RESCUE COUNCIL FOR SHIPPING AND AVIATION

SAR DENMARK
(VOLUME I)
ORGANISATION
FOREWORD

At the request of the Rescue Council for Shipping and Aviation SAR DENMARK has been published in two volumes. ‘SAR DENMARK – ORGANISATION’ and ‘SAR DENMARK – OPERATIONAL MANUAL’ are both completed for the use of the Search and Rescue Service.

This present volume I ‘SAR DENMARK – ORGANISATION’ lists mutual, concise and simple rules for every component that is included in or assists the sea and aviation rescue service.

Volume I includes management and cooperation during rescue operations in Denmark. The content furthermore covers the cooperation of the rescue service with one or several foreign rescue services, the functions of the rescue service as well as the responsibilities of the rescue sub centres and the area leaders and also the duties during rescue operations. Volume I is divided into chapters 1 through 5 which describe the general principles and procedures as well as a number of initiatives with detailed information concerning communication, national SAR contingency plans, SAR agreements and authorities with special obligations et cetera.

The contents of SAR DENMARK have been approved by the individual ministries that are represented in the Rescue Council for Shipping and Aviation.

SAR DENMARK is published at the initiative of the Rescue Council for Shipping and Aviation, as the publications committee for the Operational Contact Group of the Sea Rescue Service of Denmark handles this task in practice. Suggestions for changes or updates should be sent to the secretary of the Rescue Council for Shipping and Aviation, Ministry of Defence, Holmens Kanal 42, 1780 Copenhagen K, Denmark. An electronic version in Danish/English can be found at www.forsvaret.dk/sok under ‘nationalt’ where it freely may be downloaded and copied.

The Rescue Council for Shipping and Aviation, January 2011
TABLE OF CONTENTS

Page no.:

Foreword II
Table of contents III–IV
Diagram for corrections V
List of effective pages VI

Chapter 1 Abbreviations and acronyms in the search and rescue service 1-1 – 1-5

Chapter 2 Organisation and areas of responsibility 2-1 – 2-11

Chapter 3 Planning search and rescue operations 3-1 – 3-3

Chapter 4 Alarm and the launch of search and rescue operations 4-1 – 4-2
  Appendix 1 Flow chart (coordination and communication) 4-1-1
  Appendix 2 Definitions and description of critical situations that cause the activation of a rescue centre 4-2-1 – 4-2-3

Chapter 5 Cooperation and procedures 5-1 – 5-10
  Appendix 1 IAMSAR SITREP format 5-1-1

Addendum A Communication A1 – A5
  Appendix 1 Monitoring the emergency frequencies for aviation A-1-1
  Appendix 2 Lyngby Radio A-2-1

Addendum B JRCC Denmark SAR contingency plan B-1 – B-9
Appendix 1  Geographical areas of responsibility of the Maritime Surveillance Centres  B-1-1
Appendix 2  Rescue stations of the coastal rescue service  B-2-1
Appendix 3  Vessels of the Naval Home Guard  B-3-1
Appendix 4  Fishing control ships of the Fishing Directorate  B-4-1
Appendix 5  Geographical areas of responsibility for JRCC Denmark  B-5-1

Addendum C  The Danish National Police regulations regarding police support to the search and rescue service  C-1 – C-6
Appendix 1  Contact information of the police districts  C-1-1
Appendix 2  Map of the police districts  C-2-1

Addendum D  SAR agreements  D-1
Nordic rescue agreement  D-2 – D-6
Denmark – Sweden  D-7 – D-11
  D-11a – D-11e
Denmark – Norway  D-12 – D-16
Denmark – Germany  D – 17 – D-24
Denmark – Poland  D-25 – D-35
Denmark – Great Britain  D-36 – D-41

Addendum E  References  E-1 – E-2

Addendum F  SAR definition  F-1
CHAPTER 1

DEFINITIONS AND ABBREVIATIONS IN THE SEARCH AND RESCUE SERVICE

ACC  Area Control Centre.
ACO  Aircraft Co-ordinator.
Alarm service  A service, which primary task is to inform either the control centre or the flight information centre regarding aircrafts that are in need of search and rescue service, as well as in the extent needed to assist these aircrafts.
ALERFA  Alert Phase. A situation, where there might be concern for the safety of a vessel or an aircraft and the passengers on board.
ARCC  Aeronautical Rescue Co-ordination Centre.
ARSC  Aeronautical Rescue Sub-Centre.
ATC  Air Traffic Control.
ATD  Actual Time of Departure.
C  Coverage Factor.
COSPAT-SARSAT  Satellite system for positioning of distress calls.
CSP  Commence Search Point/Position.
DATUM  The most likely position of the object being searched for.
DMB  Datum Marker Buoy.
DETRESFA  Distress Phase.
DR  Dead Reckoning.
DRe  Reckoning Mistake.
DSC  Digital Selective Calling.
DSP  Drift Start Position.
DTG  Date Time Group.
EEZ: Exclusive Economic Zone.

Search and rescue region: A demarcated area in which search and rescue services are made.

ELT: Emergency Locator Transmitter.

ETA: Estimated Time of Arrival.

ETD: Estimated Time of Departure.


Fr: Fatigue Factor.

FIR: Flight Information Region. A closely defined air space, in which flight information and alarm services are provided (flight information region).

FLIR: Forward Looking Infra Red.

(FTK): Royal Danish Flight Tactical Command.

GMDSS: Global Maritime Distress and Safety System.


ICAO: International Civil Aviation Organization.

IMO: International Maritime Organization.

INCERFA: Uncertainty Phase.

INMARSAT: Satellite System for maritime, aeronautic and land mobile communication, also the maritime emergency and security services and perceiving signals from certain emergency radio beacons.

