airways Ltd.

APPENDIX 3
Appendix 3 (a)
Appendix 3 (b)
Appendix 3 (c)
Appendix 3 (d)
Appendix 3 (e)
Appendix 3 (f)
Appendix 3 (g)
Appendix 3 (h)
Appendix 3 (i)
Appendix 3 (j)
Appendix 3 (k)
Appendix 3 (l)
Appendix 3 (m)
CHAPTER 1
GENERAL
CHAPTER 1

GENERAL

1. Background

Guyana is a signatory of the International Civil Aviation Organisation and conforms to the requirements of Annex 12, “Search and Rescue”.

The Civil Aviation Act 53:01, Part X, Search and Rescue states that the Authority shall arrange for the establishment and provision of search and rescue services within its search and rescue region. It is therefore incumbent upon the state of Guyana to provide Search and Rescue Services to aircraft operating within the Georgetown Flight Information Region.

The Guyana Civil Aviation Authority is the coordinator of all SAR Operation in the Guyana SRR, while the Guyana Defence Force (GDF) is primarily responsible for executing the operations. The GDF does not have adequate resources for responses towards the search and rescue of persons. In order to be equipped and in a state of readiness, resources from other related agencies are shared to reduce cost and the loss of lives.

In light of the above: other Governmental and non-governmental organisations shall be called upon when necessary to ensure the execution of a SAR mission. This document details procedures for Aeronautical Search and Rescue, inclusive of the organisation, management and coordination.
1.2 INTRODUCTION

1.2.1 Search and Rescue Services

Search and Rescue services are defined as the performance of distress monitoring, communication, coordination, and search and rescue functions, including provision of medical advice, initial medical assistance and medical evacuation, using public and private resources, including cooperating aircraft, vessels, other vehicles and installations.

1.2.2 Scope of Aeronautical SAR

Aeronautical SAR activities include but are not limited to the process of locating missing, overdue or downed aircraft, extricating and providing initial medical treatment to persons involved in aircraft incident or accident in the areas outside of the perimeter of Cheddi Jagan International Airport and Eugene F. Correia International Airport (EFCIA).

The CJIA and EFCIA emergency plans include procedures applicable to aircraft incident and accident in the off and on airports.

Note: The National SAR system will provide assistance as required during an Airport Emergency.

Mission:
To search for and locate overdue, missing and downed aircraft and its’ occupants either believed to be or are in distress.

To provide initial response and relief capabilities critical to saving lives in an aeronautical incident or accident.

1.2.3 Area of responsibility:

Guyana Search and Rescue Region

Guyana is assigned responsibility for the provision of SAR services within its territory, including those portions of the Atlantic Ocean which extend to the limits of Guyana’s territorial waters. The Guyana Search and Rescue Region is coincident with the Georgetown Flight Information Region and is delineated by lines joining:

083248.64N 0600005.84W (Punta Playa) 085500.00N 0601505.89W 085500.00N 0595700.00W 085500.00N 0570000.00W 055800.00N 0570000.00W 055848.32N 0570905.34W (Benab), then along the border between Suriname/Brazil/ Venezuela back to Punta Playa 083248.64N 0600005.84W.
Map of Guyana Search and Rescue Region
1.3 Aeronautical SAR Authority

The Air Navigation Services Directorate shall ensure that the SAR operation can be promptly initiated and executed with the efficient use of available SAR resources until rescue has been completed or chance of success is no longer a reasonable possibility.

Aeronautical Search and Rescue services shall be provided to all aircraft known to Air Traffic Services, and operating in the Georgetown FIR or in adjacent SRRs when requested, under the coordinated control of the Search and Rescue Mission Coordinator (SMC) designated by the Director ANS.

The provision of SAR services is organised into three facilities:

**The Rescue Coordination Centre (RCC):** which is the main operational unit of the service from which search and rescue operations are controlled, coordinated and directed.

**The Alerting facilities:** which is the Air Traffic Services Units.

**The Tactical facilities:** which are made available to the Civil Aviation Authority/Air Navigation Services by the various agencies and authorities. These comprise of the rescue units under the operational control of the RCC during the mission.

1.3.1 Aeronautical SAR Responsibility:

The Guyana National SAR plan has charged the Guyana Civil Aviation Authority with the responsibility of facilitating the Aeronautical Search and Rescue Service in Guyana.

Through the Air Navigation Services Directorate, the ANS has established the aeronautical rescue coordination center located in the Control Tower Complex at Timehri, which plans, coordinates and directs the action to be carried out by the different participating agencies that supports, implements or collaborates in tasks pertinent to an efficient SAR service.

Aeronautical SAR services shall be provided to all aircraft known to air traffic services which are operating in Guyana’s territory as well as any other permanently or temporarily internationally agreed area in adjacent SRR.

The SAR service is provided in accordance with the provisions of: The Civil Aviation Act Cap 53:01, 2016, ICAO Annex 12 (Search and Rescue), aeronautical and maritime search and rescue manual (IAMSAR) Volumes 1, 2, and 3 (Doc.9731), Regional Supplementary Procedures (Doc7030), Guyana Aeronautical Information Publication (AIP), National SAR Plan and this Aeronautical SAR Manual.
1.3.2 Location of the RCC

Control Tower Complex
Cheddi Jagan International Airport
Timehri, East Bank Demerara
Guyana, S.A.
Telephone Number: 592 261 4356
Fax: 592 261 2279

1.4 SAR Organisation

The Aeronautical SAR organisation shall comprise the following agencies, their general roles and responsibilities:

- **The Guyana Civil Aviation Authority**
  Responsible for the organisation and coordination of Aeronautical SAR

- **The Guyana Defence Force (GDF) Coastguards/Marine Special Forces Air Command**
  The agency responsible for the execution of the mission under the control and coordination of the Rescue Coordination Center (RCC).

- **Local Aircraft Operators**
  Render additional assistance and equipment required during a mission, under the control and coordination of the RCC.

- **Airline Representatives**
  Provide information and support

- **Guyana Police Force (GPF)**
  Provide security and protection of assets and personnel.

- **Guyana Fire Service (GFS)**
  Provide equipment and personnel.

- **Maritime Administration**
  Provide personnel and equipment to support search over water.

- **Supporting agencies:**
  **Ministry of Public Health (MOPH)**
  Medical assistance

  **Ministry of Public Infrastructure and Non-Government**
  Provide additional support
Civil Defence Commission (CDC)  
Provide additional support

Guyana Geology and Mines Commission (GGMC)  
Provide additional support

Ministry of Agriculture -National Weather Watch Center (NWWC)  
Provide weather information and additional support

### 1.4.1 Functions of SAR Organisation

The SAR Organisation shall:

- Where desirable and practicable, disseminate information to the general public and emergency response authorities regarding actions to be taken when there is reason to believe that an aircraft’s emergency may become cause for public concern or require a general emergency response.

- Arrange for all aircraft, vessels and local services and facilities which do not form part of the SAR organisation to cooperate fully with the latter in SAR and to extend any possible assistance to the survivors of aircraft accidents.

- Provide for the most effective and efficient SAR services, the SAR organisation should maintain the closest practicable coordination between the relevant aeronautical and maritime authorities.

- Ensure that their SAR services cooperate with those responsible for investigating accidents and with those responsible for the care of those who suffered from the accident. To facilitate accident investigation, rescue units should, when practicable, be accompanied by persons qualified in the conduct of aircraft accident investigations.

- Immediately report all available information to the RCC of any authority, organisation or element of the SAR organisation having reason to believe that an aircraft is in an emergency.
1.5 SAR Resources

SAR is a national responsibility. The National SAR system is geared for the performance of its functions as efficiently as possible using the means and personnel committed in this SAR plan.

The Aeronautical SAR system as stated in this plan include many public and private organisations in Guyana, which performs varying functions, including communications, coordination and execution during a distress situation.

Public and private organisations (GDF, GPF, AOAG, etc.) contribute to the available SAR resources which will operate under the coordination of the Aeronautical RCC, inclusive of aircraft, rescue boats, private installations and equipment (hospitals, vehicles, ambulances, communications, etc.).

The primary means to effect the SAR operation constitutes the use of aircraft from the GDF and private owners and operators.

The participation of all available means for air and ground search from various organisations such as Coastguard and Police is integral to SAR operations. Ground patrols are especially needed in terrain where it is impracticable for aircraft to operate. Aircraft intending to participate in the SAR operations shall be equipped to receive ELT signals and have the capability to communicate with the RCC, RSC or ATSU.

SAR Missions require an amalgamation of resources from various governmental and non-governmental agencies to ensure effectiveness and efficiency. Letters of Agreement in Appendix 2 details the availability and use of such resources for SAR.
Operational Letters of Agreement

International

Operational Letters of Agreement between Guyana, French Guiana and Brazil exist for coordination and exchange of information relative to SAR Operations.

National

The participating agencies through signed Letters of Agreement have committed their support for Guyana’s National SAR Plan, each agency agrees to fully support the Guyana National SAR committee within its means. Appendix 3 contains Letters of Agreement from the following agencies:

- Guyana Defence Force (GDF)
- Guyana Police Force (GPF)
- Guyana Fire Service (GFS)
- Ministry of Health
- Aircraft Owners and Operators - Guyana (AOAG)
- Maritime Administration Department
- Ministry of Agriculture
- Guyana Geology and Mines Commission
- Civil Defence Commission

Note: Attachment A to each Letter of Agreement contains facilities and services provided by the respective agencies.
1.6 COSPAS-SARSAT Distress Beacon Detection System

1.6.1 Overview
COSPAS-SARSAT is a satellite system designed to provide distress alert and location data to assist SAR operations, using spacecraft and ground facilities to detect and locate the signals of distress beacons operating on 406 MHz or 121.5 MHz.

The responsible Cospas-Sarsat Mission Control Centre (MCC) forwards the position of the distress and other related information to the appropriate SAR authorities. Its objective is to support all organisations in the world with responsibility for SAR operations, whether at sea, in the air or on land.

The Cospas-Sarsat System provides distress alert and location data to RCCs for 121.5 MHz beacons within the coverage area of Cospas-Sarsat ground stations (Local User Terminals - LUTs), and for 406 MHz beacons activated anywhere in the World.

1.6.2 Purpose
The primary purpose of this system is to detect, positively identify and provide the positions of 406 MHz EPIRBs, ELTs and PLBs anywhere in the world. It will also detect and provide the positions of 121.5 MHz beacons activated within LUT coverage. Some of the SARSAT satellites are also able to detect and provide positions of 243 MHz beacons while the COSPAS (Russian) satellites do not detect transmissions on this frequency.

1.6.3 Worldwide system
The worldwide system comprises:
   a) Low orbiting satellites in near polar orbits
   b) Satellites in geostationary orbit;
   c) Local User Terminals (LUTs), which are ground stations that receive and initially process the raw distress signal data relayed by a satellite;
   d) Mission Control Centers (MCCs) which are responsible for the final processing and appropriate distribution of beacon detections; and
   e) Frequency stable 406 MHz beacons, each with a unique identification code and capable of transmitting for 24 or 48 hours depending on their use.

Guyana and USMCC – SARSAT has an existing arrangement for the Georgetown Search and Rescue Region to be monitored via the COSPAS/SARSAT system. The search and rescue point of contact (SPOC) for receiving COSPAS/SARSAT messages is as follows:
1.6.4 Search and Rescue Point of Contact
Timehri Control Tower
Cheddi Jagan Int’l Airport
Timehri, East Bank Demerara
Tel: (592)261-2245/4357
Fax: (592)261-2279
AFS: SYCJYOYX

1.7 SAR Consultative Committee

The SAR consultative committee shall comprise of a representative from each agency of the SAR organisation. Each agency shall provide details to Air Navigation Services of their representative and an alternate. Representatives shall be responsible for any appropriate co-ordination within their respective organisations.

Note: Details of the SAR consultative committee members are contained in Appendix 4.

1.7.1 SAR Secretariat

The Director of ANS shall be responsible to provide personnel for the SAR Secretariat. The Secretariat shall be responsible for the upkeep of all document and secretarial functions. Through the secretariat the Director General or his designate shall convene all meetings.

1.8 Meetings

Meetings shall be held bi-annually and should be chaired by the Director General or his designated representative. Executive meetings may be held as necessary and working groups may be established to handle detailed work and bring proposals to the Committee.

A special meeting can be decided by the Chairman when requested by any member of the committee once a valid reason is proposed for this meeting.

1.9 Testing of plan

SAR personnel e.g. SC, SMC, OSC, shall be trained regularly and appropriate exercises arranged to develop the necessary competence. These training exercises should include:

a) Desktop/Communications Exercise (repeated regularly)
b) Co-ordination Exercise (At least once in a year)
c) Full-Scale Exercise or a Field Exercise (At least once in two years)

Note: Training programmes (Initial, Recurrent and Specialized) shall be established for RCC Staff and all Training Records shall be maintained;
CHAPTER 2
COORDINATION
COORDINATION

2.1 SAR Coordination

The SAR system has three levels of coordination as listed in the table below:

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<th>General Functions</th>
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<td>1a) SAR Coordinator (SC)</td>
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<td>Director General</td>
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<td>1b) SAR Coordination(SC)</td>
<td>Admin/Operations</td>
<td>Director ANS</td>
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<tr>
<td>2) SAR Mission Coordinator(SMC)</td>
<td>Mission Planning</td>
<td>Designated from trained senior personnel in ANS</td>
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<tr>
<td>3) On Scene Coordinator(OSC)</td>
<td>Operational Oversight</td>
<td>Designated from trained personal from ANS</td>
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2.1.1 SAR Coordinator

The SAR Coordinator shall be the Director General of the Guyana Civil Aviation Authority. The Director General may delegate his authority for the coordinating of SAR Missions to the Director ANS or the Unit Chiefs or the Manager ATM, trained in SAR Operations. The delegated person may select a SMC.

2.1.2 Responsibilities

The Director General (DG) of the Guyana Civil Aviation Authority shall have overall responsibility for the SAR system. The DG shall authorised the Director ANS for the establishment of RCCs and Rescue Sub Centers (RSCs), arranging SAR facilities with qualified staff, coordinating SAR training and developing SAR policies. The Director Air Navigation Services shall be responsible for:

a) Promotion of the effective use of all available SAR resources.

b) Coordination of the plans and procedures with other organisations in support of the Aeronautical Search and Rescue missions and encourage the participation in “dry run” exercises.

c) Coordination with the Air Safety Regulation Directorate of the GCAA to ensure that all aircraft operating within the Georgetown FIR are equipped with a functioning ELT.

d) Formulation, coordination, evaluation and approval of the plans, procedures and regulations for the cooperation and coordination of SAR.

e) Coordinate at the National and International level the respective aspects of the SAR Plan, including Press releases on the progress of the Mission and notification of next of kin.
2.1.3 The SAR Mission Coordinator (SMC)

- The SAR Mission Coordinator (SMC) shall relieve The Duty Air Traffic Control Officer (DATCO) after obtaining a briefing as soon as possible and shall initiate the RCC.

- SAR Mission Coordinator (SMC) shall be responsible for each SAR operation carried out by Rescue Coordination Centre.

- The Director ANS shall designate a SMC for each SAR operation.

- In the event of a complex mission or one of duration extending beyond five (5) days, relief shall be provided for the SMC.

- The SMC shall be in charge of a SAR Operation until a rescue has been effected or until such time that the operation is called off, or until such time that the responsibility is transferred to another RCC.

2.1.4 Qualifications of Search and Rescue Mission Coordinator (SMC)

The SMC must be from Air Traffic Services with at least 10 years’ experience in Air Traffic Control and have completed appropriate SAR training and must be proficient with the organisational procedure. The SMC shall be capable of performing all SAR functions required by the SAR authority. To fulfill the foregoing requirements, the SMC shall have a good knowledge of the communications available, geographical features of the region, and capabilities and limitations of SAR assets. The SMC must use initiative and be inquisitive in the search for information, cross-checking the sources in doubtful cases.

2.1.5 Responsibilities of the SMC:

The SMC shall be responsible for the development of a workable action plan, dispatch and coordinate the resources which will be used to carry out the SAR mission, and request additional assets as required.