ITU: International Telecommunication Union.

JRCC: Joint (aeronautical and maritime) Rescue Co-ordination Centre.

Local leader: Appointed locally based authority, that leads and coordinates the effort on scene.

LKP: Last Known Position.

LW: Leeway.

(MHV): National Guard Maritime Branch.

(MOC): Maritime Surveillance Centre.
(MOCN) Maritime Surveillance Centre North (based in Frederikshavn, Denmark).
(MOCS) Maritime Surveillance Centre South (based on the island of Bornholm, Denmark).

MPA Maritime Patrol Aircraft.
MRCC Maritime Rescue Co-ordination Centre.
NOTAM Notice to Airmen.

Emergency Phase Situation, where there is a fair certainty that a ship or an aircraft and its passengers are in serious and present danger and in need of immediate assistance.

OSC On Scene Coordinator. The leader of a rescue unit, who is appointed in this circumstance to lead and coordinate search and rescue operations in a specific search area.

OTC Off-shore Traffic Controller.

POD Probability of Detection.
POC Probability of Containment.
POS Probability of Success.

RADIO Scheme whereas seamen can seek medical advice on the sea.

MEDICAL

RCC Rescue Co-ordination Centre.
RDV Resulting Drift Vector.

Rescue Co-ordination Centre A unit which is responsible within its search and rescue region for the organisation of the search and rescue service, and for the coordination of search and rescue operations within this region (Rescue Co-ordination Centre).

Rescue-Sub-Centre A unit which is established to assist a rescue service within a more closely defined part of its search and rescue region, and is also subject to the relevant rescue centre (Rescue-Sub-Centre).

The Rescue Council Look under the Rescue Council for Shipping and Aviation.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>COP</td>
<td>Chief of Police.</td>
</tr>
<tr>
<td>RSC</td>
<td>Rescue-Sub-Centre (look above).</td>
</tr>
<tr>
<td>TS</td>
<td>Track Spacing.</td>
</tr>
<tr>
<td>SAR</td>
<td>Search and Rescue.</td>
</tr>
<tr>
<td>SAR operation</td>
<td>The coordinating effort, commanded by a rescue co-ordination centre, to search and rescue people in distress.</td>
</tr>
<tr>
<td>DMA</td>
<td>The Danish Maritime Authority.</td>
</tr>
<tr>
<td>The Rescue Council for Shipping and Aviation</td>
<td>Permanent advisory agency to ministries, boards and directorates that contribute to the SAR service.</td>
</tr>
<tr>
<td>SITREP</td>
<td>Situation Report.</td>
</tr>
<tr>
<td>SMC</td>
<td>Search and Rescue Mission Coordinator.</td>
</tr>
<tr>
<td>ADFHQ</td>
<td>Admiral Danish Fleet HQ.</td>
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<tr>
<td>SPOC</td>
<td>SAR Point of Contact.</td>
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<tr>
<td>SRR</td>
<td>Search and Rescue Region.</td>
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</table>
SRU: Search and Rescue Unit

TMA: Terminal Area.

DTA: The Danish Transport Authority.

TWC: Total Water Current.

Uncertainty Phase: Phase in which there is uncertainty about the safety of a ship or an aircraft and its passengers.

Sc: Speed Correction.

W: Sweep Width.

Fw: Weather Correction Factor.

Wu: Sweep Width. (Uncorrected).

Wc: Sweep Width. (Corrected).

X error: Navigational error. (distressed unit).

Y error: Navigational error. (SRU).
CHAPTER 2

ORGANISATION AND RESPONSIBILITY AREAS

2.1 DIVISION OF RESPONSIBILITIES

2.1.1 GENERALLY

In Denmark a search and rescue service has been created, this service is called SAR (Search and Rescue). Duties, organisation and responsibilities have been determined in accordance to international obligations, national demands and agreements made between both national as well as international contributors.

The SAR service intends to provide the best possible effort to rescue people in distress given the most appropriate application of the funds that are available. Established boundaries for responsibilities primarily serve purposes of planning and thus should never become a hindrance to the most appropriate insertion of relief aids in emergency situations.

The Danish SAR service is organised by the Joint Rescue Coordination Centre Denmark (JRCC Denmark) med responsibilities of assisting ships, aircrafts and offshore installations in distress.

2.1.2 INTERNATIONAL RELATIONS

The search and rescue cooperation between nations is regulated by international conventions and bilateral agreements. The interaction and responsibilities of national organisations in relation to the SAR-services of neighbouring countries has been organised by recommendations and guidance by the International Maritime Organization (IMO) concerning shipping, and by the International Civil Aviation Organization (ICAO) concerning aviation.

Both organisations, which will be described in further detail in chapter 3, publish important material relating to the SAR service, the content thereof is reflected upon in the hand book.
2.1.3 **NATIONAL LY**

The Danish SAR organization has been created with the contribution of many state authorities/agencies, supplemented by contributions by municipal and private organizations. Volunteer resources are available but are not formally incorporated into the organization.

The Danish ministry of economics and industry holds the responsibility of shipping in Danish territorial waters. The SOLAS Convention regulations regarding this are provided in the Maritime Safety Act which include Danish ships globally and foreign ships in the exclusive economic zones to the extent which is compatible with international law. The powers of the Act have been delegated to the Danish Maritime Authority.

In accordance to §6 in the Maritime Safety Act, Danish ships are required to aid to the rescue of human lives at sea, including providing assistance to emergency services. The Act implements the SOLAS Convention regarding Danish ships including other affiliated IMO Conventions, Resolutions and Circulars. Concerning Danish ferries on regular services IMO Circular MSC/Circ. 1079 of July 10 2003, Guidelines for Preparing Plans for Co-Operation between Search and Rescue Service and Passenger Ships (in accordance with SOLAS regulation V/7.3) prescribes that the agreement has been entered into and is carried on board.

The Ministry of Traffic is responsible for all matters concerning civil aviation in Denmark and as such is the resort ministry to the aviation rescue service. The Ministry of Traffic has delegated the assignment to the Traffic Authority, which externally in relation to the international aviation and ICAO holds the responsibility for the aviation rescue service.

The Ministry of Defence is responsible for the management and operation of the SAR organization. The Ministry of Defence has imposed the Danish Defence Command to handle the daily management of the SAR service.

The division of tasks is as follows:

- JRCC Denmark manages search and rescue operations in connection with persons in distress at sea.
- JRCC Denmark furthermore manages and coordinates search and rescue operations in connection with missing, distressed or wrecked aircrafts.

JRCC Denmark may for the implementation of this request assistance from the relevant authorities.
- The police force has the coordination management during SAR operations in lakes, marshes, streams and in harbours cf. § 17 of the Preparedness Act.

Search and rescue operations in lakes, marshes, streams and harbours are assigned to the municipal rescue services (fire and rescue services). These operations should thus be incorporated into the dimensioning of the municipal rescue service. In the case of recovering for example fatalities however, this is a police job, and as such the police are required to obtain the relevant rescue branches.

The police may for the implementation of this request assistance from the relevant authorities.

The daily management of the SAR service is delegated to JRCC Denmark, which disposes over the primary SAR resources.

2.1.4 OPERATIONAL

The rescue service’s daily management is carried out by JRCC Denmark, which is established and integrated into the Operations Centre at the Admiral Danish Fleet HQ in Aarhus, Denmark.

2.1.5 GEOGRAPHICAL

The international geographical breakdown of search and rescue areas is based upon conventions, agreements, plans, recommendations or procedure.

The geographic responsibility area of the Danish JRCC organization is identified as its Search and Rescue Region (SRR). The responsibility areas for aviation and sea rescue are apparent in addendum B, appendix 5.

The Danish SAR service is established within this area, however help may also be provided outside the Danish SRR. Bilateral SAR agreements have been made between Denmark and her neighbouring countries.

Cooperation agreements, which establish particular alarm or coordination procedures for specific geographical areas, can be established between both domestic as well as foreign rescue coordination centres. Significant SAR agreements are added in addendum D of the handbook.
2.1.6 RESOURCES AND ECONOMY

The SAR service of Denmark is an organisation, in which the management functions and the officially acknowledged and permanently established resources are called the primary SAR units. The larger part of materials and personnel are made available to the specific SAR operation by the ministries, governing boards and their branches in accordance to agreements made between the contributors. In addition to state resources a number of municipal and privately owned resources are included into the SAR organisation.

Volunteer resources such as sailing guilds, aviator associations and radio amateur clubs may assist the SAR service. They are not an official part of the organisation and can for that reason not be attributed any liability or duties besides what is legally required.

In connection with the restructuring of the SAR service during the period of 1955-57 the involved government departments agreed upon the following financial principle: ‘There will be no balances on assists executed in search and rescue purposes between the governmental branches of the rescue service’.

2.1.7 THE RESCUE COUNCIL

Under the recommendation by the report of 27th June 1957 concerning the shipping and aviation rescue services and per agreement with the involved government departments (Ministry of Defence, Justice Department, The Ministry for Greenland, The Ministry of trade, crafts, industry and shipping, The Ministry of Public Service and the General Directorate for the Postal- and Telegraph Service) The Rescue Council for Shipping and Aviation (The Rescue Council) has been formed by the Defence Secretary on May 25th 1960.

The Rescue Council is responsible for considering applications to secure the best possible execution of the search and rescue operations that the Danish authorities are legally required to perform or delegate in relation to shipping and aviation and recommending them to the relevant responsible ministers.

The Rescue Council consists of members that are appointed by respectively The Ministry of Defence (4 members, including the chairman and secretary), The Justice Department (1 member), The Ministry of Economic Affairs and Trade (1 member), the Ministry of Food, Agriculture and Fisheries (1 member), Ministry of Transport (1 member) and the Ministry of Science, Technology and Development (1 member).
2.1.8 THE OPERATIONAL CONTACT GROUP OF THE SEA RESCUE SERVICE

Subject to the Rescue Council is the Operational Contact Group of the Sea Rescue Service (OCS). Generally the OCS handles OCS operative affairs concerning co-ordination, efficiency and optimization of the SAR service – and furthermore specific tasks assigned to it by the Rescue Council.

The permanent members of the OCS are the following agencies:

Admiral Danish Fleet HQ, Royal Danish Flight Tactical Command, the Danish Emergency Management Agency, the Home Guard Command, the Danish Maritime Safety Administration (abolished October 2011), the Danish Maritime Authority, the Directorate of Fisheries (now incorporated into the Nature and Professions Directorate under the Danish Ministry of Foods, Agriculture and Fisheries), Lyngby Radio (LYRA), the Association of Municipal Emergency Management Captains and the Danish National Police.

With observer status the following further are included in the OCS:

Maritime Surveillance Centre North, Maritime Surveillance Centre South, the Association of Danish Rescuers, 722nd Squadron (Air Force), 1st Squadron (Navy), Naval Home Guard District West, Naval Home Guard District East, the Danish Naval Warfare School, The Danish Fishermen's Occupational Health Services and the Danish Fishermen’s Association.

OCS ordinarily holds biannual meetings under the chairmanship of the Admiral Danish Fleet, who also convene and issue agenda to the meetings. The group set the propositions to the Ministry of Defence/the Rescue Council.