The SMC shall:

- Obtain a briefing from the ACC/FIC in order to commence SAR operations. Relocate to the designated RCC and convene a meeting with the National SAR Agencies.
- Notify all supporting agencies including the accident investigation authority
- Obtain and evaluate all data on the emergency
- Ascertain the type of emergency equipment carried by the missing or distressed aircraft.
Plot SAR area or areas of interest and decide on method and facilities to be used for search,
Inform the SC of the action plan.
Designate RSC when applicable
Ascertain the prevailing environmental and meteorological conditions of the area of interest and conduct a risk assessment.
Ascertain the availability of aircraft or ships in the search areas.
Coordinate the operation with adjacent RCC, when necessary
Arrange briefing and debriefing of SAR personnel
Evaluate reports from any source and modify action plan if necessary
Arrange for fueling of aircraft on prolonged search, and make arrangements for accommodation of SAR personnel
Arrange for deliveries of supplies to sustain survivors
The SMC shall coordinate ambulance service and notify the hospitals appropriately.
The SMC shall advise the relatives of the missing persons that the search has been suspended
Maintain in a chronological order an accurate and up to date records of events
Issue progress reports at end of day
Liaise with Air Traffic Services and Aeronautical Information Service facilities
Recommend the abandoning, suspension or cessation of search
Release SAR facilities when no longer required
Prepare final report.
The SMC shall convene a “wash up” meeting after conclusion of each SAR operation to identify areas for improvement, areas of success, recommend amendments to the plan, etc.
The SMC shall solicit support from other organisations which have the capacity to assist in carrying out the SAR operations.

2.1.6 On Scene Coordinator (OSC)

When two or more SAR units are working together on the same mission, an On-Scene Coordinator (OSC) shall be assigned to coordinate the activities of all participating units. The SMC shall designate an On-Scene Coordinator.

2.1.7 Qualifications of On Scene Coordinator (OSC)

The OSC shall have a minimum of 5 years’ experience as an Air Traffic Control Officer in ATC Units and satisfactorily completed an established basic SAR course or SMC Course or SAR Administrator course or the most suitably qualified person capable of assuming the duty. E.g. A person in charge of a ship or aircraft.
2.1.8 Responsibilities:

The OSC shall:

- Assume operational coordination of all on scene SAR facilities
- Receive the search action plan from the SMC
- As far as practicable, in consultation with the SMC, modify the plan based on environmental conditions.
- Keep the SMC advised of any changes to the plan
- Provide relevant information to other search facilities
- Implement the search action plan
- Monitor the performance of other search units participating in the search
- Coordinate the safety of flight issues with SAR aircraft
- Develop and implement rescue plan (when needed)
- Make consolidated reports (SITREPs) back to the SMC.

2.2 Rescue Coordination Centre

The first agency to become aware of a distress situation shall respond until the appropriate SAR authority has assumed that responsibility. In the case of an aircraft incident or accident the Georgetown ACC/FIC shall be the first agency to respond. The SMC shall assume full responsibility after a briefing and acknowledgement for the Georgetown ACC/FIC.

2.2.1 Authority

The Director Air Navigation Services shall be responsible for ensuring that the RCC is maintained and appropriately equipped and is always in a state of readiness for a SAR mission. The RCC shall be manned by the Search and Rescue Mission Coordinator during a SAR event.

2.2.2 Location of the RCC

The Rescue Coordination Centre
Control Tower Complex
Cheddi Jagan International Airport
Timehri,
East Bank Demerara
Telephone: 592-261-4356
Fax: 592-261-2279
Email: rcc@gcaa-gy.org
AFTN: SYCJYAYX
2.2.3 Communication

Responsibility of the Rescue Coordination Center

In the event of SAR operations as per direction of the SMC. The RCC shall be in a state preparedness and shall:

a) Remain informed on weather situation throughout the SSR;

b) Make sure all the communication facilities are available;

c) Keep the records of all SAR telephone directories up-to-date;

d) Initiate documentation/Maintain Log Book

e) Prepare material, maps, etc. for plotting,

f) Check and update all SAR items stored in the SAR Store; and

g) Obtain information on;

- Origin of alert;
- Type of incident;
- Possibility to contact alerting person;
- Position and/or route, flight plan, last reported position and radio frequency used;
- Time of incident;
- Aircraft (Registration, Type and other particulars);
- Persons on board;
- Type of cargo (including Dangerous Goods);
- Assistance requested if any;
- Intentions of the pilot;
- Communications;
- Verify weather (previous, present, prognosis);
- Rescue equipment required;
- Clothing and other commodities required for land parties; and
- Verify all information received:

2.3 Rescue Coordination Center-Supporting Staff

The RCC/RSC staff shall consist of personnel who are experienced in ATC and/or trained in SAR operations.

When a period of heavy activity is anticipated or during major SAR incidents, the regular staff may be supplemented as required.

Agencies and authorities that may be involved in providing SAR services to an RCC in the event of an incident are to be alerted as early as practicable so that staffing can be managed.
2.4 SAR FLOW CHART

Aeronautical Incident

Yes: Commence Notification as per Checklist until Relieved by the SMC
Notify: USMCC/ATSU Aircraft Operator Force Control/GDF Others

SMC:
Activate ASAR Plan
Notify all relevant Agencies
Develop Plan of Operation
Deploy SAR Team
Locate/Rescue/Recover
Coordinate Medical Assistance for Survivor/Bodies
Transport to Safety/Hospital/Morgue

No: Notify the appropriate adjacent RCC.
Provide assistance as required.

Withdrawal of SAR assets and Termination of SAR Mission
CHAPTER 3
OPERATIONS AND PROCEDURES
OPERATIONS AND PROCEDURES

3.1 Concept of Operations

When the SAR system first becomes aware of an actual or potential emergency, the information collected and the initial action taken are often critical to successful SAR operations. It must be assumed that in each incident there are survivors who will need assistance and whose chances of survival are reduced by the passage of time. The success of a SAR operation depends on the speed with which the operation is planned and carried out. Information must be gathered and evaluated to determine the nature of the distress, the appropriate emergency phase, and what action should be taken. Prompt receipt of all available information by the RCC is necessary for thorough evaluation, immediate decision on the best course of action and a timely activation of SAR assets to make it possible to:

a) Locate, support and rescue persons in distress in the shortest possible time; and

b) Use any contribution survivors may still be able to make towards their own rescue while they are still capable of doing so.

Execution of plan

The execution of the SAR plan will be dependent on the situation and its progression:

- When an aircraft has declared a phase of emergency in the Georgetown FIR or ATS has declared that an aircraft is overdue or missing.
- When it is known or believed that an aircraft and its occupants are in grave and imminent danger.
- When by agreement, cooperation is required in case of other emergencies or by request from neighbouring States.

3.1.1 SAR Stages

The response to a SAR incident usually proceeds through a sequence of five stages. These stages are groups of activities typically performed by the SAR system in responding to a SAR incident from the time the system becomes aware of the incident until its response to the incident is concluded. The response to a particular SAR incident may not require the performance of every stage. For some incidents, the activities of one stage may overlap the activities of another stage such that the portions of two or more stages are being performed simultaneously. The five SAR stages are:
1. **Awareness stage**

When knowledge exists that there is an emergency situation or an impending emergency.

2. **Initial action**

This stage includes the evaluation and classification of information to declare a phase of emergency and to alert SAR services. In this regard three phases of emergency have been established:

- Uncertainty Phase
- Alert Phase
- Distress Phase

3. **The planning stage:**

This stage consists of the planning of the operations, including the plans for search, rescue and transfer of survivors to a place where they can receive medical attention or other security area following medical process.

4. **Operations Stage:**

This stage consists of the execution of the operations and dispatching the SAR units to the location of the emergency and other operations projected in the planning stage.

5. **Conclusion stage:**

This stage consists of the return of the SAR units when it has been verified that the aircraft and its occupants are no longer in danger or when they have been rescued or it has been determined that further search will be of no avail.

The phases of emergency shall be declared by the RCC, its sub center; if established, or the Air Traffic Services units based on the classification of actual or potential SAR event in accordance with the following:
3.2 Phases of Emergency

The three phases of emergency are as follows:

Uncertainty phase when:

1) No communication has been received from an aircraft within a period of thirty minutes after the time a communication should have been received, or from the time an unsuccessful attempt to establish communication with such aircraft was first made, whichever is the earlier, or when;

2) an aircraft fails to arrive within thirty minutes of the estimated time of arrival last notified to or estimated by air traffic services units, whichever is the later, except when no doubt exists as to the safety of the aircraft and its occupants.

Alert phase when:

1) Following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failed to reveal any news of the aircraft, or when

2) An aircraft has been cleared to land and fails to land within five minutes of the estimated time of landing and communication has not been re-established with the aircraft, or when

3) Information has been received which indicates that the operating efficiency of the aircraft has been impaired, but not to the extent that a forced landing is likely, except when evidence exists that would allay apprehension as to the safety of the aircraft and its occupants, or when

4) An aircraft is known or believed to be the subject of unlawful interference.
**Distress phase when:**

1) Following the alert phase, further unsuccessful attempts to establish communication with the aircraft and more widespread unsuccessful inquiries point to the probability that the aircraft is in distress, or when

2) The fuel on board is considered to be exhausted, or to be insufficient to enable the aircraft to reach safety, or when

3) Information is received which indicates that the operating efficiency of the aircraft has been impaired to the extent that a forced landing is likely, or when

4) Information is received, or it is reasonably certain that the aircraft is about to make or has made a forced landing, except when there is reasonable certainty that the aircraft and its occupants are not threatened by grave and imminent danger and do not require immediate assistance.

**NOTE: In addition to the above, Table 1 provides guidance to Air Traffic Services for the progression of the phases of emergency.**
Table 1. Progression of emergency.

<table>
<thead>
<tr>
<th>FOR ALL FLIGHTS</th>
<th>Uncertainty</th>
<th>Alert</th>
<th>Distress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distress signal MAYDAY, SOS, A7700</td>
<td></td>
<td></td>
<td>Immediately</td>
</tr>
<tr>
<td>Urgency Signal PAN PAN, XXX, ELT</td>
<td>Within 5 minutes</td>
<td></td>
<td>Depending on circumstances</td>
</tr>
<tr>
<td>Unlawful Interference – A7500</td>
<td>Immediate</td>
<td></td>
<td>Depending on the circumstances</td>
</tr>
<tr>
<td>The operating efficiency is impaired without a likely forced landing.</td>
<td>Immediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel on board is considered exhausted</td>
<td></td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>A forced landing is made or is likely</td>
<td></td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>Loss of Comms. (aircraft in approach phase or within the aerodrome vicinity).</td>
<td>within 5 minutes</td>
<td></td>
<td>Within 10 minutes</td>
</tr>
<tr>
<td>Loss of Comms. (aircraft leaving the aerodrome)</td>
<td>Within 10 minutes</td>
<td>Within 20 minutes</td>
<td>Within 30 minutes</td>
</tr>
<tr>
<td>Controlled Flights</td>
<td>Loss of radio contact</td>
<td>Within 10 minutes</td>
<td>Within 20 minutes</td>
</tr>
<tr>
<td>Uncontrolled flights</td>
<td>Loss of radio contact or delay in arrival/arrival report</td>
<td>Within 30 minutes</td>
<td>Within 60 minutes</td>
</tr>
</tbody>
</table>
3.3 Determination of Search Areas

Planning

When an initial response fails to locate either the distressed craft or its occupants, it is necessary to plan and execute an intensive search. The planning of a search may be considered under six broad headings:

- a) Determination of the most probable position of the distressed craft and/or its occupants;
- b) Delineation of an area large enough to ensure that the survivors are within the area;
- c) Selection of facilities and equipment to be employed;
- d) Selection of the search procedures to be used;
- e) Allocation of search resources;
- f) Preparation for rescue.

The most probable position (MPP) of a distress incident may be determined from a position reported at the time of the incident, or by the dead reckoning calculation of a position. Additionally, it must be decided what is desirable in terms of search coverage and what may be achievable using available resources.

The extent of a search area is based on the accuracy with which the position of the occurrence is known. The SMC should take into account such factors as the possible navigation error of the distressed craft and the search craft, meteorological conditions, and drift of the distressed craft or survivors if in the water.

When the location of a craft is not known, a reconstruction of the probable route and some estimation of the most likely position of the incident must be made by the RCC. Two concepts of value in SAR Planning are the Possibility Area, and the Probability Area.

Possibility Area

The possibility area is the area in which a missing craft could be located. Usually the area is too big to be considered the search area but knowledge of its extent and boundaries may be of use when assessing intelligence information, in particular sighting or hearing reports.

The possibility area is displayed as a circle drawn around the last known position (LKP) of the craft. The radius of this circle should equal the endurance at the time of the LKP expressed in terms of distance and taking into account wind velocity for aircraft or drift for vessels. It is assumed that the craft may have proceeded in any direction until its fuel was exhausted.
The probability area is the area in which a missing craft and/or survivors, are most likely to be found, taking into account possible errors in the navigation of the missing craft and of the search craft, together with an allowance for any water movement (should the incident occur on or over water) and a safety factor.

When the position of an incident is reported by a witness, or reported as a navigational fix determined by radar or another craft or by the distressed craft itself, or calculated by the RCC in the form of DR position, the probability area is enclosed by a circle of probability centred on that position, taking into account the applicable above mentioned factors.

In the case of a downed aircraft, joining lines 10 NM either side of the aircraft’s known, planned or suspected route will normally form the initial probability area for an aircraft search. The 10 NM may be adjusted to allow for the type of flight, e.g. a transiting helicopter may be 5 NM either side of track whereas a turbo prop or jet aircraft may be 15 NM or more.
### 3.3.1 Search Patterns

Search patterns shall be in accordance with the following categories:

1. **Visual search patterns**
   - Sector Search (VS)
   - Expanding Square (SS)
   
   i. Second Expanding Square, if needed
   - Track line (TL)
   - Parallel Sweep (PS)
   - Creeping Line (CS)
   - Creeping line search coordinated (CSC)
   - Contour search (OS)
   - Shoreline search

2. **Electronic search patterns**
   - Survival beacon search
   - RADAR search

3. **Night search patterns**
   - Parachute flare search
   - Infrared devices
   - Night vision goggles

4. **Land search patterns**
   - Visual search patterns
3.3.2 Visual Search-Track Line Search

This procedure is normally employed when an aircraft has disappeared without a trace. It is based on the assumption that the target has crashed, made a forced landing or ditched on or near the intended route and will be easily seen, or that there are survivors capable of signaling their position by a flashing lamp or other means. It consists of a rapid and reasonably thorough search on either side of the intended route of the target, normally at a height of 1000 to 2000 FT during day or at 2000 to 3000 FT at night. A track line pattern is often used as an initial reaction to a distress situation, the second, intensive phase being introduced on the failure of the track line search.

Aircraft and ships following the same route as that of the missing aircraft should be asked if they are available to divert to assist in the search for the target. For aircraft, this type of search should be regarded as additional to searches by SAR units, as an en-route aircraft may not be entirely suitable as a search platform due to its performance, configuration, endurance, navigational capabilities or lack of observers.
3.3.3 Contour search

Contour search is used to examine mountain slopes and valleys when sharp changes in elevation make other types of search impractical. The procedure requires that the search aircraft be flown at a selected contour level adjacent to the side of steep terrain, starting at the highest selected level. The search is started above the highest peak with the search aircraft completely circling the mountain at that level. Then the search aircraft descends a planned vertical distance while making an orbit in the direction opposite to the search (forming a figure eight), then it makes another circuit of the mountain, and so on. When there is not enough space to make an orbit opposite to the direction of the search, the search aircraft may spiral downwards around the mountain. If the mountain cannot be circled, successive sweeps at the same intervals should be flown along its side. Valleys are searched in circles, moving the center of the circuit one track spacing after each completed circuit.

Figure B showing a Contour Search
A contour search may be very dangerous. Extreme caution should therefore be exercised when searching mountains and valleys. The following safety matters should be considered:

a) The crew must be very experienced and well briefed and possess accurate large scale maps (1:100,000 scale maps are recommended);

b) Mountainous search areas should be assigned to multi-engine aircraft whenever possible;

c) During search, all the pilot's attention will be devoted to flying the aircraft. The pilot must evaluate forward terrain to avoid any hazard such as power lines, cables etc. When searching valleys, the pilot must plan to ensure that the aircraft can either climb out of a difficulty or turn around, knowing at all times which way to turn in case of an emergency;

d) The weather conditions in the search area must be good, including both good visibility and lack of turbulence, and must be constantly checked. Flights in mountainous areas should be avoided when winds exceed 30 knots because downdraughts can exceed 2000 FT per minute;

e) Aircraft should not enter any valley that is too narrow to permit a 180 degree turn at the altitude flown. Searches should be flown close to one side of a canyon or valley so that the entire width may be used if a 180 degree turn becomes necessary. A similar method should be applied when making a contour search of a mountain;

f) The aircraft should be highly manoeuvrable and have a high rate of climb and a small turning radius.

Orographic turbulence may be found as up draughts on the upwind side of slopes and ridges and on the downwind side as downdraughts. The extent of the effect depends on the wind speed and the steepness of the slope. Orographic turbulence will be more intense over a rough surface.

The safest crossing of mountain peaks and ridges at low altitude under windy or turbulent conditions is downwind, where any downdraughts will be encountered after the terrain is crossed. If this is not practical, altitude should be increased before crossing these areas. Best procedure in transiting a mountain pass is to fly close to that side of the pass where there is an upwind. This will provide additional lift in case of an emergency. Maximum turning space is available and a turn into wind will be towards lower terrain. Flying through the middle of a pass may be dangerous as this allows the least turning space and is often the area of greatest turbulence.
In cases when it is not practical to search the entire surface of a mountainous area, the SMC may initiate plans on the basis of certain assumptions, e.g., if limited to VMC, the pilot would neither willingly enter cloud nor descend below the lowest height at which a valley or a gap could be safely traversed. There may, on the other hand, be intelligence information to hand indicating that the pilot did enter cloud, in which case the aircraft may be found at an elevation within the extent of the then existing cloud layer. These possibilities should be examined carefully if it is known that a pilot was flying, or intended to fly, through a valley or gap in the proximity of cloud.

Figure C Example of probability area for contour search
To determine a probability area in such circumstances, the SMC may proceed as follows:

a) Mark the contour line at a level 500 FT higher than the highest level it is considered that the aircraft would have been flown, and colour all areas above this height in RED;

b) Mark the contour line at a level 500 FT lower than the height at which the area could be safely traversed, and colour all areas below this height in GREEN;

c) The uncoloured area will be the probability area, and, on an appropriate map, may be used as a three-dimensional representation of ridges, gullies, etc.

*Note: Figure C above demonstrates a resultant diagram after using this procedure.*

Crews must be well briefed and possess accurate, large-scale maps showing the contour lines. 1:100,000 is the smallest practical scale. Crews shall be reminded to make all positioning turns away from the mountainside and to exercise extreme caution when searching valleys where climb-out or turn-around is difficult or impossible.

An accurate account of the areas searched is required by the RCC. The search crews should plot actual areas covered as the flight progresses. Areas that have been searched should be shaded in on a large scale topographical map, leaving the unsearched area outlined.

Only one aircraft shall be assigned to an area at any one time.
3.4 Cooperation between States:

1. The SAR organisation shall arrange coordination of the SAR efforts with those of neighboring states, especially when these operations are proximate to adjacent SRR.

2. Agreements with neighboring states should be made to strengthen SAR cooperation and coordination, setting forth the conditions for entry of each other’s SAR units into their respective territories. These agreements should also provide for expediting entry of such units with the least possible formalities. The SAR organisation shall permit immediate entry into its territory of SAR units of other States for the purpose of searching for the site of an aircraft accidents and rescuing survivors of such accidents.

3. SAR units entering the territory of Guyana from neighboring States for SAR purposes shall transmit a request for prior approval, giving full details of the projected mission.

4. Requests for the entry of aircraft, equipment and personnel from other States to engage in search for aircraft in distress or to rescue survivors of aircraft accidents should be transmitted to the RCC which shall:
   a) Immediately acknowledge the receipt of such a request, and forward the request, to the concerned authorities,
   b) As soon as possible, indicate the conditions, if any, under which the projected mission may be undertaken.

5. Instructions as to the control which will be exercised on entry of such aircraft and/or personnel shall be given by the RCC in accordance with the standing plan for the conduct of SAR in the area.

6. The SAR organisation with prior approval shall:
   a) Provide assistance including assistance in the form of aircraft, vessels, persons or equipment, as may be needed;
   b) Grant any necessary permission for the entry of such aircraft, vessels, persons or equipment into its territory;
   c) Make the necessary arrangements with the appropriate customs, immigration or other authorities with a view to expediting such entry.

7. The SAR organisation shall make arrangement for joint training exercises involving its SAR units, those of neighboring States and operators to promote search and rescue efficiency.
3.4.1 Cooperation with other Services

The SAR organisation (as stated in Paragraph 1.4) shall arrange for all aircraft, vessels and local services and facilities which do not form part of the SAR organisation to cooperate fully with the latter in SAR and to extend any possible assistance to the survivors of aircraft accidents. To provide for the most effective and efficient SAR services, the SAR organisation should maintain the closest practicable coordination between the relevant aeronautical and maritime authorities. The SAR organisation shall ensure that their SAR services cooperate with those responsible for investigating accidents and with those responsible for the care of those who suffered from the accident. To facilitate accident investigation, rescue units should, when practicable, be accompanied by persons qualified in the conduct of aircraft accident investigations. Any authority, organisation or element of the SAR organisation having reason to believe that an aircraft is in an emergency shall give immediately all available information to the RCC.

3.5 Activation of SAR system

The SAR system operates on a 24hours basis and the Georgetown Flight Information Center /Area Control Center is responsible for activating the RCC when necessary.

3.5.1 Aircraft wreckage at sea

When an aircraft wreck is located in the sea, the Guyana Civil Aviation Authority and the Maritime Administration Department will coordinate in order to conduct a cohesive operation that will allow for the location, dispatching SAR units, rescue and for all necessary assistance to the people involved in the SAR operations in order to aid the persons affected.

3.5.2 Procedures

The search for information shall commence after the initial notification of a real or potential SAR event. All information received with respect to an incident, and during SAR operations shall be evaluated to determine their validity and degree of accuracy. Air Traffic Services and the RCC shall take the following actions as quickly as possible.
3.5.3 Notification by Air Traffic Services

General

Alerting and Search and Rescue Services are provided by all Air Traffic Services Units. During the phases of an emergency, the Duty Air Traffic Controller in the Air Traffic Services Unit (ATSU) under whose control or communication the aircraft was, shall initiate the notification process and provide the necessary assistance to the Flight Information Centre and or the Rescue Coordination Centre when activated. The notification and actions taken by ATS are dependent upon the phase of emergency declared.

The Duty Air Traffic Controller in the ACC or FIC shall perform the functions of the RCC until being relieved by a Unit Supervisor or the SMC.

The Shift Supervisor or the Duty Air Traffic Control Officer (DATCO) shall co-opt the assistance of the Aeronautical Information Services Officer (AISO).

The AISO shall communicate with other agencies and facilities as necessary under instructions from the Supervisor or Duty Air Traffic Controller. A chronological log on all actions taken shall be kept.

The Duty Air Traffic Control Officer with assistance from the Shift Supervisor shall carry out the notification process in accordance with the phase of emergency. (Checklist in Appendix 5)

Notification Message

The Notification message shall be as follows:

- INCERFA, ALERFA or DETRESFA as appropriate for the emergency;
- Name of agency and person calling;
- Nature of emergency;
- Significant information from flight plan; (POB, FOB, etc.)
- Unit which last made contact, time and means used;
- last position report and how determined;
- Color and distinctive marks of aircraft; - any action taken by reporting office;
- Dangerous goods carried onboard, if known
- Other pertinent remarks.
1. The Shift Supervisor or DATCO shall obtain as much of the following information from either the Pilot of the Aircraft Operator:
   - Call sign or registration, if unknown
   - Description: type, colours and markings of aircraft
   - Passengers and fuel on board
   - Flight rules (VFR, IFR)
   - Pilot rating and experience
   - Place of departure, destination and planned route
   - Actual time of departure and estimated time of arrival
   - Actual route
   - Emergency equipment carried
   - Last communication received
   - Last known position
   - Communications equipment
   - Navigation aids equipment - any dangerous cargo
   - Other relevant information.

2. Plot the track of the aircraft based on the flight plan information
3. Provide a chronological log on events of the emergency.
4. Brief the relieving Officer

The designated SMC on arrival at the Control Tower shall immediately obtain a situation report from the Duty Air Traffic Control Officer in the ACC or FIC and activate the RCC.

3.5.4 Uncertainty Phase

When a situation exists wherein there is uncertainty regarding an aircraft and its occupants, Air Traffic Services shall take the following actions:

**Actions by ATS**

The Duty Air Traffic Controller responsible for the ATSU with which the aircraft was in last contact shall:

1. Inform the Shift Supervisor who will provide assistance to the DATCO and continue the notification process to:
   - SATCO Operations
   - Flight Information Centre/Rescue Coordination Centre, when necessary
   - Manager ATS Operations
   - Aircraft Operator
   - Director Air Navigation Services
   - Director General GCAA
2. Continue the communication search to:
   i. Attempt communication with the aircraft involved on all appropriate frequencies either directly or through other ground and airborne stations.
   ii. Determine its most probable location or route by:
       • Making enquiries at aerodromes (including the aerodrome of departure) and other locations where it might have landed or observed; and
       • Contacting other appropriate sources, e.g. Aircraft known or believed to be on the same route within communication range.

3. Request other ATS units check their frequencies
4. Maintain listening watch on 121.5 MHz
5. Maintain close liaison with other ATS units, including adjacent ACCs, when necessary, so that:
   i. New information obtained will be immediately made available for evaluation, plotting, decision making, etc.;
   ii. Duplication of action shall be avoided
6. Notify all agencies and or personnel previously informed of any new information obtained or any change to the emergency phase.
7. Inform the aerodrome of destination, where applicable.
8. Enter into the SAR log (Appendix 5) all incoming information and progress reports, details of action taken as described above.

### 3.5.5 Alert Phase

Following the uncertainty phase, subsequent attempts to establish communication with the aircraft or inquiries to other relevant sources have failed to reveal any news of the aircraft the phase of emergency shall be progressed to Alert Phase and the DATCO shall initiate notification with support agencies.
**Actions by ATS**

The Shift Supervisor or DATCO shall continue with widespread attempts to obtain information of the aircraft from:

a) Force Control  
b) Other aircraft Operators  
c) Other aircraft operating in localities along the route of flight of the aircraft  
d) Miners  
e) Charterer  
f) Guyana Defence Force  
g) Medical Centre  
h) Others  
i) Adjacent ACCs

If no information is received following a more widespread attempt, declare Alert Phase and update the persons previously notified.

When the Alert Phase is declared and the DATCO is aware that the FIC has not been notified, he/she shall notify:

- FIC  
- Supervisor on duty, if available  
- SATCO Ops  
- Manager ATS Ops
ACTION BY FIC/RCC

When the FIC has been notified of an aircraft in the Alert Phase of an emergency, the Shift Supervisor or Duty Officer or SMC shall:

1. Complete or initiate all relevant actions as detailed in the Uncertainty phase.

2. Notify the following:
   - Force Control
   - Guyana Defence Force – Air Corp
   - Guyana Defence Force – Ops Centre
   - USMCC
   - Aircraft Operator
   - Airport Authority to which the aircraft is destined within Guyana, in the case of unlawful interference.
   - Guyana Police Force
   - Ministry of Public Health

4. Review all information received.

5. Continue widespread search for information on the aircraft from all available sources

6. Re-evaluate the flight plan, weather, terrain, possible communication delays, last known position, last radio communication, pilot rating and experience, estimated aircraft endurance and performance under adverse conditions.

7. Maintain close liaison between other ATS units and request their assistance with respect to passing information/instruction to the aircraft in emergency or the aircraft reporting an aircraft in emergency, when practicable.

8. Inform other aircraft operating in the vicinity of the aircraft in emergency of the nature of the emergency.

9. Continue to monitor the progress of the aircraft in emergency, where practicable

10. Estimate and plot the probable position of the aircraft and its maximum range from its last known position.

11. Whenever possible communicate to the aircraft operator all information received and action taken.

12. Coordinate with USMCC regarding possibility of ELT signal.

13. If appropriate, initiate search and rescue planning, under the instruction from the supervisor.

14. Keep all agencies previously informed of any new information received.

15. Request other aircraft operating in close proximity to the intended route of the aircraft concerned, to conduct a reconnaissance, in so far as practicable.

16. Maintain a chronological record of events.
3.5.6 DISTRESS PHASE

When a situation exists wherein there is reasonable certainty that an aircraft and its occupants are in grave and imminent danger, and require immediate assistance or; following the ALERT PHASE, Air Traffic Services shall take the following actions:

ACTION by ATS

The Duty Air Traffic Control Officer or Shift Supervisor shall update all agencies or personnel previously notified, or if initiating notification immediately notify:

- Flight Information Centre, unless previously notified.
- Supervisor on duty, if available
- Unit Chief or Manager Air Traffic Management

ACTION by FIC/RCC

When the FIC has been notified of an aircraft in the Distress Phase of an emergency, Supervisor shall assist the officer on duty as necessary to:

1. Complete all actions detailed for Uncertainty and Alert Phases.
2. Further develop a plan for the conduct of Search and Rescue.
3. Communicate the plan to the appropriate agencies and authorities.
4. Notify the ACC and RCCs in whose Search and Rescue regions are within the aircraft maximum range as determined from the last known position.
5. Estimate the geographical point, line or area of the aircraft, evaluate the degree of uncertainty and determine the extent of the area to be searched.
6. Amend the plan as the operation develops.
7. Select and notify designated SAR units for deployment.
8. Request aircraft, vessels, radio stations and other facilities to assist by:
   i. maintaining a listening watch for transmissions from aircraft in distress, survival radio equipment or ELT signal
   ii. providing assistance to the aircraft in distress as far as practicable
   iii. preparing for deployment of SAR tasks
   iv. informing RCC of any developments
9. Notify the State of Registry and Operator of the aircraft.
10. Notify the accident investigation authorities.
11. Maintain close liaison with relevant ATS units for any new information.
12. Analyse new information for decision making.
13. Keep the aircraft operator informed of any developments.
14. Maintain a chronological report of events.
Appendix 5 contains checklists for Uncertainty, Alert and Distress Phase etc.

3.5.7 RESCUE COORDINATION CENTRE PROCEDURES

Awareness stage:

- All reports concerning an incident which are received before and during the SAR operation must be carefully evaluated to determine their validity, urgency for action and extent of the operation required. The evaluation shall be thorough, and decisions must be made, and action taken as quickly as possible by the SMC.

- If confirmation of uncertain information cannot be obtained without undue delay, the SMC shall act on the information received rather than await verification.

- In the case of unreported aircraft, the following must be considered:
  - Communications delays
  - Adverse weather conditions
  - Habits of the pilot (if known).

After evaluating all available information, the RCC shall inform:

- Guyana Defence Force – Air Corp and Ops Centre
- USMCC
- Aircraft Operator
- Airport Authority to which the aircraft is destined within Guyana, in the case of unlawful interference.
- Guyana Police Force/Force Control
- Ministry of Public Health
**Initial Action Stage**

The SAR system begins to respond during this stage. The actions by ATS and or the RCC during each phase of emergency are detailed below.

1. The Search and Rescue Mission Coordinator designated by the DG or the DANS, shall be responsible for the cohesive planning and execution of the mission.

2. The Rescue Coordination Centre and or it’s rescue sub center (when established) shall maintain a daily register, with respect to the SAR operation in order to maintain a chronological record of all information received and actions taken.

3. After evaluation of all the available information and dependent on the phase of emergency declared, the RCC shall immediately inform all the authorities, ATSU and services involved in the SAR plan. This applies especially in the case of the reception of an ELT.

4. Ensure that all supporting agencies have been informed and updated as the situation progresses.

5. Maintain close contact with the ATS units.

6. Ensure adjacent RSCs and/or RCCs have been informed, if necessary.

7. In the case of a distress situation, when the location is known, dispatch a SAR unit with the least delay.

8. Develop a plan of action to carry out the SAR operations

9. Determine the available SAR assets to carry out the operations with a plan to obtain additional if needed.

10. Estimate the position of the aircraft in distress

11. Evaluate the degree of uncertainty with respect to its position

12. Evaluate the terrain of the Search Area.

13. Develop a plan of action for the search.

14. Develop a plan of action for the rescue.

15. If necessary, designate an on-scene coordinator
16. Examine the initial plan and modify as the information becomes available.

17. Notify the State of Registry

18. Notify the appropriate Accident Investigation Authorities.

*Note: An ATSU or RCC having declared a Distress Phase shall immediately activate the SAR plan to initiate rescue.*

**Planning stage:**

During the planning phase the RCC shall:

1. Evaluate the situation
   - Before a search is undertaken, all information must be carefully evaluated and analysed, since often times the information available is incomplete. To make up for the lack of information, the RCC must create a scenario; part assumption, part facts of what probably happened to the aircraft and its occupants. These scenarios are the basis of planning a search and should have a high probability of being true. If several scenarios exist, the SMC shall decide on which ones to pursue as priority. Survival of distressed persons may be affected by varying factors. Considerations should be given to:
     - The intended route with possible deviations of the aircraft
     - Last known position and time of the distressed aircraft and how determined
     - Possible hazards at the time of the accident – weather, terrain, etc.
     - Distressed aircraft capability and condition – airworthiness, types of navigation aids, survival equipment, visual or instrument flight, etc.
     - Crew behaviour – experience, training, habits, medical conditions,
     - On scene conditions which may determine survivability of the victims – temperature extremes, availability of water, animals, etc. Survivors may drift from the scene for shelter, water or safety, in the case of wind drift or water current.
     - Sighting or identification of search objects such as rafts, survival craft, debris or other evidence of distress incident, smoke, flares or other signals which maybe visual or aural.
2. Calculate the location of the distress aircraft and the probable area of that location. Determine the maximum distance survivors could have travelled. Establish a probable and possible area of search.