2.2 OPERATIONAL CONDITIONS

2.2.1 MANAGEMENT

The operational management of SAR operations is executed by JRCC Denmark, who has the authority to deploy and manage the allocated resources in SAR operations. Managing includes the decision to launch and conclude operations, the duty to organize and direct deployed units and the privilege to delegate entire or parts of management of a SAR operation to a rescue sub command centre or a competent local management (area/local leader).
2.2.2 **RESCUE COORDINATION CENTRES**

JRCC Denmark is, in accordance with agreements between the implicated governing boards and branches, authorized to deploy in search and rescue operations the civilian and military rescue services, that are included in the SAR organization. JRCC Denmark manages and coordinates search and rescue in the Danish responsibility zone and is responsible for the ability to immediately set the rescue service into function in a way that is most efficient and appropriate.

Simple and unambiguous principles for the allocation of the operational management are a prerequisite for an efficient SAR service.

2.2.3 **RESCUE-SUB-CENTRES**

A rescue coordination centre might have sub centres (Rescue-Sub-Centres), whereto the command of a rescue operation entirely or partially may be delegated. The purpose of the rescue sub centres is to provide an efficient management and coordination of the resources in a delineated SAR operation.

In Denmark no Rescue-Sub-Centres exist as such, however during an operation parts of the task solution may be delegated to either of the Maritime Surveillance Centres, LYRA or a local leader.

In consultation with JRCC Denmark both Marine Surveillance Centre North and South are obligated to secure ties with the local authorities, with whom an eventual cooperation might be necessitated.

2.2.4 **LOCAL COMMAND**

It is often appropriate to establish a local command in the place or area where the SAR operation is taking place. This function is called an On-Scene Coordinator and the purpose is to coordinate and manage all efforts on scene. The on-scene coordinators are appointed according to the following guidelines:

- When a vessel is in distress and cannot or does not wish to maintain its own command, the vessel (ship or aircraft) that first arrives on scene must take on the function as on-scene coordinator.
- In case the vessel is not capable, or it is superfluous or unreasonable due to the circumstances, the rescue centre may decide whether the function of on-scene coordinator is better imposed on a more suitable vessel.

- During major operations or whenever the conditions are in favour thereof, the rescue coordination centre may appoint the leader of a rescue unit (ship or aircraft) as the on-scene coordinator. In rescue operations where more than one rescue aircraft partake, the rescue coordination centre or possibly the OSC may appoint a suitable aircraft as the Aircraft Co-ordinator (ACO).

Management of SAR operations close to shore, in or around harbours or in small waters may often advantageously be delegated to a local authority on shore.

The command on scene is executed by a local, competent authority appointed by the rescue coordination centre, for example the police station, coast guard rescue station and in some circumstances a harbour office. The function is identified as the on-scene coordinator and its task is to manage and coordinate the efforts on scene, and to keep the relevant rescue coordination centre or possibly rescue sub-centre updated about the situation.

2.2.5 EFFORT AND DELEGATION

Any of the elements of the rescue service is obligated to show own initiative and in the circumstances given to act immediately in a manner that is optimal for a successful execution of the rescue operation. If an element has taken action without beforehand giving information to the responsible rescue centre, notification must be given as soon as possible after doing so, so that a full evaluation of the situation and a suitable coordination of the efforts ahead may be made.

Delegation of parts of the operational management in a rescue operation is determined in every single case from an overall assessment of the situation. The following, general principles are basic to the decision to delegate:

- Decisions to initiate and finish SAR operations are made by JRCC Denmark
- In case of accidents in connection with marshes, lakes, streams or harbours the decision to initiate and finish the SAR operation is made by the police.
In sea rescue operations which are locally bounded and do not require any air or foreign resources, parts of the task solution may be delegated to the relevant maritime surveillance centre.

During flight rescue operations the operational command management will remain with JRCC Denmark. An on-scene coordinator and a local leader will be appointed as often as is required by the circumstances of the situation.

2.2.6 **COMMUNICATION**

The public radio safety service is performed by the Air Traffic Control regarding aviation and by Lyngby Radio for shipping.

The rescue coordination centres furthermore have the Danish defence and aviation communication systems at their disposal. The management functions of the SAR service is linked via direct telephone connections between the rescue coordination centres and from there to the aforementioned radio safety service.

2.3 **RESOURCES**

2.3.1 **GENERALLY**

The following resources take part in the SAR organisation and may in the incidence of a SAR operation be disposed over by the rescue coordination centres:

2.3.2 **STATE RESOURCES**

The Danish defence contributes with:

- The Royal Danish Navy ships.
- The Royal Danish Navy operative land organisation.
- The Royal Danish Air Force aircrafts.
- The Royal Danish Navy Air Control Wing.
- Units of the Royal Danish Army.
- Units of the Danish Home Guard.
- The Danish Emergency Management Agency chemical counselling regarding emergencies involving dangerous materials.
- The State’s regional rescue management (The emergency centres of the Danish Emergency Management Agency)
The Danish Maritime Administration contributes with:
- Inspection vessels.
- Pilot stations and pilot vessels.

The Ministry for Foods, Agriculture and Fisheries contribute with:
- Fishing control ships.

The Danish Police Force contributes with:
- The personnel and materials of the various police circuits in Denmark.
- Beach/shore inspectors.

The Ministry of Transportation contribute with:
- The personnel and materials of the Danish Coastal Authority.
- Units of the civilian aviation traffic service alarm services and the personnel and materials of these units.

A fire and rescue emergency management service has been established at airports that are used for route and charter traffic, furthermore at some airports a sea rescue service, according to the provisions laid out by the Danish Traffic Board.

The Danish National Radio contributes to the SAR service by extending warnings and search queries when requested.