3. Determine the optimum allocation of resources so the chances of finding survivors are maximized.

4. Decide whether to search a small area with high coverage or a large area with lower coverage.

5. The RCC shall determine which choice has the greatest Probability of Success, and if necessary seek additional search facilities early.

6. Assume the survivors post distress movement and probable error of that assumption.

7. Define the Search area and sub search areas

8. Assign specific search areas to SAR units

**Operation stage**

Safe and effective SAR operations depend on coordinated teamwork and sound judgment relating to risk assessment. In this regard, saving distressed persons and the safety of SAR personnel are of equal concern to the SMC, hence it is pertinent that RCC:

1. Brief and debrief of search personnel shall include:
   - a full description and nature of the distress
   - full details of the search areas
   - any clues which may indicate the presence of search objects; such as distress signals, visual signal codes, broken treetops, wreckage, burnt patches, smoke, signs of a landslide or unusual occurrence affecting terrain, reflection from metal or glass, white or coloured objects.
   - Type and method of search and method of recording areas searched.

2. Select the resources and the equipment to be used in the operation inclusive of the types and numbers of SAR facilities to be used.
3. Establish a system of monitoring the status of SRUs to ensure they are not overworked and fatigued.

4. Evaluate the conditions of the search.

5. The ability of the search craft to accurately navigate the search pattern

6. The sweep width, which is dependent on the environmental conditions (smoke, haze, fog, low clouds, precipitation), terrain (flat, forested, mountainous, river) search object (type, size, contrast, etc.) and sensors.

7. Select the methods or patterns of search that allows for optimum coverage of the search area.
   - The technique is to move lookouts and or electronic sensors through the search area using one of a few standard search patterns. A regular, organized pattern of search ensures the entire area assigned is covered uniformly, safer to perform and easier to coordinate where multiple search facility are engaged.
   - Search patterns should be within the operational capability of each available search facility to accurately and safely complete its assigned pattern.
   - Type of sensor being employed
   - Direction and rate of search object’s predicted movement
   - Environmental conditions
   - Minimize the risk of collision with other search facilities o Search patterns coordinated between air and surface facilities offer advantages.

8. Divide the search area into sub areas and assign based on available resources.
   - Normally more than one aircraft should not be assigned to the same sub area. Multiple search facilities in one area distract crew’s attention from search, except where high altitude electronic search and low altitude visual search is coordinated.

9. Communication procedures and frequencies to be used
   - Details of other SAR facilities and areas of operation
   - Action to be taken on sighting of search object
   - Details of droppable supplies and any special procedures
   - Flight separation instructions
   - Special instructions concerning the flight to and from search area, including routes and level.
   - Designation of OSC and ACO when necessary.
   - Briefing of surface search personnel
• Transmission of SITREPS every 30 minutes and shall be in the form of a statement.

3.5.8 Rescue Planning and Operations

When the distressed aircraft and/or its occupants have been located it is the responsibility of the SMC in consultation with the OSC and pilot in command of the SAR facility as the case maybe to decide on the method of rescue taking into consideration the following:

• Action taken by the sighting craft and the SAR action which can be taken by other craft on-scene
• Location and disposition of survivors
• Condition of survivors and medical considerations
• Number of persons reported to be on board the distressed craft and the number of persons located
• Environmental conditions, observed and forecasted
• Available SAR facilities and their state of readiness
• Daylight hours remaining
• Any risks to SAR personnel

3.5.9 Sighting of the search object and procedures

When the search object has been located, the search facility must indicate to the survivors that they have been sighted by either:

• Flashing a light signal
• Low pass with landing lights on or rocking of wing, if the search facility is an aircraft
• Firing two green signal flares

If an immediate rescue cannot be carried out, the search facility which located the search object shall:
• Drop communications and survival equipment.
• Keep the distress scene in sight at all times, thoroughly survey the scene, accurately plot the location
• Report the sighting of the search object to the RCC. Reports shall include at least the following information:
  o Time of sighting
  o Position of the search object
Description of the distress scene
Number of sighted survivors and their apparent condition
Apparent condition of the aircraft

Supplies and survival equipment required
Any communication from survivors
Type and location of any surface vehicle, boat, etc.
What action was taken by the search facility?
Weather
Any risks
Remaining endurance of the SAR facility making report

3.5.10 Delivery of rescue personnel and equipment

During a rescue, personnel delivery shall be limited to medical personnel or repair parties only.

Equipment such as chain saw, pumps, torches, batteries, radios and medical supplies shall be delivered with the least delay.

Air SAR facilities shall carry supplies and survival equipment for dropping to survivors as soon as they are found. Supply dropping operation will must be coordinated with ATS in advance to avoid any delay regarding issuance of clearance. When dropping supplies by air, pilot and crew should understand and be able to account for factors that affect an air drop, such as:

- Correct release point;
- Drift effect of the wind;
- Aircraft speed;
- Aircraft height;
- Relative locations of the distress site and the rescue facility’s base;
- Time before rescue can be effected; and
- Danger of exposure.
3.5.11 Safety precautions and procedures at aircraft accidents

Always remember that some military aircraft may be carrying ammunition, bombs, rockets, etc. Ejector seats are powered by explosives. The following precautions should be observed at all aircraft accident sites:

a) Attendance at crash sites should be limited to essential personnel.
b) Personnel should wear Personnel Protective Equipment (PPE) – see paragraph 2.
c) All work at the crash site should be conducted upwind of the wreckage wherever possible.
d) The location of helicopter landing zones in close proximity to crash sites should be avoided to prevent the possible spread of contamination.
e) Eating, drinking, and smoking in or around the crash site should be prohibited.
f) Aircraft technical personnel familiar with the aircraft type should be utilised in the Location, identification, and salvage of hazardous materials and remnants.
g) Environmental health personnel should also be notified when suspected dangerous substances are present at the accident site.
h) SAR personnel who were working at the accident site should shower as soon as possible after leaving the area.

Personnel working within 10 meters of any crash site should wear the following protective equipment:

a) Respiratory protection; wear Occupational Safety and Health approved full-face or half-mask respirators with cartridges for organic vapours (for protection from jet fuel) and for dust, mist, and fumes (for airborne particulate fibers and other dust). All personnel must be fit, tested, and trained in the use of respirators. The use of full-face respirators will eliminate the need for goggles or safety glasses.
b) Eye protection such as goggles or safety glasses with side shields shall be worn when a half-face respirator is used.
c) Skin protection;
   i. Coverall - Tyvek, coated with 1.25mm polyethylene with hood. The coveralls should have a zipper front, elastic sleeves, legs, and drawstring hood.
   ii. Gloves - Puncture resistant leather gloves shall be worn. The environmental engineers will determine any additional requirements.
   iii. Boots - Steel toed shoes or boots should be worn.
   iv. All equipment should be thoroughly washed upon removal.
3.5.12 Rescue by aircraft

Fixed wing aircraft may drop equipment to survivors and direct rescue facilities, but they have limitations. They can mark the scene, showing lights, dropping flares, etc.

Sea Planes and amphibians may be able to operate along waterways and can land close to survivors located in such areas.

Helicopters can be used to rescue survivors by winching or landing on cut away helipads; however, coordination must be carried out by the OSC between surface facilities and helicopters. Consideration must be given to the fuel consumption, space and weight limitations.

3.5.13 Rescue by maritime facilities

When both maritime and helicopters are dispatched to the distress scene, survivors shall be transferred to helicopters for a more rapid delivery to the medical base.

Rescue boats are designated SRUs, however, any vessel nearby the distress scene may be used for rescue. When such vessels are sent to the scene, lifesaving appliances shall accompany those boats.

An aircraft ditching shall be responded to immediately, since it will float for only a limited time.

3.5.14 Rescue by land facilities

In certain areas, land facilities may be the most efficient means of rescuing survivors of aircraft accidents in-land or maritime survivors. Although the location may be known, the operation should not be undertaken without enough planning.

The land facility will be taken as close as possible to the distress scene by the most expeditious means of transport available. If access to the site is difficult, an aerial survey shall be done to determine the best route. The land facility must be equipped with means of two-way communication.

As soon as the distress scene is accessed, an attempt should be made to account for all occupants of the distressed aircraft. The search must continue until all occupants are found or accounted for or there is no significant chance of locating additional survivors. Nonetheless, those survivors located must be rescued as soon as possible.
The land facility must be able to:

- Give first aid
- Evacuate survivors collect and preserve medical and technical data to support investigation
- Attempt to establish the identities of casualties/survivors by any mean available
- Make a preliminary assessment of the wreckage
- Report to the SMC

### 3.5.15 Care for Survivors

After the rescue, SAR personnel shall ensure that survivors are not left alone. After rescue, survivors may require hospital treatment. Selection of transportation to medical facilities shall be carefully considered, taking into account the condition of the survivors, possibility of a medical doctor among the survivors, capability of the rescue facilities to reach the survivors in the shortest possible time, etc.

### 3.5.16 Debriefing of Survivors

A survivor who has been rescued may be able to give information that may assist the SAR operations. SAR personnel should in a calm voice, interview the survivor and pass information obtained to the RCC. During the debriefing process, SAR personnel shall not suggest answers to the survivor, and care shall be taken as to avoiding worsening the condition of the survivor. Additionally, all statements obtained shall be carefully assessed if the victim appears excited or frightened. Information passed to the RCC shall include as far as practicable:

- Total number of persons involved
- Possibility of any other survivor
- Indication of their position
- The survivors own medical history, heart condition, diabetes, infectious disease, etc.

**Note:** Consideration should be given to the fact that survivors may be traumatized and may not recall anything at that time.
3.5.17 Handling of the deceased

The Police shall handle the removal, transfer and where necessary the disposal of human remains regardless of their nationality. All necessary arrangement with mortician and morgue shall be made by the police. The police shall release names of civilians. The GDF will release names of military casualties. When the deceased are citizens of other States, diplomatic channels shall be used to coordinate transfer of the remains and the necessary notifications to next of kin.

SAR aircraft will transport human remains if no other means are available. The remains shall be securely wrapped and placed in body bags.

3.5.18 Requirements at the crash site

The aircraft wreckage and its surroundings shall not be disturbed except to assist in the recovery of survivors. Not only does the wreckage pose dangers, but the position of flight controls, the location of debris and other factors are important to the accident investigation. Rescue facilities shall be aware of this policy. Control of access to the crash site shall be established as soon as possible after the accident. The Police assisted by the GDF shall ensure the integrity of the crash site, and the wreckage is not accidentally set on fire.

If it is necessary to cut into the aircraft to remove survivors, non-sparking tools shall be used to ensure safety of both the rescue personnel and the survivors. Fire extinguishers shall be kept in close proximity.

A photographer will be designated by the SMC to take pictures of the aircraft wreckage, which will aid in the investigation process. These photographs shall be securely kept and delivered directly to the SMC, with the least possible delay. Further distribution of these accident photos is strictly prohibited.

Measures to preserve medical evidence shall be taken. The designated photographer shall take pictures of bodies prior to removal. The SAR ground facilities shall ensure shielding of bodies from the elements by the best means available. Police/investigator shall note the position of the immobilized survivors and SAR medical personnel shall maintain a medical log of each survivor.

Note: Except for compelling reasons, human remains shall not be moved without first notifying the SMC. Further guidance material is available in Guyana Aircraft Accident and Incident Investigation Unit of the Ministry of Public Infrastructure. (AIG Guidance Paper 1 and 2)
3.5.19 Major Rescue Operations:

Regardless of the magnitude and priority of the life-saving efforts involved in responding to a major incident, if any other functions are being carried out concurrently on scene by other than SAR personnel, the overall response involving SAR and the other functions should be well coordinated. All efforts shall be made to conduct a thorough critical incident stress briefing, including counseling sessions with mental health professionals, religious leaders and other human support services when necessary for personnel and survivors involved in an accident.

*Note: Major Rescue operations shall require the complete involvement of the Civil Defence Commission. Coordination for additional facilities shall rest with the CDC.*

3.5.20 During the conclusion stage

Points the SMC shall consider before suspending a Search:
- A thorough search of all the assigned areas has been completed
- All possible and probable areas have been investigated
- All reasonable means of obtaining information on the aircraft have been exhausted
- All assumed calculations used in the preparation of the search have been examines.

When the distressed craft has been located and the survivors rescued, the SMC shall terminate the SAR operation, close the case and immediately advise the operating agency, the reporting source, and any alerted authorities, agencies, services, or facilities. Information of interest to accident investigation and medical authorities shall be given to them without delay.
3.5.21 Suspension or Termination of a SAR Operation

SAR operations shall continue until all reasonable hope of rescuing survivors has passed. The SAR Coordinator shall decide in consultation with higher authority when to discontinue the SAR operation. When the appropriate authority considers, based on reliable information that a rescue operation has been successful, or that the emergency no longer exists, it shall terminate the SAR operation and promptly so inform any authority, facility or service which has been activated or notified.

The SMC shall thoroughly review the situation. The decision to suspend or terminate the operations shall be based on an evaluation of the probability that there were survivors from the initial incident, the probability of survival after the incident, the probability that any survivors were within the computed search area, and the effectiveness of the search effort as measured by the cumulative probability of success.

The SMC shall convene a “Wash Up” meeting after conclusion of each SAR operation so as to identify areas for improvement, areas of success, recommend amendments to the plan, etc. This meeting shall provide the forum for a complete debrief of the entire operation and should be convened at least two weeks after the conclusion of the SAR operation.

The reasons for search suspension or termination of a SAR Mission should be clearly recorded. The SMC should advise the relatives of the missing persons that the search has been suspended or terminated. The case review shall examine:

- Search decisions for proper assumptions and reasonable planning scenarios;
- Certainty of initial position and any drift factors used in determining search area;
- Significant clues and leads re-evaluated;
- Data computations;
- The search plan, to ensure that:
  - All assigned areas were searched;
  - The probability of detection is as high as desired; and
  - Compensation was made for search degradation caused by weather, navigational, mechanical, or other difficulties; and
- The determination about the survivability of survivors, considering:
  - Time elapsed since the incident;
  - Environmental conditions
  - Age, experience, and physical condition of potential survivors; survival equipment available; and
- Studies or information relating to survival in similar situation.
CHAPTER 4

COMMUNICATIONS
4.1 General

It is essential that the SAR communication system be effective so that there is rapid transmission of information regarding alert situations to the SAR unit, and to maintain two-way communications with the people in danger, SAR facilities in the search areas and the RCC.

The SAR Communication System shall allow for a structure that is readily accessible by any person or organisation who or which wishes to communicate an Alert situation.

The communications will be effected in accordance with the procedures established and will conform to the Phases of Emergency (Uncertainty, Alert and Distress).

The organisations which form part of the SAR system shall have available primary and secondary means of communications, the secondary having to function immediately in case of failure of the primary.

4.2 Communications Procedures

The SAR communication network shall be initiated when an aircraft or persons on board an aircraft encountered a phase of emergency or when a direct alert communication is received from an alerting post regarding a real or potential distress situation (ATSU, Police, Aircraft Operators, etc.)

The communications shall be effected by the quickest means available to the SAR organisations (radio, telex, email, fax, etc.).

Radiotelephony Communication for SAR shall be carried out by persons who have acquired an English Language Proficiency of Grade 4 or greater from the GCAA.

When an aircraft makes a distress call on the normal ATS frequency, or a distress message is relayed by another aircraft, communications shall not be transferred to another frequency unless the distress aircraft makes contact on such other frequency, normally 121.5MHz or 243MHz and 406 MHz.

When an alert message is received by an Alerting Post or ATS facility, that unit shall forward the alert message immediately to the FIC or RCC, relevant SAR personnel and response agencies.

The coordination between the RCC and supporting organisations shall be done initially by telephone or radio on the established frequency published in the Guyana AIP, thereafter: another frequency may be established for coordination.
Radio transmissions shall be in a form that is clear and concise in order to avoid the necessity of sending repetitions which will congest the frequency.

If one mode of communication fails during the operations, the RCC shall inform all appropriate organisations and SAR facilities of the alternative method that will be used.

The RCC shall maintain a detailed chronological register of all communications carried out from the beginning of the operations.

### 4.3 Communication Procedures at the distress scene

The SAR facilities shall communicate with the ATSU when they are close to the site of the accident, then instantly initiate communication with the RCC on the established frequency giving confirmation of the wreckage.

The SAR units shall maintain constant two-way communication with the RCC or OSC informing them of the progress made during a mission.

SAR aircraft at the location of the wreck shall communicate on the frequency established by the RCC.

### 4.4 Communications Procedures to confirm an accident and to activate the Aeronautical SAR plan

Emergency caused by the activation of ELT

The RCC when in receipt of an emergency signal (ELT) from the COSPAS SARSAT system or 121.5MHz, shall verify the activation and geographical coordinates of the possible distress site.

ATSU shall check with other ATS units to ensure all aircraft are accounted for or whether an aircraft is overdue.

In case of the confirmation of an overdue, lost or distress aircraft, the ATSU shall activate the Aeronautical SAR plan. In case of an overdue aircraft, solicit information from other sources, details of the aircraft, number of passengers on board, etc.

In a case where all aircraft are accounted for and no information is received of other aircraft reporting emergency or the imminent aircraft disaster in the location mentioned in the COSPAS-SARSAT message, the ATS unit shall declare a “FALSE ALARM”. In the event that the RCC was activated this unit shall be responsible for the above action.
4.5 Means of Communication and Operational Frequencies of the Aeronautical SAR System

The SAR organisation and its supporting agencies shall employ the following means of communications: HF, VHF, Telephone, fax and email. To communicate an emergency situation of an aircraft in the Georgetown FIR, the following means of communication shall be used:

Georgetown Flight Information Centre or Area Control Centre Radio Contact on VHF/HF frequency used by ATS, or Aeronautical Information Service by Telephone. The ATS units shall maintain a listening watch on frequency 121.5MHz to ensure immediate reception of emergency calls and or ELT signals.

4.6 International Emergency Frequencies

VHF Emergency Frequency - 121.5MHz or 243MHz

In the case of an aircraft accident at sea, commercial boats shall be informed of the accident by way of radio communications between such vessels and the Coastal Stations (Georgetown Light House), on the international maritime distress frequency.

The GCAA Public Relations Officer or other Public Organisations; State or Private shall be made available to the RCC for use in an aircraft emergency when needed.

Boats may receive information of a distress situation by reception of:

- SOS message transmitted by an aircraft on the international distress frequency.
- SOS message transmitted by the commercial boats after receiving an automatic emergency signal.
- A message emitted by an aircraft participating in the SAR operation.

4.7 Aircraft Emergency Equipment

Aircraft operating in Guyana shall comply with the Guyana Aviation Requirements regarding the carriage of ELT.

4.8 Communications:

Appendix 6 contains contact information for organisations which will be involved in Aeronautical SAR operation inclusive of Telephone Numbers.
4.9 Search and Rescue Signals

When meteorological conditions permit, the following visual shall be used to communicate during a SAR operation.

Signals with Surface Craft:
The following manoeuvres performed in sequence by an aircraft mean that the aircraft wishes to direct a surface craft towards an aircraft or a surface craft in distress:

a) Circling the surface craft at least once;

b) Crossing the projected course of the surface craft close ahead at low altitude and:
   i. Rocking the wings;
   ii. Opening and closing the throttle;
   iii. Changing the propeller pitch.

c) Heading in the direction in which the surface craft is to be directed. Repetition of such manoeuvres has the same meaning.

The following manoeuvres by an aircraft means that the assistance of the surface craft to which the signal is directed is no longer required:

a) Crossing the wake of the surface craft close astern at a low altitude and:
   i. Rocking the wings; or
   ii. Opening and closing the throttle; or
   iii. Changing the propeller pitch.

b) The following replies may be made by surface craft to the signal in section above for acknowledging receipt of signals:
   i. The hoisting of the “code pennant” (vertical red and white stripes close up (meaning understood);
   ii. The flashing of a succession of “t’s” by signal lamp in the morse code;
   iii. The changing of heading to follow the aircraft.

c) For indicating inability to comply:
   i. The hoisting of the international flag “N” (a blue and white checkered square);
   ii. The flashing of a succession of “N’s” in the Morse code.
4.10 Ground-Air Visual Signal Codes

Ground-air visual signal code for use by survivors:

1. Require assistance V
2. Require medical assistance X
3. No or Negative N
4. Yes or Affirmative Y

4.11 Air-to-Ground Signal codes

The following signals by aircraft mean that the ground signals have been understood:

a) During the hours of daylight:
   i. By rocking the aircraft’s wings;

b) during the hours of darkness:
   ii. Flashing on and off twice the aircraft’s landing lights or, if not so equipped, by switching on and off twice its navigation lights.

*Note: Lack of the above signal indicates that the ground signal is not understood.*
GUYANA CIVIL AVIATION AUTHORITY

AERONAUTICAL SEARCH AND RESCUE PLAN

APPENDICES
APPENDIX 2

SAR AGENCIES
ROLES AND RESPONSIBILITIES

Appendix 2(a) Guyana Defence Force
Appendix 2(b) Guyana Police Force
Appendix 2(c) Guyana Fire Service
Appendix 2(d) Ministry of Health
Appendix 2(e) Ministry of Agriculture
Appendix 2(f) Civil Defence Commission
Appendix 2(g) Aircraft Owners Association of Guyana
Appendix 2(h) Guyana Geology and Mines Commission
Appendix 2(i) Maritime Administration Department
Appendix 2(j) Ministry of Public Works and Communications (renamed Ministry of Public Infrastructure)
GUYANA DEFENCE FORCE

(AIR COMMAND, SPECIAL FORCES, COASTGUARD)

The Guyana Police Force in collaboration with Guyana Defence Force shall be the primary agency for the execution of the rescue of persons or recovery of bodies.

The rotor wing assets shall be used for searches in terrain where it is impracticable for fixed wing aircraft to operate. They shall also be used for dropping of supplies and extraction or persons or bodies.

The fixed wing assets will lend logistical support to the operations such as transportation of personnel, fuel, food, etc. in addition to searches.

Soldiers shall carry out ground searches as necessary.

The GDF shall also aid in clearing landing areas for helicopters. In case of accessing search object in forested and mountainous terrain, the Special Forces of the GDF will be utilized for such access.

First aid shall be provided to survivors by the GDF, when located.

The GDF shall provide security to survivors and wreck in so far as is practicable, in the absence of the Guyana Police Force being able to access the site.

The Guyana Police Force shall take over responsibility of the crash site on arrival at the site.

A representative of the GDF shall report to the RCC to effectively liaison with the GDF authorities to ensure efficient deployment of resources to the RCC.
Appendix 2(b)

GUYANA POLICE FORCE

The Guyana Police Force shall provide communications facilities where available to coordinate between SRUs and the RCC.

A senior officer shall report to the RCC to effectively liaison with the Police authorities for the deployment of resources as and when needed to ensure an efficient operation.

The Police shall provide security to persons and the aircraft or the crash site.

They shall be responsible for victim identification, release of the names of deceased, reception of survivors, immigration clearance, etc.

The Police shall provide if available resources for river transport and road transportation, escorts of ambulances, medical personnel, etc. if necessary.
Appendix 2(c)

Guyana Fire Service

At the request of the RCC, the GFS shall provide necessary and available human and other resources for the efficient conduct of the SAR Operations.

The Fire Service personnel shall provide first aid to survivors, if they are the first agency to arrive at the scene.

Assist in conveying survivors from site if practicable to hospitals or medical care area.

A senior officer shall report to the RCC to effectively liaison with the GFS for the deployment of resources as and when needed to ensure an efficient operation.
Appendix 2(d)

Ministry of Public Health

The Ministry of Public Health shall:

1. Provide medical personnel for the provision of medical attention to survivors.

2. Provide medical supplies for survivors.

3. Conduct triage at the scene of distress or medical base.

4. Liaise with all hospitals to provide medical services, inclusive of ambulance service for survivors who have been rescued, when required.
Appendix 2(e)

Ministry of Agriculture

The Ministry of Agriculture shall:

1. Make available the communication channels for coordination of information between their hinterland bases and the RCC, when needed.

2. Provide weather information; forecasts and updates along the routes of intended operation for the SAR ops.

3. Provide support with personnel, equipment and other logistical support.
Appendix 2(f)

Civil Defence Commission

The Director General of the Civil Defence Commission is responsible to:

1. Provide support to the operations by: providing available resources including boats, beds, tents, and other available related items for the SAR Mission.

2. Coordinate with NGOs when additional assistance is required: Medical, transportation, supplies, etc.
Appendix 2(g)

Aircraft Owners Association of Guyana

The Aircraft Owners Association of Guyana shall assist with the provision of SAR facilities for location of search object.
Appendix 2(h)

Guyana Geology and Mines Commission

The Guyana Geology and Mines Commission shall assist with logistical support including; mapping, transportation, equipment, etc.
Appendix 2(i)

Maritime Administration Department

Maritime Administration Department shall assist with the execution of the operation, especially access along the waterways.
Appendix 2 (j)

Ministry of Public Works and Communications renamed Ministry of Public Infrastructure

The Ministry of Public Infrastructure (MPI) shall:

1. Coordinate at the National Level.

2. Liaise with the diplomatic community when required.

3. In collaboration with the Guyana Police Force is responsible for press releases, liaison with victim’s next of kin and families of the injured.

4. Liaise with neighbouring states for additional facilities when needed.
APPENDIX 3

Appendix 3 (a) Letter of Agreement Georgetown and French Guyana

Appendix 3 (b) Letter of Agreement Georgetown and Brazil

Appendix 3 (c) Letter of Agreement Ministry of Public Infrastructure MPI and Guyana Defence Force

Appendix 3 (d) Letter of Agreement MPI and Guyana Police Force

Appendix 3 (e) Letter of Agreement MPI and Guyana Fire Service Ministry of Health

Appendix 3 (f) Letter of Agreement MPI and Ministry of Health

Appendix 3 (g) Letter of Agreement MPI and Ministry of Agriculture

Appendix 3 (h) Letter of Agreement MPI and Civil Defence Commission

Appendix 3 (i) Letter of Agreement MPI and Aircraft Owners Association of Guyana

Appendix 3 (j) Letter of Agreement MPI and MARAD

Appendix 3 (k) Letter of Agreement MPI and Guyana Geology and Mines Commission

Appendix 3 (l) Letter of Agreement MPI and Air Services Limited

Appendix 3 (m) Letter of Agreement MPI and Trans Guyana Airways Lt

Appendix 3 (n) Letter of Agreement Georgetown ACC and Piarco ACC
SEARCH AND RESCUE LETTER OF AGREEMENT BETWEEN
GEORGETOWN RCC / GUYANA AND CAYENNE RCC / FRENCH GUYANA

1- INTRODUCTION
In order to execute the norms and recommended methods of the International Civil Aviation Organization (ICAO), related to the benefit of help among the SAR services of neighboring States, the SAR services of Georgetown RCC / Guyana and Cayenne RCC / French Guyana, agree to establish direct communications for SAR coordination purposes.

2- EFFECTIVE DATE
The present Operational Agreement will enter in validity 1st November 2007.

3- OBJECTIVE
The objective of this Letter of Agreement is to establish procedures for direct communications between Georgetown and Cayenne Rescue Coordination Centers (RCC), according to the SAM/SAR/03/05 Conclusion of the Third Meeting for Search and Rescue Installation for the South America Region (SAM-96/05-SAR), carried out from 22 until 26 August of 2005, in Santiago del Chile.

4- REACH
The procedures contained in this Letter of Agreement have the purpose of giving fluency and effectiveness to the co ordinations between Georgetown RCC and Cayenne RCC. These RCC will establish the necessary co ordinations on the operations of Search and Rescue that are developed along their common national frontiers, using for this systems presented in Annex 1 to this Letter of Agreement. This Annex will be updated directly by the involved RCC, whenever alterations arise in the presented data.

5- TERMS OF THE AGREEMENT
- The Co ordinations between Georgetown RCC and Cayenne RCC will be executed in accordance with the norms, recommended methods and foreseen procedures of the IAMSAR manual.
- The assigned RCCs will have the obligation to acknowledge of receipt and to give answer to the outlined information.
- The language to be used is English.
- Each RCC will notify any damage in its systems and should inform the other RCC, in what way they will keep the communications while this damage is repaired.
- The used systems are not to be used for particular matters.
- The signer RCCs commit to maintain the teams and the necessary technology for the good operation of this agreement.
- The authorities responsible for the SAR Services of each State, or people designated by them, will execute the revision of the present agreement during the realization of the meetings of the Regions (SAM), or when any of the parts consider it as necessary.

6- INFORMATIONS TO BE EXCHANGED BETWEEN THE ASSIGNED RCC's
- Interceptions or escort of aircraft in situations of declared emergency.
- Situation of emergency of retarded aircrafts or any other event.
- Alerts of civil aircrafts.
- Means to support SAR missions.
- SAR events.
- Emergencies declared by transponder code of aircrafts.
- COSPAS – SARSAT system alerts.
- Air transportation of sick and injured persons.
- Procedures for aircrafts crossing, in attention to emergencies and SAR cases.
- Natural disasters.
- Coordinations to Search and Rescue operations.

7. REVISION

The present Letter of Agreement will be revised when the procedures indicated on it are affected by amendments to the norms, recommended methods, regional procedures implanted by the ICAO, or when new communications means are enabled and can affect these procedures. In the case that changes arise in the regulations of the ICAO, the Georgetown RCC or Cayenne RCC will initiate the amendment of this agreement.

8. PUBLICATIONS

The dissemination of the present agreement will be carried out as they are required to each state resolution.

9. CANCELLATION

The cancellation of the present Agreement will be made when some of the parts consider it this way and should make the due notification in writing.

10. VALIDITY

The present Operational Agreement will be in validity from its signature, by the corresponding authorities.

----------------------------------

FRENCH GUYANA REPRESENTATIVE

Jean Antoinette H.P.L.P.H.E
Chief of Cayenne RCC

GUYANA REPRESENTATIVE

Rickford SAMAROO
Manager ATS Operations

Dated this ........ day of September 2007.
# Search and Rescue International Agreement between Georgetown RCC / Guyana and Cayenne RCC / French Guyana

## Annex 1
**Means of SAR Communications**

<table>
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<th>MEAN</th>
<th>GEOGETOWN RCC</th>
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NA – not available.
SEARCH AND RESCUE LETTER OF AGREEMENT BETWEEN AMAZONICO RCC / BRAZIL AND GEORGETOWN RCC / GUYANA

1 - INTRODUCTION

In order to execute the norms and recommended methods of the International Civil Aviation Organization (OACI), related to the benefit of help among the SAR services of neighboring States, the SAR services of Amazônico RCC / Brazil and Georgetown RCC / Guyana, agree to establish direct communications for SAR coordination purposes.

2 - EFFECTIVE DATE

The present Operational Agreement will enter in validity 1st November 2007.

3 - OBJECTIVE

The objective of this Letter of Agreement is to establish procedures for direct communications between Amazônico and Georgetown Rescue Coordination Centers (RCC), according to the SAM/SAR/03/05 Conclusion of the Third Meeting for Search and Rescue Installation for the South America Region (SAM-96/05-SAR), carried out from 22 until 26 August of 2005, in Santiago del Chile.

4 - REACH

The procedures contained in this Letter of Agreement have the purpose of giving fluency and effectiveness to the coordinations between Amazônico RCC and Georgetown RCC. These RCC will establish the necessary coordinations on the operations of Search and Rescue that are developed along their common national frontiers, using for this systems presented in Annex 1 to this Letter of Agreement. This Annex will be updated directly by the involved RCC, whenever alterations arise in the presented data.

5 - TERMS OF THE AGREEMENT

- The coordinations between Amazônico RCC and Georgetown RCC will be executed in accordance with the norms, recommended methods and foreseen procedures of the IAMSAR manual.
- The assigned RCCs will have the obligation to acknowledge of receipt and to give answer to the outlined information.
- The language to be used is English.
- Each RCC will notify any damage in its systems and should inform the other RCC, in what way they will keep the communications while this damage is repaired.
- The used systems are not to be used for particular matters.
- The signer RCCs commit to maintain the teams and the necessary technology for the good operation of this agreement.
- The authorities responsible for the SAR Services of each State, or people designated by them, will execute the revision of the present agreement during the realization of the meetings of the Regions (SAM), or when any of the parts consider it as necessary.

6 - INFORMATIONS TO BE EXCHANGED BETWEEN THE ASSIGNED RCC’S

- Interceptions or escort of aircrafts in situations of declared emergency.
- Situation of emergency of retarded aircrafts or any other event.
- Alerts of civil aircrafts.
- Means to support SAR missions.
- SAR events.
- Emergencies declared by transponder code of aircrafts.
- COSPAS – SARSAT System Alerts.
- Air transportation of sick and injured persons.
- Procedures for aircrafts crossing, in attention to emergencies and SAR cases.
- Natural disasters.
- Coordinations to carry out Search and Rescue Operations.
SEARCH AND RESCUE INTERNATIONAL AGREEMENT BETWEEN AMAZÔNICO RCC / BRAZIL AND GORGETOWN RCC / GUYANA

ANNEX I
MEANS OF SAR COMMUNICATIONS

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<th>MEAN</th>
<th>AMAZÔNICO RCC</th>
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NA – not available.
7 - REVISION

The present Letter of Agreement will be revised when the procedures indicated on it are affected by amendments to the norms, recommended methods, regional procedures implanted by the OACI, or when new communications means are enabled and can affect these procedures. In the case that changes arise in the regulations of the OACI, the Amazónico RCC or Georgetown RCC will initiate the amendment of this agreement.

8 - PUBLICATIONS

The dissemination of the present agreement will be carried out as they are required to each State resolution.