2.3.3 **Municipal**

A number of municipalities in Denmark possess resources that are useful to the SAR organisation. These resources typically include:
- The personnel and materials of the harbours.
- The municipal emergency rescue service.
- Rescue materials that have been acquired for special circumstances, e.g. life boats on the beaches.

The deployment of municipal resources is requested via the local police, unless a special agreement has been made. In the greater area of Copenhagen a cooperation agreement has been made, so that a request for deployment of municipal resources is acquired through the Copenhagen Police Radio Service (HS).

2.3.4 **PRIVATE RESOURCES**

Privately owned resources that formally are a part of the SAR organisation include:

- Lyngby Radio
- INMARSAT Coast Earth Station EIK, Norway

Furthermore privately owned rescue and salvage resources may be utilised.

Outside the SAR organisation rescue resources exist in connection with the off-shore industry. These include:

- Management functions for off-shore installations.
- Rescue and salvage ships.
- Aircrafts.

These materials are expected to be deployed per request by the rescue coordination centres. The management functions on the oil drilling platforms may resume the function as on-scene coordinator to a certain extent.

2.3.5 **VOLUNTEER RESOURCES**

Resources that are the capacities of shipping academies, sailing associations, boating guilds, aviation clubs, radio amateur clubs and so on, quite often extend their volunteer abilities to the SAR service. These resources are not a part of the formal SAR organisation as primary SAR units however agreements may be made locally between the holders of such volunteer resources and JRCC Denmark.
These agreements may solely contain the guidelines for the operative deployment of resources. Queries regarding payment, insurance and liability are not relevant to the SAR organisation.

2.4 **INTERNATIONAL RESOURCES**

2.4.1 **COOPERATION BETWEEN NATIONAL RESCUE COORDINATION CENTRES**

Search and rescue operations often necessitate the cooperation between JRCC Denmark and the equivalent rescue coordination centres in neighbouring countries.

This cooperation includes both management issues as well as assistance consisting of resources. Although the SAR organisations of the countries are structured differently the cooperation is executed without regard to the geographical responsibility areas, by the following main principles:

- The rescue coordination centre that first receives the alarm executes the operational management unless other is agreed upon in the specific circumstances.
- Per request additional rescue coordination centres contribute with resources for the rescue coordination centre that holds the operational command of a SAR operation.

The main principle for the cooperation is, that the rescue centre that most efficiently might solve the task, takes on the operational management, while the other rescue centres contribute with the resources that are necessary.

The rescue coordination centres that daily cooperate with JRCC include:

- ARCC GLÜCKSBURG, Germany
- ARCC KINLOSS, UK
- JRCC SWEDEN, Sweden
- ARSC GDYNIA, Poland
- JRCC DEN HELDER, The Netherlands
- JRCC NORTHERN NORWAY, Norway (COSPAS-SARSAT Mission Control Centre)
- JRCC SOUTHERN NORWAY, Norway
- MRCC ABERDEEN, UK
2.4.2 **AVAILABLE RESOURCES**

The available resources of the aforementioned rescue coordination centres appear from international SAR contingency plans.

2.4.3 **SATELLITE SYSTEMS**

**COSPAS-SARSAT**

Denmark participates in a system identified as COSPAS-SARSAT, the purpose of which is to determine the positioning of emergency signals that are transmitted on the 406 MHz frequency.

JRCC Denmark is the Danish national SAR point of contact to the COSPAS-SARSAT system and as a function thereof has access to national registers of Danish, Greenlandic and Faroe emergency radio transmitters. The responsibility for updating these registers lies upon the Danish Transport Authority, the Danish Maritime Authority and the former Danish National IT and Telecom Agency (abolished October 2011).

Emergency signals that can be traced to Danish territory or to Danish registered emergency radio transmitters are transmitted to JRCC Denmark who evaluates the signal.

**INMARSAT**

Ships that can communicate through the international maritime satellite system INMARSAT may send emergency signals to and communicate with shore via the INMARSAT system's geostationary satellites (see addendum A).

Emergency calls are received by the earth stations and are automatically transmitted to a rescue coordination centre that is attached to the earth station in question. The rescue coordination centre then redirects the emergency call to the appropriate rescue coordination centre. JRCC Denmark is
linked to the earth station in Eik, Norway. JRCC Denmark is the national Danish SPOC in relation to the INMARSAT system.

2.5 **SAR AGREEMENTS AND CONTINGENCY PLANS**

2.5.1 **SAR AGREEMENTS**

The international organisation of the search and rescue service is constructed in accordance with recommendations encompassed in international conventions regarding aviation and shipping matters. The practical cooperation between nations is settled per agreements between the countries in question. SAR agreements are included in addendum D to the handbook.

2.5.2 **SAR CONTINGENCY PLANS**

JRCC Denmark devises the SAR contingency plan for the Danish responsibility area – this is found in addendum B. The chief of police furthermore contributes by devising Acts for the involvement of the police force in the sea and aviation rescue service, cf. addendum C.
3.1 INTERNATIONALLY

3.1.1 SEA RESCUE SERVICE

In 1998 the United Nations’ International Maritime Organisation (IMO) published a handbook ‘International Aeronautical and Maritime Search and Rescue Manual’ (IAMSAR). The handbook has been divided into three volumes (Vol. I Organisation and Management, Vol. II Mission Coordination, Vol. III Mobile Facilities). Vol. III offers guidance to persons who need assistance from others in emergency situations, and also to the leader of the ship that may be requested to either offer such assistance or command a search and rescue operation at sea. Vol. I and II are in the use of JRCC Denmark and the Maritime Surveillance Stations and set up guidelines for the construction of sea rescue organisations and the implementation of search and rescue operations and also encourage coastal states to develop similar sea rescue organisations that will be capable of cooperating and offer mutual assistance in rescue efforts.

The International Convention on Maritime Search and Rescue (the SAR Convention) became effective on June 22nd 1985. The essential purpose of the convention is to facilitate the cooperation between the sea rescue services of each country and between the participants of search and rescue operations by establishing the legal and technical background of an international search and rescue plan.

The SAR Convention determines inter alia that the participating nations:

- Must coordinate their search and rescue organisations,
- If necessary should coordinate their search and rescue operation with neighbouring countries,
- Should enter into agreement with the neighbouring countries about determining the conditions for rescue units to access into or above the territorial waters or space of the specific country. And also,
- Should enter into search and rescue agreements with the neighbouring countries with regards to coordination of materials, implementation of joint procedures and regular testing of the interstate communication channels etc.
3.1.2 FLIGHT RESCUE SERVICE

Annex 12 of the United Nations’ Convention on International Civil Aviation Organization (ICAO Convention) determines the international standards and guidelines of the flight rescue service with the purpose of easing international cooperation. The 6th edition of Annex 12, implemented by the ICAO Council in March 1975, is valid for the ICAO member states by the establishment, maintenance and running of aviation oriented search and rescue services and besides the territories of the member states covers the parts of international waters or areas over which no sovereignty is recognized.

Annex 12 determines that member states:

- Must provide assistance to aircrafts in distress and to survivors of air crashes without regard to the nationality of such aircrafts or the survivors.
- Must sketch the search and rescue regions for which they provide search and rescue services to ensure that no overlapping occurs.
- Must establish a rescue coordination centre in their respective search and rescue regions,
- Must coordinate the organisation of their search and rescue services amongst themselves.
- Should – under the observance of existing laws and regulations of the land – allow rescue units from other states immediate access to its territorial waters or airspace when the purpose alone is to determine the location of a crash site and save potential survivors.
- Should as quickly as possible list the possible conditions of which the intended operation are to be performed under.
- Should enter into agreement with neighbouring states in which the conditions of the access of rescue units to the states’ territories are determined and to ensure that such agreements by means of the least number of formalities help promote the access for rescue units.

Denmark utilizes Annex 12 which states the terms that should be taken into consideration in connection with the international cooperation between the flight rescue services.
3.1.3. **MANUAL FOR AERONAUTIC AND MARITIME SEARCH AND RESCUE SERVICES – IAMSAR**

ICAO and the IMO have jointly completed a manual, International Aeronautical and Maritime Search and Rescue Manual Vol. I, II and III which specifies and clarifies the international regulations and recommendations regarding the organisation and procedures for aeronautical and maritime search and rescue services which is the content of the ICAO Convention’s Annex 12, the IMO International Convention on Maritime Search and Rescue as well as the ITU Radio Regulations.

3.2. **NATIONALLY**

The planning and execution of any SAR operation is based on the listed documents in Addendum E.

JRCC Denmark draws up the necessary requirements for executing SAR operations within its area of responsibility. The requirements must contain guidelines for the coordination and cooperation between the national police force, the resources of the Danish Maritime Safety Administration, the centres of the Danish Emergency Management Agency, the rescue vessels of the Ministry for Food, Agriculture and Fisheries and with Lyngby Radio according to the guidelines in IAMSAR, vol.III.

The police commissioner (equivalent to a PPO) decides to which extent local planning is necessary regarding the coordination of the contribution of the police with JRCC Denmark, Lyngby Radio, the resources of the Danish Maritime Safety Administration and the Danish Emergency Management Agency centres as well as other local resources. If necessary the police commissioner will appoint a person responsible locally for a specifically outlined area to draw up an area contingency plan.

Outlined demarcations laid out for the areas of responsibility are primarily for planning purposes and should never become an obstacle to the appropriate deployment of relief measures in an emergency.

It is paramount for the effective execution of a SAR operation that the management responsibility is unequivocally placed and announced. A clear-cut agreement of who is the responsible leader of the operation should therefore be made. This agreement as well as the information of the responsible leader and the on-scene coordinator must be exchanged between the parties involved and be announced to the participating rescue units.
CHAPTER 4
ALARM AND INITIATION OF SEARCH AND RESCUE OPERATIONS

Appendixes: 1. Flow chart (coordination and communication)
2. Definitions and description of critical situations that cause the activation of a rescue coordination centre.

4.1. ALARM

The notification to a rescue coordination centre of a situation that requires or could cause the activation of the rescue service must occur as soon as possible and is usually undertaken by:

- Lyngby Radio concerning critical situations involving ships and vessels equipped with maritime communication devices.
- Air Coordination Centre (ACC) Copenhagen concerning critical situations involving civilian and military aircrafts.
- Other authorities that receive the notification of critical situations at sea or air (see appendix 1 regarding the schematic and principled overview of the coordination).

Whenever JRCC Denmark receives any notification from another source than the above mentioned, the JRCC will assess the situation and apply the most appropriate course of action in the specific critical situation.

Regardless of the above mentioned regulations about notification of a rescue coordination centre, the local relief and rescue organisations that are capable of an immediate response must firstly be activated.
4.2. **SEARCH AND RESCUE OPERATIONS**

With regard to the circumstances JRCC Denmark will command the search and rescue operations in close cooperation with Lyngby Radio, air traffic service (ATS) units and other involved authorities and institutions.

Any unit or link must keep JRCC Denmark as well-informed as possible about the course of the operation and also about any circumstances that are considered of possible importance to the further progress of the operation. Reversely JRCC Denmark should keep the other activated links or units in the appropriate order informed best possibly regarding the performed dispositions and of the progress of the operation in outline.