9 - CANCELLATION

The cancellation of the present Agreement will be made when some of the parts consider it this way and should make the necessary notification in writing.

10 - VALIDITY

The present Operational Agreement will be in validity from its signature, by the corresponding authorities.

SIGNATURES

______________________________

GUYANA REPRESENTATIVE

Rickford SAMARQ

Manager Air Traffic Services – Operations

______________________________

BRAZIL REPRESENTATIVE

Maj Av – SÍLVIO Monteiro Junior

Chief of the Search and Rescue Division of Operations Sub department of Air Space Control Department

Cap Esp CTA – JORGE Wallacy Paiva de Azevedo

Adjunct of the Search and Rescue Division of Operations Sub department of Air Space Control Department

Dated this 27 day of September 2007.
Appendix 3(c)

SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C)
and
Guyana Defence Force (GDF)

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Guyana Defence Force agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The Guyana Defence Force shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of GDF, the RCCs shall immediately supply information to the GDF.


4.1 The RCCs and the GDF shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by GDF shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II - FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.
4.3 The GDF accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.

5. **Relationship between the RCCs and the GDF**

5.1 The authorities of the RCCs and GDF, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in ......................on the ........day of the Month of ........... of 20..

Hon. Robeson Benn
Minister Public Works & Comm
MPW&C

Commodore Gary Best
Chief of Staff
Guyana Defence Force

For the Ministry PW&C

For the Guyana Defence Force

1st Edition

20 Mar 2009
Appendix 3(d)

SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C) and Guyana Police Force (GPF)

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Guyana Police Force agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The Guyana Police Force shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of GPF, the RCCs shall immediately supply information to the GPF.


4.1 The RCCs and the GPF shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by GPF shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.
Guyana Civil Aviation Authority
Aeronautical Search and Rescue Plan

4.3 The GPF accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.

5. Relationship between the RCCs and the GPF

5.1 The authorities of the RCCs and GPF, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in ........................................ on the 15th day of the Month of March of 2010

Hon. Robeson Benn
Minister
Public Works and Communications

For the Min. PW&C

Henry Greene
Commissioner of Police
Guyana Police Force

For the Guyana Police Force

1st Edition
20 Mar 2009
SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C) and
Guyana Fire Service (GFS)

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Guyana Fire Service agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The Guyana Fire Service shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of GFS, the RCCs shall immediately supply information to the GFS.


4.1 The RCCs and the GFS shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by GFS shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.

1st Edition 20 Mar 2009
Guyana Civil Aviation Authority
Aeronautical Search and Rescue Plan

4.3 The GFS accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.

5. Relationship between the RCCs and the GFS

5.1 The authorities of the RCCs and GFS, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in .................. on the ........day of the Mcnth of ........ of 20..

Hon. Robeson Benn
Minister
Ministry Public Works and Comms.

For the Min. PW&C

Lawrence David
Chief Fire Officer
Guyana Fire Service

For the Guyana Fire Service

1st Edition 20 Mar 2009
Appendix 3(f)

SEARCH AND RESCUE 
LETTER OF AGREEMENT 
Between the Ministry of Public Works and Communications (MPW&C) 
and 
Ministry of Health

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Ministry of Health agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely: Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The Ministry of Health shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of Ministry of Health, the RCCs shall immediately supply information to the Ministry of Health.


4.1 The RCCs and the Ministry of Health shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by Ministry of Health shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.

4.3 The Ministry of Health accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.
5. **Relationship between the RCCs and the Ministry of Health**

5.1 The authorities of the RCCs and Ministry of Health, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in .................................. on the ______ day of the Month of _______ of 20__1

Hon. Robeson Benn  
Minister  
Ministry Public Works &Comms.

Hon. Leslie Ramsammy  
Minister  
Ministry of Health

For the Min. PW&C  
For the Min. of Health

1st Edition  
20 Mar 2009
ATTACHMENT A

LIST OF FACILITIES AND SERVICES PROVIDED BY
THE MINISTRY OF HEALTH

1. Administration and Coordination
   Office of the Chief Medical Officer
   Contact 226 1224

2. Provision of Medical Services
   Regional Health Services
   Contact 225 2420

3. Health Facilities
   EMS services
   Georgetown Public Hospital Corporation 227 8204 (913)
   Region 1:
   Mabaruma Public Hospital 777 5015
   Kumaka District Hospital
   Pakera Hospital
   Port Kituma Community Hospital
   Region 2:
   Suddie Public Hospital 774 4227
   Charity District Hospital 771 4243
   Region 3:
   West Demerara Regional Hospital 254 0311
   Leonora Cottage Hospital 268 3660
   Leguan Hospital 260 0732
   Wakenaam Hospital 268 3958
   Region 4
   Georgetown Public hospital Corporation 227 8204
   Diamond Diagnostic Center 265 4681
   Dr. CC Nicholson District Hospital 229 2965
   Region 5:
   Mahaicony District Hospital 221 2209
   Forth Wellington Hospital 232 0294
Region 6:
New Amsterdam Hospital 333 2591
Port Morant District Hospital 336 5376
Skeldon Hospital 339 2211
Mibicuri District Hospital
Forth Canji national Psychiatric Hospital 3332141

Region 7:
Bartica Public Hospital 455 2339
Kamarang District Hospital By SW Radio

Region 8:
Mahdia District Hospital By SW Radio

Region 9:
Lethem Public Hospital 772 2006
Aishalton District Hospital By SW Radio

Region 10:
Mackenzie Hospital 444 3002
Upper Demerara Hospital 442 0811
Kwakwani Hospital 440 2224
Appendix 3(g)

SEARCH AND RESCUE
LETTER OF AGREEMENT

Between the Ministry of Public Works and Communications (MPW&C)
and
Ministry of Agriculture

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Ministry of Agriculture agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The Ministry of Agriculture shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of Ministry of Agriculture, the RCCs shall immediately supply information to the Ministry of Agriculture.


4.1 The RCCs and the Ministry of Agriculture shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by Ministry of Agriculture shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.

4.3 The Ministry of Agriculture accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.
5. Relationship between the RCCs and the Ministry of Agriculture

5.1 The authorities of the RCCs and Ministry of Agriculture, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana's National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in ....................on the ..........day of the Month of .......... of 20..

............................
Hon. Robeson Benn
Minister
Ministry Public Works & Comms.

............................
Hon. Robert Persaud
Minister
Ministry of Agriculture

For the Ministry PW&C

For the Ministry of Agriculture

1st Edition 20 Mar 2009
SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C) and Civil Defence Commission (CDC)

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Civil Defence Commission (CDC) agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The CDC shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of CDC, the RCCs shall immediately supply information to the Commissioner - CDC.


4.1 The RCCs and the CDC shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by CDC shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II - FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.

4.3 The CDC accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.

1st Edition 20 Mar 2009
5. **Relationship between the RCCs and the CDC**

5.1 The authorities of the RCCs and CDC, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in .................................. on the ........day of the Month of ........ of 20... .

Hon. Robeson Benn  
Minister  
Ministry Public Works & Comms.

C. Ramsarup  
Director General  
Civil Defence Commission

For the Min. PW&C  
For the Civil Defence Commission

1st Edition  
20 Mar 2009
Appendix 3(i)

SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C)
and
Guyana Aircraft Owners and Operators (AOAG)

1. Introduction
1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Guyana Aircraft Owners and Operators (AOAG) agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance
2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement
3.1 The AOAG shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.1.1 The AOAG shall be compensated for services rendered and use of their assets.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of AOAG, the RCCs shall immediately supply information to the AOAG.

4.1 The RCCs and the AOAG shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by AOAG shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.

4.3 The AOAG accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.
5. Relationship between the RCCs and the AOAG

5.1 The authorities of the RCCs and AOAG, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in .....................on the ......day of the Month of .............of 20..

Hon. Robeson Benn
Minister
Ministry Public Works & Comms.

Mr. M. Correia
President
Guyana Aircraft Owners and Operators Association
Appendix 3(j)

SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C) and
Maritime Administration Department (MARAD)

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Maritime Administration Department (MARAD) agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority, request such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Aeronautical Search and Rescue Region (SRR) whose jurisdiction falls under the purview of the Aeronautical Rescue Coordination Centre (ARCC).

3. Terms of Agreement

3.1 The MARAD shall at all times, supply the ARCC with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of MARAD, the RCCs shall immediately supply information to the MARAD.


4.1 The ARCC and the MARAD shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by the MARAD shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II-FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the ARCC.

4.3 The MARAD accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority and coordinated by the ARCC.

1st Edition 20 Mar 2009
5. **Relationship between the ARCC and the MARAD**

5.1 The authorities of the ARCC and the MARAD, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority shall be responsible for advising the other official and/or private sources forming part of Guyana's National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in **Georgetown** on the 30th day of the Month of **November** of 2009.

Hon. Robeson Benn  
Minister  
Ministry Public Works & Comms.

Ms. C. Rogers  
Director General  
Maritime Administration Department

For the Min. PW&C  
For the MARAD

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1st Edition  
20 Mar 2009
Appendix 3(k)

SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C)
and
Guyana Geology and Mines Commission (GGMC)

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, the Guyana Geology and Mines Commission (GGMC) agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely, Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 The GGMC shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of GGMC, the RCCs shall immediately supply information to the Commissioner - GGMC.


4.1 The RCCs and the GGMC shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by GGMC shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-1 and shall form part of the Operations Plan (Operational Guide) of the RCCs.

4.3 The GGMC accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.
Guyana Civil Aviation Authority
Aeronautical Search and Rescue Plan

5. Relationship between the RCCs and the GGMC

5.1 The authorities of the RCCs and the GGMC, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in .............. on the ........day of the Month of March of 2010

Hon. Robeson Benn
Minister
Ministry Public Works & Comms.

Wilhelm Woolford
Commissioner
Guyana Geology and Mines Commission

For the Min. PW&C

For the GGMC

20 Mar 2009

1st Edition
ATTACHMENT 'A'

SEARCH AND RESCUE AGREEMENT BETWEEN MINISTRY OF PUBLIC WORKS AND COMMUNICATION AND THE GUYANA GEOLOGY AND MINES COMMISSION

LIST OF FACILITIES AND SERVICES PROVIDED BY THE GUYANA GEOLOGY AND MINES COMMISSION

1. Provision of funding as needed (pursuant to an agreed mechanism for approval for disbursement between GGMC and PW & C).

2. Facilitation of access to private airstrips/landings on mineral properties.

3. Provision of logistical support on land and water (e.g., loan/provision of boats and vehicles).

4. Provision of appropriate personnel pursuant to 3. above.

5. Assist with communication with relevant interior location (i.e., use of satellite phones, etc).

6. Provision of materials and beddings (i.e., rations, medical supplies, linens, blankets etc.)

7. Provision of reconnaissance intelligence; dissemination of maps; relevant co-ordinates; location of mineral properties where relevant.

N.B. The information at 7. above will only be provided on a need-to-know basis with appropriate exchange of letters guaranteeing confidentiality.
SEARCH AND RESCUE
LETTER OF AGREEMENT
Between the Ministry of Public Works and Communications (MPW&C) and
Air Services Ltd.

1. Introduction

1.1 Pursuant to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO), adopted by Guyana, concerning the provision of assistance among national agencies supplying services and installations to handle search and rescue cases, Air Services Ltd (ASL) agrees to provide assistance whenever the agencies of the Ministry of Public Works and Communications, namely; Guyana Civil Aviation Authority and or the Maritime Administration Department requests such assistance due to some emergency.

2. Scope of the Assistance

2.1 Both agencies agree to combine the means which, after prior evaluation, might be of use to support SAR missions within the airspace corresponding to the Guyana Search and Rescue Region (SRR) whose jurisdiction, including the respective ground and maritime areas, falls under the purview of the agencies Rescue Coordination Centre.

3. Terms of Agreement

3.1 Air Services Ltd. shall at all times, supply the RCCs with updated information regarding the availability of those services and facilities which could support a SAR mission at a given moment.

3.1.1 Air Services Ltd shall be compensated for services rendered and use of their assets.

3.2 Upon the occurrence of a SAR incident which for humanitarian reasons requires, or could require, the immediate support of ASL, the RCCs shall immediately supply information to ASL.


4.1 The RCCs and ASL shall set up mechanisms to coordinate possible mutual assistance actions which might be advisable for a prompt response in the SAR cases in which it is deemed convenient to implement the present mutual assistance Operational Agreement.

4.2 The coordination mechanisms and the list of facilities and/or services supplied by ASL shall appear in Attachment A to this Agreement, in keeping with the minimum requirements stipulated in the CAR/SAM Air Navigation Plan (ANP), Volume II – FASID, Part VII - Table SAR-I and shall form part of the Operations Plan (Operational Guide) of the RCCs.

4.3 ASL accepts to participate in exercises at regular intervals organised by Guyana Civil Aviation Authority or the Maritime Administration Department and coordinated by the RCCs.
5. **Relationship between the RCCs and Air Services Ltd**

5.1 The authorities of the RCCs and Air Services Ltd, or the officials appointed by them are authorised, within the framework of the present SAR Operational Agreement, to communicate directly so as to coordinate and deal with all matters in common concerning SAR cooperation between their respective agencies.

5.2 These authorities and those of SAR-related services and facilities shall meet at least once a year (or, in special cases, after a 72-hour notice) to discuss the results of the operations and exercises of the previous year and, if necessary, to propose those changes deemed convenient to optimise the present agreement.

5.3 The Guyana Civil Aviation Authority or the Maritime Administration Department shall be responsible for advising the other official and/or private sources forming part of Guyana’s National SAR Plan of the existence of the present SAR Operational Agreement and shall seek the possibility of setting up similar methods with other national or local providers.

Signed in ......................on the ..........day of the Month of ............ of 2010

Hon. Robeson Benn  
Minister  
Ministry Public Works & Comms.

Mr. M. Ally  
Managing Director  
Air Services Ltd
SEARCH AND RESCUE
LETTER OF AGREEMENT
BETWEEN
GEORGETOWN ACC
(RESCUE COORDINATION CENTRE)
AND
PIARCO ACC
(RESCUE COORDINATION CENTRE)
DOCUMENT IDENTIFICATION SHEET

SEARCH AND RESCUE LETTER OF AGREEMENT BETWEEN Piarco ACC (Rescue Coordination Centre) and Georgetown ACC (Rescue Coordination Centre)

REFERENCE INDEX
SAR/LOA-SYCJACC-TTPPACC-001

EDITION : Edition 1.0
EDITION DATE : 13/01/2020

Abstract
This Search and Rescue Letter of Agreement (SAR/LOA) between the Georgetown ACC (Rescue Coordination Centre) and Piarco ACC (Rescue Coordination Centre) provides a description of the SAR coordination procedures to be used between the respective ATS Units in the provision of their operational duties.