The managing and coordinating functions of JRCC Denmark cease when the situation which has caused the operation no longer requires the assistance of the rescue coordination centre. For crashed vessels the coordinating and managing functions of the rescue coordination centre cease when the crash site is localised and when the survivors are brought to safety. Any changes in status of the situation must immediately be notified by JRCC Denmark.

4.3. **CALLING OFF SAR OPERATIONS**

When JRCC Denmark during a critical situation is informed that the critical situation no longer exists it will directly or indirectly notify any authority, centre or service it has activated or notified as soon as possible and in the appropriate order. Cancellation and termination of a SAR operation falls upon JRCC Denmark.
FLOW CHART (COORDINATION AND COMMUNICATION)

Note:

Communication between rescue coordination centres and on-scene-coordinators must be approached in the most appropriate manner in the situation.
DEFINITIONS AND DESCRIPTIONS OF CRITICAL SITUATIONS THAT CAUSE
THE ACTIVATION OF A RESCUE COORDINATION CENTRE

1. CRITICAL PHASES

In aviation and shipping the definitions and descriptions indicated below of critical situations that cause the activation of a rescue coordination centre are applied:

1.1. UNCERTAINTY PHASE (Code word: INCERFA)

Aviation

A situation where there is uncertainty about an aircraft and the safety of the passengers.

The uncertainty phase sets in when:

- no notice from an aircraft has been received within 30 minutes after the time when such a notice should have been received, or from the time when an unsuccessful effort has been made the first time to establish a connection, running from the earliest of these times, or when

- an aircraft does not arrive within 30 minutes of the estimated time of arrival (ETA) that has last been notified to or calculated by air traffic service units, from the latest of these times, except when there is no doubt regarding the safety of the aircraft and its passengers.

Shipping

A situation where there is any uncertainty concerning a ship and the passengers on board.

The uncertainty phase sets in when:

- a ship or persons are reported to have not reached the destination at the estimated time of arrival (ETA), or when
- a ship or persons - who contradictory to an agreement thereof – have not issued the expected position or safety statement.

1.2. **ALERT PHASE** (Code word: ALERFA)

**Aviation**

A situation where there is fear for the safety of an aircraft and its passengers.

The alert phase sets in when:

- repeated attempts have been made after the uncertainty phase to establish a connection with the aircraft, or enquiries with other relevant sources do not result in any new information concerning the aircraft, or when

- an aircraft has been given landing clearance and does not touch down within 5 minutes of the estimated time of landing and it has not been possible to resume any connection with the aircraft, or when

- information has been received that the airworthiness of the aircraft has been compromised however not to such an extent that an emergency landing is likely, except when information exists that exclude any fear for the safety of the aircraft and its passengers, or when

- an aircraft is known or presumed to have been subjected to a criminal act.

**Shipping**

A situation where there is fear for the safety of a ship and its passengers.

The Alert Phase sets in when:

- repeated failed attempts have been made after the uncertainty phase to establish a connection with the ship or any person and enquiries with other relevant sources have been unsuccessful, or when
the information received indicates that the navigational abilities of a ship are compromised, however not to such an extent that an emergency situation is likely unfolding.

1.3. DISTRESS PHASE (Code word: DETRESFA)

**Aviation**

A situation where there is a fair certainty that an aircraft and its passengers are in serious and imminent danger and in need of immediate assistance.

The Distress Phase sets in when:

- repeated unsuccessful attempts have been made after the Alert Phase to establish a connection with the aircraft, and extensive enquiries make the assumption probable that the aircraft is in distress, or when

- the fuel quantity must be considered to be exhausted or insufficient to ensure the aircraft reaching safety, or when

- information has been received that the airworthiness of the aircraft has been compromised to such an extent that an emergency landing is to be expected, or when

- information has been received or there is a reasonable assumption that the aircraft is either performing an emergency landing or has performed an emergency landing, except when there is fair certainty that the aircraft and its passengers are not in any serious and imminent danger and in need of immediate assistance.

**Shipping**

A situation when there is fair certainty that a ship or a person is in serious and imminent danger and in need of immediate assistance.
The Distress Phase sets in when:

- reliable information is received that a ship or a person is in serious and imminent danger and in need of immediate assistance, or when

- further unsuccessful attempts have been made after the Alert Phase to establish a connection with a ship or people and further unsuccessful extensive enquiries point to the probability that a ship or people are in distress, or when

- information has been received which indicate that the navigational capabilities of the ship have been compromised to such an extent that an emergency situation is most likely.

2. **EMERGENCY, URGENCY AND SAFETY SIGNALS**

*Emergency signals* indicate that a serious and imminent danger is present and thus immediate assistance is needed.

*Urgency signals* indicate that the transmitting station has an extremely urgent notification to deliver concerning the safety of a either an aircraft a ship or another vessel or concerning the safety of one or several persons.

An aircraft may with the use of its landing or positioning lights indicate with a special signal that it is in difficulties forcing it to land, however without any indication that the signal calls for any immediate assistance.

*Safety signals* indicate that a station intends to commence the transmission of a message about navigational safety or is about to send out an important meteorological warning.

Safety signals are not utilised by aircrafts.
CHAPTER 5

COOPERATION AND PROCEDURES

Appendix: 1. IAMSAR SITREP format

5.1. **GENERALLY**

The prerequisite for an efficient and appropriate execution of SAR operations is to convert the principles described in the handbook to practical cooperation and develop a procedure that is organised to suit Danish conditions. The following will describe and comment upon the cooperation and the procedures that are generally utilised in a typical Danish rescue operation. The main principles for the practical cooperation during search and rescue operations are:

- Common sense
- High level of information
- Initiative

Following the rules and sticking to procedure should never obstruct a quick and appropriate effort.