Georgetown ACC:
CONTACT PERSON: R. Sookhoo TEL: (592)608-5545 DIVISION: GCAA/ANS/ATS

Piarco ACC:
CONTACT PERSON: A. Brathwaite TEL: (868)620-5969 DIVISION: TTCAA/ANS/ATS
ALTERNATE: K. Ingraham (II) TEL: (868)723-3872 DIVISION: TTCAA/ANS/ATS

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ELECTRONIC BACKUP

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Search and Rescue Letter of Agreement between GEORGETOWN ACC (RCC) and PIARCO ACC (RCC) Effective Date: 13-01-2020
### DOCUMENT APPROVAL

The following table identifies all management authorities who have successively approved the present issue of this document:

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<td>Lt. Col. (Retd) Egbert Field</td>
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<td>Guyana Civil Aviation Authority</td>
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<td>Director General of Civil Aviation</td>
<td>Francis Regis</td>
<td>13-01-2020</td>
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<td>Manager Air Traffic Management</td>
<td>Roy Sookhoo</td>
<td>13-01-2020</td>
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<td>Manager ATS &amp; ANS Safety (MATS &amp; ANS Safety)</td>
<td>Alexis Brathwaite</td>
<td>13-01-2020</td>
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<td>Air Navigation Services Division</td>
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**DOCUMENT CHANGE RECORD**

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Search and Rescue Letter of Agreement between GEORGETOWN ACC (RCC) and PIARCO ACC (RCC)
Effective Date: 13-01-2020
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Search and Rescue Letter of Agreement between GEORGETOWN ACC (RCC) and PIARCO ACC (RCC)
Effective Date: 13-01-2020
FOREWORD

The procedures contained in this Search and Rescue Letter of Agreement (SAR/LOA) supplement or detail, when so required, the procedures prescribed in ICAO documents and shall be applied to all air traffic that operate within a common area of interest or, cross the common boundary of the Georgetown UTA/CTA/FIR and Piarco UTA/CTA/FIR.
# LETTER OF AGREEMENT BETWEEN

GEORGETOWN ACC (Rescue Coordinating Centre) AND
PIARCO ACC (Rescue Coordinating Centre)

# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOCUMENT IDENTIFICATION SHEET</td>
<td>3</td>
</tr>
<tr>
<td>DOCUMENT APPROVAL</td>
<td>4</td>
</tr>
<tr>
<td>DOCUMENT CHANGE RECORD</td>
<td>5</td>
</tr>
<tr>
<td>CHECKLIST OF PAGES</td>
<td>6</td>
</tr>
<tr>
<td>FOREWORD</td>
<td>7</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>8</td>
</tr>
<tr>
<td>1. General</td>
<td>9</td>
</tr>
<tr>
<td>2. Procedures</td>
<td>9</td>
</tr>
<tr>
<td>3. Terms of the Agreement</td>
<td>10</td>
</tr>
<tr>
<td>4. Information to be Exchanged Between the Respective ACCs (RCCs)</td>
<td>10</td>
</tr>
<tr>
<td>5. Revisions and Deviations</td>
<td>11</td>
</tr>
<tr>
<td>6. Publications</td>
<td>11</td>
</tr>
<tr>
<td>7. Cancellation</td>
<td>11</td>
</tr>
<tr>
<td>8. Interpretation and Settlement of Disputes</td>
<td>12</td>
</tr>
<tr>
<td>9. Validity</td>
<td>12</td>
</tr>
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<td>ANNEX A</td>
<td>13</td>
</tr>
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</table>

Search and Rescue Letter of Agreement between GEORGETOWN ACC (RCC) and PIARCO ACC (RCC)

Effective Date: 13-01-2020
SEARCH AND RESCUE LETTER OF AGREEMENT
BETWEEN
GUAYANA CIVIL AVIATION AUTHORITY
AND
TRINIDAD AND TOBAGO CIVIL AVIATION AUTHORITY
GEORGETOWN ACC (RESCUE COORDINATION CENTRE)
PIARCO ACC (RESCUE COORDINATION CENTRE)

Effective Date: 13 January 2020

1. General

1.1 Purpose

1.1.1 The purpose of this Search and Rescue Letter of Agreement (SAR/LOA) is to establish the SAR coordination procedures to be applied between the Georgetown ACC (Rescue Coordination Centre) and Piarco ACC (Rescue Coordination Centre) when providing Alerting Services to Operational Air Traffic.

1.1.2 The procedures are supplementary to those specified in ICAO, inter-air traffic service provider’s agreements and/or national documents.

1.2 Operational Status

1.2.1 Both ATS Units shall keep each other advised of any changes in the operational status of the facilities which may affect the procedures specified in this SAR/LOA.

1.3 Special Provisions

1.3.1 Nil

2 Procedures

2.1 The procedures to be applied by the Piarco Area Control Centre and the Georgetown Area Control Centre are detailed in the Annexes to this SAR/LOA:
Annex A: Definitions and Abbreviations
Annex B: Means of Communications

2.2 These procedures shall be promulgated to the operational staff of the ATS Units concerned.
Terms of the Agreement

3.1 The Coordination between Georgetown RCC and Piarco RCC will be executed in accordance with the norms, recommended methods and foreseen procedures of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual.

3.2 The parties shall acknowledge receipt and respond to queries in respect of the information outlined in section 4.

3.3 The language to be used is English.

3.4 Each RCC will notify any damage in its systems and should inform the other RCC, in what way they will keep the communications while this damage is repaired.

3.5 The parties commit to provide and the resources necessary for the effective operation of this agreement.

3.6 The authorities responsible for the SAR Services of each State, or people designated by them, will execute the revision of the present agreement during the realization of the meetings of the Regions (CAR/SAM), or when any of the parties consider it as necessary.

Information to be Exchanged Between the Respective ACCs (RCCs)

4.1 Interceptions or escort of aircraft in situations of declared emergency.

4.2 Situation of emergency of retarded aircraft or any other event.

4.3 Alerts of civil aircraft.

4.4 Means to support SAR missions.

4.5 SAR events.

4.6 Emergencies declared by transponder code of aircraft.

4.7 COSPAS - SARSAT System Alerts.

4.8 Air transportation of sick and injured persons.

4.9 Procedures for aircraft crossing, in attention to emergencies and SAR cases.

4.10 Natural disasters.

4.11 Coordination to carry out Search and Rescue Operations.
5 Revisions and Deviations

5.1 Revision of the Letter of Agreement.

The revision of the present SAR/LOA, excluding the Annexes, requires the mutual written consent of the signatories.

5.2 Revision of the Annexes to the Letter of Agreement.

The revision of Annexes to the present SAR/LOA will occur when the procedures indicated therein are affected by amendments to the norms, recommended methods, regional procedures published by ICAO, or when new communications means are enabled and can affect these procedures. Such revision requires the mutual written consent of the representatives of the respective ATS Units designated by the respective signatories, normally the Heads of Operations at the respective Units.

5.3 Temporary Deviations

When necessary, the Supervisors of the ATS Units concerned may introduce, by mutual agreement and for a specified time period, temporary modifications to the procedures laid down in the Annexes to the present SAR/LOA.

5.4 Incidental Deviations

Instances may arise where incidental deviations from the procedures specified in the Annexes to this SAR/LOA may become necessary. Under these circumstances, Air Traffic Controllers are expected to exercise their best judgement to ensure the safety and efficiency of air traffic in the provision of Alerting Services.

6 Publications

6.1 This Agreement shall be disseminated by each State in accordance with the State’s individual requirements.

7 Cancellation

7.1 Cancellation of the present SAR/LOA by mutual agreement of the respective Approving Authorities may take place at any time.

7.2 Cancellation of this SAR/LOA by either Approving Authority is possible at any time, providing that the cancelling party declares its intention to cancel the SAR/LOA with a minimum pre-notification time before the date of cancellation is to take effect.
8 Interpretation and Settlement of Disputes

8.1 Should any doubt or diverging views arise regarding the interpretation of any
provision of the present SAR/LOA or in case of dispute regarding its application the
parties shall endeavour to reach a solution acceptable to both of them.

8.2 Should no agreement be reached each of the parties shall refer to a higher level of its
national aviation administration to which the dispute shall be submitted for settlement.

9 Validity.

This Search and Rescue Letter of Agreement becomes effective when signed by the
authorised representatives of both States and is supplemental to the ATS Letter of

<table>
<thead>
<tr>
<th>Guyana Area Control Centre (RCC)</th>
<th>Piarco Area Control Centre (RCC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lt. Col. (Retd) Egbert Field A.A.</td>
<td>Francis Regis</td>
</tr>
<tr>
<td>Director General</td>
<td>Director General of Civil Aviation</td>
</tr>
<tr>
<td>Guyana Civil Aviation Authority</td>
<td>Trinidad and Tobago Civil Aviation Authority</td>
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</tbody>
</table>

Date [dd/mmm/yyyy]: 23 JANUARY 2020

<table>
<thead>
<tr>
<th>Guyana Area Control Centre (RCC)</th>
<th>Piarco Area Control Centre (RCC)</th>
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<tbody>
<tr>
<td>Roy Sookhoo</td>
<td>Alexis Brathwaite</td>
</tr>
<tr>
<td>Manager</td>
<td>Manager ATS and ANS Safety</td>
</tr>
<tr>
<td>Air Traffic Management</td>
<td>ATS and ANS Safety Department</td>
</tr>
<tr>
<td>Air Navigation Services</td>
<td>Air Navigation Services Division</td>
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<tr>
<td>Guyana Civil Aviation Authority</td>
<td>Trinidad and Tobago Civil Aviation Authority</td>
</tr>
</tbody>
</table>

Date [dd/mmm/yyyy]: 13 JANUARY 2020
ANNEX A

Definitions and Abbreviations

A.1 Definitions.

A.1.1 ATS Unit Area of Responsibility.
An airspace of defined dimensions where a sole ATS unit has responsibility for the provision of air traffic services.

A.1.2 Area of Common Interest
A volume of airspace as agreed between two ATS Units, extending into the adjacent Area of Responsibility, within which airspace structure and related activities may have an impact on air traffic coordination procedures.

A.1.3 General Air Traffic (GAT)
All flights which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislation.

A.1.4 Operational Air Traffic (OAT)
All flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.
## ANNEX B

### B.1 Means of Communications

<table>
<thead>
<tr>
<th>MEANS</th>
<th>GEORGETOWN ACC (RCC)</th>
<th>PIARCO ACC (RCC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REDDIG</td>
<td>9051 (ACC)</td>
<td>9152 (ACC)</td>
</tr>
<tr>
<td>TELEPHONE NUMBERS</td>
<td>+592 261 4356 (RCC)</td>
<td>+868 669 4852 (ACC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+868 669 6180/1 (ACC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+868 668 4128 (AIM)</td>
</tr>
<tr>
<td>FAX</td>
<td>+592 261 2279</td>
<td>+868 669 4259</td>
</tr>
<tr>
<td>SAR POINT OF CONTACT (SPOC)</td>
<td>+592 261 2269 (AIS)</td>
<td>+868 669 4806 (EXT 2504 – MANAGER ATS &amp; ANS SAFETY)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+868 669 4806 (EXT 2513 – UC AERO DROMES)</td>
</tr>
<tr>
<td></td>
<td>+592 685 4271</td>
<td>+868 620 5969 (MOBILE – MANAGER ATS &amp; ANS SAFETY)</td>
</tr>
<tr>
<td></td>
<td>+592 608 5545 (MANAGER ATM)</td>
<td>+868 723 3872 (MOBILE – UC AERO DROMES)</td>
</tr>
<tr>
<td>AMHS/AFTN</td>
<td>SYCYOYX (SPOC)</td>
<td>PIA <a href="mailto:ROACC@CAA.GOV.TT">ROACC@CAA.GOV.TT</a></td>
</tr>
<tr>
<td></td>
<td>SYG CYCYX (FIC/RCC)</td>
<td><a href="mailto:ABRATHWAITE@CAA.GOV.TT">ABRATHWAITE@CAA.GOV.TT</a></td>
</tr>
<tr>
<td>E-MAIL</td>
<td><a href="mailto:GEORGETOWNACC@GCAA-GY.ORG">GEORGETOWNACC@GCAA-GY.ORG</a></td>
<td>K <a href="mailto:INGRAHAM@CAA.GOV.TT">INGRAHAM@CAA.GOV.TT</a></td>
</tr>
<tr>
<td>ACC TELEPHONES</td>
<td>+592 261 2245 (ACC)</td>
<td>+868 669 4852 (ACC)</td>
</tr>
<tr>
<td></td>
<td>+592 261 3012 (FIC)</td>
<td>+868 669 6180/1 (ACC)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+868 271 3218 (ACC – BACK-UP ONLY)</td>
</tr>
</tbody>
</table>

### B.1.1 Verbal Coordination.

All verbal communications between non-physically adjacent controllers should be terminated with the initials of both parties concerned.
APPENDIX 4

SAR CONSULTATIVE COMMITTEE
### APPENDIX 4

**NATIONAL SAR COMMITTEE**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>DESIGNATION</th>
<th>TEL.</th>
<th>FAX</th>
<th>EMAIL</th>
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<tbody>
<tr>
<td>Ministry of Public Works</td>
<td>Minister</td>
<td>227-0790</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civil Defence Commission</td>
<td>Director General</td>
<td>226-8815</td>
<td>225 0486</td>
<td></td>
</tr>
<tr>
<td>Guyana Civil Aviation Authority</td>
<td>Director General</td>
<td>225-6822</td>
<td>225-6800</td>
<td><a href="mailto:Director-general@gcaa-gy.org">Director-general@gcaa-gy.org</a></td>
</tr>
<tr>
<td>Guyana Defence Force</td>
<td>Chief of Staff</td>
<td>226-9888</td>
<td>226-0487</td>
<td></td>
</tr>
<tr>
<td>Guyana Police Force</td>
<td>Commissioner of Police</td>
<td>226-0487</td>
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<tr>
<td>Guyana Fire Service</td>
<td>Chief Fire Officer</td>
<td>226-2411</td>
<td>225-4596</td>
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<tr>
<td></td>
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<td>226-2413</td>
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<td></td>
</tr>
<tr>
<td>Maritime Administration Department</td>
<td>Director General</td>
<td>225-7330</td>
<td>226-9581</td>
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<tr>
<td>Ministry of Public Health</td>
<td>Chief Medical Officer</td>
<td>226-1224</td>
<td>226-0973</td>
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<tr>
<td>Aircraft Owners and Operators of Guyana</td>
<td>President</td>
<td>222-6513</td>
<td>624-6038</td>
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<tr>
<td>Ministry of Home Affairs</td>
<td>Minister</td>
<td>226-1717</td>
<td>227-4806</td>
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</table>
APPENDIX 5

CHECKLISTS FOR UNCERTAINTY, ALERT AND DISTRESS PHASE
APPENDIX 6

CONTACT INFORMATION
APPENDIX 6

CONTACT INFORMATION
## APPENDIX 6

### ATTACHMENT A : CONTACT INFORMATION

<table>
<thead>
<tr>
<th>Name Of Agency</th>
<th>Office</th>
<th>Home</th>
<th>Mobile</th>
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<tbody>
<tr>
<td><strong>Georgetown Public Hospital Corporation</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Medical Director</td>
<td>226 – 6712</td>
<td></td>
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</tr>
<tr>
<td>CEO</td>
<td>226 – 1835</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Officer</td>
<td>227 – 8241</td>
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<tr>
<td><strong>Port Health CJIA</strong></td>
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<td>Port Health</td>
<td>261 – 2219</td>
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<tr>
<td>Chief Medical Officer</td>
<td>226 – 1224</td>
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<tr>
<td><strong>Intl. Aircraft Operators</strong></td>
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<tr>
<td>Amerijet</td>
<td>261 – 2271</td>
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<td>Caribbean Airlines</td>
<td>261 – 2331</td>
<td>624-3053</td>
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<tr>
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<td>261 – 2363</td>
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<tr>
<td>Caribbean Airlines - Station Manager</td>
<td>261 – 2436</td>
<td>623-3041</td>
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<tr>
<td>Laparkan</td>
<td>261 – 2729</td>
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<td>Suriname Airways</td>
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<td>261 - 2278</td>
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<td>Jags Aviation</td>
<td>222-2460</td>
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<tr>
<td>Local Aircraft Operators</td>
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<tr>
<td><strong>ASL – Operations</strong></td>
<td>222-4357 ext</td>
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<td></td>
<td>259/227 (RDO Rm)</td>
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<td></td>
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<td>600-4751</td>
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<td><strong>ROR – Operations</strong></td>
<td>222 – 2337</td>
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<td>225 – 9648</td>
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<td><strong>Trans Guyana Airways</strong></td>
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<td><strong>CJIA</strong></td>
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<tr>
<td>CEO</td>
<td>261 - 2244</td>
<td></td>
<td>600-1120</td>
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<tr>
<td><strong>Airport Manager</strong></td>
<td>261 - 2248</td>
<td>261-2212</td>
<td>625 – 6040</td>
</tr>
<tr>
<td><strong>Airport Duty Officer</strong></td>
<td>261 - 2281</td>
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<td>624 – 7022</td>
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<tr>
<td><strong>Works Branch</strong></td>
<td>261 – 2358</td>
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<tr>
<td><strong>SECURITY.</strong></td>
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<td><strong>Airport Security</strong></td>
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<td>261 – 2337</td>
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<tr>
<td><strong>Officer in charge Airport Security.</strong></td>
<td>261 - 2276</td>
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<tr>
<td><strong>Timehri Police station</strong></td>
<td>261 – 2222</td>
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<tr>
<td><strong>Force Control</strong></td>
<td>226 – 4585</td>
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<td>225 – 2700</td>
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<tr>
<td><strong>Officer in Charge Force control</strong></td>
<td>225 - 0593</td>
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<tr>
<td><strong>GDF</strong></td>
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<tr>
<td><strong>Operation Centre</strong></td>
<td>261 – 2377</td>
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<tr>
<td><strong>Medical Centre</strong></td>
<td>261 – 2223</td>
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<tr>
<td><strong>Base Commander</strong></td>
<td>261 – 2381</td>
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<td><strong>Air Corps</strong></td>
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<tr>
<td><strong>Ops. Centre switchboard</strong></td>
<td>261 – 2223-5</td>
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<tr>
<td><strong>Civil Defence Commission</strong></td>
<td>226 – 1117</td>
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</tbody>
</table>
ATTACHMENT A

LIST OF
EQUIPMENT & SUPPLIES
ATTACHMENT 1

FACILITIES AND EQUIPMENT REQUIRED

The following equipment, not normally carried by aircraft, should be readily available for SAR operations:

- binoculars;
- a copy of the International Code of Signals;
- signaling equipment, e.g. lamps, mounted loudspeakers, pyrotechnics;
- buoyant VHF/UHF marker beacons, floating lights, smoke floats, dye markers, etc., to mark position of survivors;
- air-deployable supplies and equipment for survivors;
- fire-fighting equipment;
- cameras for photographing wreckage and the location of survivors;
- first-aid supplies, including resuscitation equipment for immediate use;
- loudhailers and containers for dropping written messages;
- portable dewatering pumps and bailers;
- inflatable life rafts;
- Lifejackets and lifebuoys.

Land facilities equipment:

- Large-scale maps (1:50000 or 1:100000);
- reliable magnetic compass and watch;
- a protractor and a pair of dividers.
- DF equipment for radio signals, listening devices for collapsed structures,
- GPS equipment for three-dimensional positioning can be useful.
- Satellite phones, cellular phones
Supplies and Survival Equipment Guide

The lists of supplies and survival equipment which follow are not all-inclusive but are intended to serve as a guide.

Rations: subsistence pack of concentrated food or assorted containers of food, water in sealed containers or screw top polythene containers, condensed milk, coffee, sugar, and salt.

In general, provision of water to survivors should take priority over food.

Signaling: portable radio transmitter/receiver, pyrotechnic signals (smoke candles and red flares), flare pistol and colour-coded signal flares, flashlight, whistle, signaling mirror, and signal code card.

Medical: first-aid kit, insect repellent and head net, aspirin, sunburn lotion, and sunglasses or glare goggles.

Covering: tent, sleeping bag, blanket, waterproof clothing, socks, gloves, protective foot covering, wool hat, and compact foil emergency (“space”) blanket.

Fire and Lighting: water- and wind-proof matches, burning lens, fire kindling tablets, emergency stove, candles, and flashlight with spare batteries and bulbs.

Sundry: can opener, cooking and eating utensils, fishing kit, lock-blade knife, axe, rope, compass, writing pad, pencil, soap, toweling and toilet tissues, and booklet with survival hints.
ATTACHMENT B

LIST OF ABBREVIATIONS AND ACRONYMS
### Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
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<tr>
<td>A/C</td>
<td>Aircraft</td>
</tr>
<tr>
<td>ACC</td>
<td>Area control center</td>
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<tr>
<td>ACO</td>
<td>Aircraft co-ordinator</td>
</tr>
<tr>
<td>AES</td>
<td>Aeronautical earth station</td>
</tr>
<tr>
<td>AFN</td>
<td>Aeronautical fixed network</td>
</tr>
<tr>
<td>AFTN</td>
<td>Aeronautical fixed telecommunications network</td>
</tr>
<tr>
<td>AIP</td>
<td>Aeronautical Information Publication</td>
</tr>
<tr>
<td>AIS</td>
<td>Aeronautical information services</td>
</tr>
<tr>
<td>AMS</td>
<td>Aeronautical mobile service</td>
</tr>
<tr>
<td>AMSS</td>
<td>Aeronautical mobile satellite service</td>
</tr>
<tr>
<td>ANC</td>
<td>Air Navigation Commission</td>
</tr>
<tr>
<td>AOAG</td>
<td>Guyana Private Aircraft Owners and Operators Association</td>
</tr>
<tr>
<td>ARCC</td>
<td>Aeronautical rescue co-ordination center</td>
</tr>
<tr>
<td>ARSC</td>
<td>Aeronautical rescue sub-center</td>
</tr>
<tr>
<td>ATC</td>
<td>Air traffic control</td>
</tr>
<tr>
<td>ATCO</td>
<td>Air Traffic Control Officer</td>
</tr>
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<td>ATN</td>
<td>Aeronautical telecommunications network</td>
</tr>
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<td>ATS</td>
<td>Air traffic services</td>
</tr>
<tr>
<td>CDC</td>
<td>Civil Defence Commission</td>
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<tr>
<td>Cospas</td>
<td>Space System for Search of Vessels in Distress</td>
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<tr>
<td>C/S</td>
<td>Call sign</td>
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<td>CSP</td>
<td>Commence search point</td>
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<td>DF</td>
<td>Direction finding</td>
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<td>GDF</td>
<td>Guyana Defence Force</td>
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<tr>
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<td>Guyana Fire Service</td>
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<td>GGMC</td>
<td>Guyana Geology and Mines Commission</td>
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<tr>
<td>GPF</td>
<td>Guyana Police Force</td>
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<td>DME</td>
<td>Distance measuring equipment</td>
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<td>DRU</td>
<td>Desert rescue unit</td>
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<td>DATCO</td>
<td>Duty Air Traffic Control Officer</td>
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<td>DSC</td>
<td>Digital selective calling</td>
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<tr>
<td>ELT</td>
<td>Emergency locator transmitter</td>
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<tr>
<td>EPIRB</td>
<td>Emergency position-indicating radio beacon</td>
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<tr>
<td>FIC</td>
<td>Flight information center</td>
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<td>FIR</td>
<td>Flight information region</td>
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<tr>
<td>FM</td>
<td>Frequency modulation</td>
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<tr>
<td>GCAA</td>
<td>Guyana Civil Aviation Authority</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>GNSS</td>
<td>Global Navigation Satellite System</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
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<td>HF</td>
<td>High Frequency</td>
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<tr>
<td>ICAO</td>
<td>International Civil Aviation Organisation</td>
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<tr>
<td>IFR</td>
<td>Instrument Flight Rules</td>
</tr>
<tr>
<td>IMC</td>
<td>instrument meteorological conditions</td>
</tr>
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<td>IMO</td>
<td>International Maritime Organisation</td>
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<tr>
<td>Inmarsat</td>
<td>International Mobile Satellite Organisation</td>
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<tr>
<td>INS</td>
<td>inertial navigation system</td>
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<tr>
<td>kHz</td>
<td>kilohertz</td>
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<td>LES</td>
<td>land earth station</td>
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<tr>
<td>LKP</td>
<td>last known position</td>
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<td>LUT</td>
<td>local user terminal</td>
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<td>Maritime Administration Department</td>
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<td>MCC</td>
<td>mission control center</td>
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<tr>
<td>MF</td>
<td>medium frequency</td>
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<td>megahertz</td>
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<td>MoPH</td>
<td>Ministry of Public Health</td>
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<td>MRO</td>
<td>mass rescue operation</td>
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<td>NM</td>
<td>nautical mile</td>
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<td>NOTAM</td>
<td>notice to airmen</td>
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<tr>
<td>OSC</td>
<td>on-scene co-ordinator</td>
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<tr>
<td>PLB</td>
<td>personal locator beacon</td>
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<td>RANP</td>
<td>regional air navigation plan</td>
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<td>RCC</td>
<td>rescue co-ordination center</td>
</tr>
<tr>
<td>RF</td>
<td>radio frequency</td>
</tr>
<tr>
<td>RSC</td>
<td>rescue sub-center</td>
</tr>
<tr>
<td>SAR</td>
<td>search and rescue</td>
</tr>
<tr>
<td>SARSAT</td>
<td>Search and Rescue Satellite-Aided tracking</td>
</tr>
<tr>
<td>SATCO</td>
<td>Senior Air Traffic Control Officer</td>
</tr>
<tr>
<td>SC</td>
<td>SAR co-ordinator</td>
</tr>
<tr>
<td>SCC</td>
<td>SAR co-ordinating committee</td>
</tr>
<tr>
<td>SITREP</td>
<td>situation report</td>
</tr>
<tr>
<td>SMC</td>
<td>SAR mission co-ordinator</td>
</tr>
<tr>
<td>SPOC</td>
<td>SAR point of contact</td>
</tr>
<tr>
<td>SRR</td>
<td>search and rescue region</td>
</tr>
<tr>
<td>SRU</td>
<td>search and rescue unit</td>
</tr>
</tbody>
</table>
Guyana Civil Aviation Authority
Aeronautical Search and Rescue Plan

UHF  ultra-high frequency
UTC  co-ordinated universal time
VFR  visual flight rules
VHF  very-high frequency
VMC  visual meteorological condition
ATTACHMENT C

GLOSSARY
**Aircraft co-ordinator (ACO):** A person who co-ordinates the involvement of multiple aircraft in SAR operations.

**Alert phase:** A situation wherein apprehension exists as to the safety of an aircraft or marine vessel and of the persons on board.

**Alerting post:** A unit designated to receive information from the general public regarding aircraft or vessel in emergency and to forward such information to the associated rescue co-ordination center or rescue sub-center.

**Area control center (ACC):** A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

**Coast earth station (CES):** Maritime name for an Inmarsat shore-based station linking ship earth stations with terrestrial communications networks.

**Conclusion stage:** A period during a SAR incident when SAR facilities return to their regular location and prepare for another mission.

**Coordinated Search Pattern:** Multi-unit pattern using vessels and aircraft.

**Course:** The intended horizontal direction of travel of a craft.

**COSPAS-SARSAT system:** A satellite system designed to detect distress beacons transmitting on the frequencies 121.5 MHz and 406 MHz

**Craft:** Any air or sea-surface vehicle, or submersible of any kind or size.

**Datum:** A geographic point, line, or area used as a reference in search planning.

**Datum Area:** Area in where it is estimated that the search object is most likely to be located.

**Dead Reckoning:** Determination of position of a craft by adding to the last fix the craft’s course and speed for a given time.

**Direction finding (DF):** Homing on signals to pinpoint a position.
**Distress alerting:** The reporting of a distress incident to a unit, which can provide or co-ordinate assistance.

**Distress phase:** A situation wherein there is reasonable certainty that a vessel or other craft, including an aircraft or a person, is threatened by grave and imminent danger and requires immediate assistance.

**Ditching:** The forced landing of an aircraft on water.

**Drift:** Movement of a search object caused by environmental forces.

**Emergency locator transmitter (ELT):** Aeronautical radio distress beacon for alerting and transmitting homing signals.

**Emergency phase:** A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

**Emergency position-indicating radio beacon (EPIRB):** A device usually carried aboard maritime craft that transmits a signal that alerts search and rescue authorities and enables rescue units to locate the scene of the distress.

**False Alarm:** Distress alert initiated for other than an appropriate test, by communications equipment intended for alerting, when no distress situation actually exists.

**False Alert:** Distress alert received from any source, including communications equipment intended for alerting, when no distress situation actually exists, and a notification of distress should not have resulted.

**Flight information center (FIC):** A unit established to provide flight information and alerting services.

**Flight Information Region:** An airspace of defined dimensions within which flight information service and alerting services are provided.

**Fix:** A geographical position determined by visual reference to the surface, referencing to one or more radio navigation aids, celestial plotting, or other navigation device.
**General communications**: Operational and public correspondence, traffic other than distress, urgency and safety messages, transmitted or received by radio.

**Global Maritime Distress and Safety System (GMDSS)**: A global communications service based upon automated systems, both satellite-based and terrestrial, to provide distress alerting and promulgation of maritime safety information for mariners.

**Global Navigation Satellite System (GNSS)**: World-wide position and time determination system that includes one or more satellite constellations and receivers.

**Global positioning system (GPS)**: A specific satellite-based system used in conjunction with mobile equipment to determine the precise position of the mobile equipment.

**Grid**: Any set of intersecting perpendicular lines spaced at regular intervals.

**Ground Speed**: The speed an aircraft is making relative to the earth’s surface.

**Heading**: The horizontal direction in which a craft is pointed.

**Initial Action Stage**: A period during which preliminary action is taken to alert SAR facilities and obtain amplifying information.

**International Mobile Satellite Organisation (Inmarsat)**: A system of geostationary satellites for world – wide mobile communications services and which support the Global Maritime Distress and Safety System and other emergency communications systems.

**Last known position (LKP)**: Last witnessed, reported, or computed DR position of a distressed craft.

**Local user terminal (LUT)**: An earth receiving station that receives beacon signals relayed by Cospas-Sarsat satellites, processes them to determine the location of the beacons and forwards the signals.
Mass Rescue Operation (MRO): Search and rescue services characterized by the need for immediate response to large numbers of persons in distress, such that the capabilities normally available to search and rescue authorities are inadequate.

MAYDAY: The international radiotelephony distress signal, repeated three times.

MEDEVAC: Evacuation of a person for medical reasons.

MEDICO: Medical advice. Exchange of medical information and recommended treatment for sick or injured persons, where treatment cannot be administered directly by prescribing medical personnel.

Mission control center (MCC): Part of the COSPAS SARSAT system that accepts alert messages from the local user terminal(s) and other mission control centers to distribute to the appropriate rescue co-ordination centers or other search and rescue points of contact.

Operator: A person, organisation or enterprise engaged in or offering to engage in aircraft operation.

On scene: The search area or the actual distress site.

On-Scene Coordinator (OSC): A person designated to co-ordinate search and rescue operations within a specified area.

On scene endurance: The amount of time a facility may spend at the scene engaged in search and rescue activities.

Operations stage: A period during a SAR incident when SAR facilities proceed to the scene, conduct search, rescue survivors, assist distressed craft, provide emergency care for survivors, and deliver survivors to a suitable facility.

Optimal search area: The search area which will produce the highest probability of success when searched uniformly with the search effort available.

Optimal search plan: A plan that maximizes the probability of success of finding the search object using the available search effort.
Overdue: A situation where a craft has failed to arrive at its intended destination when expected and remains missing.

PAN-PAN: The international radiotelephony urgency signal. When repeated three times, indicates uncertainty or alert, followed by nature of urgency.

Personal locator beacon (PLB): Personal radio distress beacon for alerting and transmitting homing signals.

Pilot-in-command: The pilot designated by the operator or in the case of general aviation the owner, as being in command and charged with the safe conduct of flight.

Planning stage: A period during a SAR incident, when an effective plan of operations is developed.

Position: A geographical location normally expressed in degrees and minutes of latitude and longitude.

Positioning: Process of determining a position which can serve as a geographical reference for conducting a search.

Possibility area: The smallest area containing all possible survivor or search object locations.
(2) For a scenario, the possibility area is the smallest area containing all possible survivor or search object locations which are consistent with the facts and assumptions used to form the scenario.

Rescue: An operation to retrieve persons in distress, provide for their initial medical or other needs and deliver them to a place of safety.

Rescue co-ordination center (RCC): A unit responsible for promoting efficient organisation of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

Rescue sub-center (RSC): A unit subordinate to a rescue co-ordination center established to complement the latter according to particular provisions of the responsible authorities.
**Rescue unit:** A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue.

**Scenario:** A consistent set of known facts and assumptions describing what may have happened to the survivors.

**Search:** An operation, normally coordinated by an RCC or RSC, using available personnel and facilities to locate persons in distress.

**Search Area:** The area, determined by the search planner that is to be searched. This area may be subdivided into search sub-areas for the purpose of assigning specific responsibilities to the available search facilities.

**Search Action Plan:** Message, normally developed by the SMC, for passing instructions to SAR facilities and agencies participating in a SAR mission.

**Search and Rescue aircraft:** An aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

**Search and rescue co-ordinating communications:** Communications necessary for the co-ordination of facilities participating in a search and rescue operation.

**Search and rescue coordinator (SC):** One or more persons or agencies within an Administration with overall responsibility for establishing and providing SAR services and ensuring that planning for those services is properly coordinated.

**Search and rescue facility:** Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

**Search and rescue mission coordinator (SMC):** The official temporarily assigned to co-ordinate response to an actual or apparent distress situation.

**Search and rescue plan:** A general term used to describe documents which exist at all levels of the national and international search and rescue structure to describe goals, arrangements and procedures which support the provision of search and rescue services.
Search and rescue point of contact (SPOC): Rescue co-ordination centers and other established and recognized national points of contact which can accept responsibility to receive COSPAS SARSAT alert data to enable the rescue of persons in distress.

Search and rescue region (SRR): An area of defined dimensions, associated with a rescue co-ordination center, within which search, and rescue services are provided.

Search and rescue service: The performance of distress monitoring, communication, co-ordination and search and rescue functions, including provision of medical advice, initial medical assistance, or medical evacuation, through the use of public and private resources including co-operating aircraft, vessels and other craft and installations.

Search and rescue sub-region (SRS): A specified area within a search and rescue region associated with a rescue sub-center.

Search and rescue unit (SRU): A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

SAR: refers to Aeronautical Search and Rescue in this document.

Search object: A ship, aircraft, or other craft missing or in distress or survivors or related search objects or evidence for which a search is being conducted.

Search pattern: A track line or procedure assigned to an SRU for searching a specified area.

Search sub-area: A designated area to be searched by a specific assigned search facility or possibly two facilities working together in close co-ordination.

Situation report (SITREP): Reports, from the OSC to the SMC or the SMC to interested agencies, to keep them informed of on-scene conditions and mission progress.

Sortie: Individual movement of a resource in conducting a search or rendering assistance.

State of Registry: The State on whose register the aircraft is entered.
Uncertainty phase: A situation wherein doubt exists as to the safety of an aircraft or a marine vessel, and of the persons on board.

Unnecessary SAR alert (UNSAR): A message sent by an RCC to the appropriate authorities as a follow up when the SAR system is unnecessarily activated by a false alert.

Vessel: A maritime craft.