5.2. **THE ALARM CALL**

The rescue service is mainly alarmed by:

- Foreign rescue coordination centres,
- The distressed,
- Witnesses to an accident,
- Persons who presume or estimate that an accident has occurred.
The identity, location and the means of communication of the notifying person must be secured by the recipient of the alarm.

The alarm call should have information about:

- **WHERE** the accident has happened (positioning).
- **WHAT** has happened.
- **WHEN** did the incident occur (time).
- **HOW** is the situation unfolding (additional information).

### 5.3 INITIAL RESCUE EFFORT

The recipient of an alarm decides

- who should further be alarmed, and
- whether the situation requires an immediate effort.

The alarm call should be made to JRCC Denmark if it concerns circumstances at sea or circumstances that concern aviation.

If it concerns anything but these circumstances the alarm call should be made to the police.

Immediate response is initiated if and when it is apparent from the notification that human lives are in imminent danger, consequently necessitating a quick rescue. Ship fires, air crashes and drowning accidents are typical examples thereof.

Further alarming by JRCC Denmark is promptly made after the initial rescue effort is set into action.

Besides initiating the immediate effort the police are assigned the task of assisting the coordinating rescue coordination centre with status reporting, including:
- patrols onshore in the search area,
- contact with relatives etc.,
- activation of local, private resources, and
- dissemination of notifications and reports.

Air traffic service (ATS) units and air fields are quite often the first link in the chain of alarm when critical situations and air crashes occur. The alarm will typically be on radio or as a visual observation. Local ATS units and air fields will normally launch local resources firstly if the critical situation is of a local character before JRCC Denmark and ACC Copenhagen are informed.

ACC Denmark is the central ATS unit where all the information regarding a critical situation involving an aircraft is collected if it is flying within the Copenhagen flight information region. ACC Copenhagen forwards alarms and information to JRCC Denmark. When a critical situation exists or is likely to exist, ATS units and air fields will continue to offer assistance to JRCC Denmark until the point when JRCC Denmark decides that assistance is no longer necessary. If a harbour office is the first link in the chain of alarm when an incident or accident occurs in the area of or by a harbour the harbour office must immediately pass on the notification and initiate an immediate effort if it is evident from the notification that human lives are in imminent danger making a quick rescue necessary.

Local planning may prescribe further initial arrangements which must be reported to JRCC Denmark promptly after launch.

If rescue ships, Danish Maritime Safety Administration rescue stations, Navy units as well as rescue aircrafts are alerted first, they must immediately pass on the notification and initiate assistance. Communication is established with the coordinating rescue coordination centre, and in case the recipient of an alarm is appointed by the rescue centre to be the on-scene coordinator, the necessary arrangements are made thereof, including the capacity to forward notifications. Initiated arrangement, objectives, and observations etc. must promptly be reported to the rescue coordination centre.

If Lyngby Radio, one of the Maritime Surveillance Centres or and ATS unit is alerted first the alarm must immediately be forwarded to JRCC Denmark and necessary rescue efforts are initiated. Furthermore the implementing plans and arrangements according the rescue coordination centre guidelines are launched.
The cooperation in the initial phase of an operation mainly consists of communication between the coordinating rescue coordination centre and the activated resources.

JRCC Denmark receives direct alarm calls or notifications concerning incidents and accidents within and outside the Danish rescue zone. Direct alarm calls typically include:

- absence (overdue situations),
- unusual observations,
- ships in need of assistance,
- alarms or requests for assistance by other rescue centres, and
- electronic alarms from satellite receiving stations.

5.4. **PROGRESS REPORT/INITIATION**

The alerted rescue coordination centre forwards the alarm, and obtain further information from

- the alarm recipient/the distressed concerning which measures are already initiated, the circumstances at the site, the number and identities of the persons that are in danger,
- the police concerning relatives, ownership, descriptions and the circumstances onshore and so on,
- JRCC Denmark on the status of resources and the weather conditions,
- foreign rescue centres on the possibility for assistance and for the weather conditions,
- Lyngby radio, Maritime Surveillance Centres and ACC Copenhagen concerning local resources and on ships and aircrafts in the area that may be able to assist.

Progress reports are made continuously and are essential for the planning and execution of the operation. The cooperation on this stage mainly consists of the exchange of information.

Once the overview of the magnitude of the situation has been established the decision is made whether the first alerted rescue coordination centre will continue to command and coordinate the operation, or the command will be assigned to another rescue coordination centre. If the command is transferred to another rescue coordination centre, all participants of the operation will be informed via the applied channels of
JRCC Denmark coordinates the effort of all contributing resources and ensures that the decided measures are implemented as well as informs about the intent for the execution of the operation, including:

4. position information,
5. use of participating rescue units and elements, including assistance from contributing foreign rescue coordination centres,
6. concerning possibly activated rescue sub centres,
7. designation of on-scene coordinator,
8. designation of local leader,
9. communication and information channels, and
10. meteorological conditions

The participants of the operation cooperate for the execution of the plan of the rescue coordination centre by communicating observation notifications, progress reports and procurement of intentions and recommendations. JRCC Denmark evaluates the ongoing situation from the received information and adjusts the operation accordingly.

5.5. **FURTHER COOPERATION**

5.5.1. **THE FUNCTION OF THE RESCUE-SUB-CENTRE**

A rescue sub-centre is activated by JRCC Denmark. The tasks and cooperation within the area of the rescue sub-centre include:

- JRCC Denmark functions to the extent they are not managed by JRCC Denmark itself, including the preparation and transmission of emergency, safety and rush notifications via Lyngby Radio.
- Determining and communicating positions of sea and air accidents as well as search areas,
- deployment and division of commissioned, assigned or units that have rushed to the scene.
- coordination of the ongoing operation, including avoiding interference,
- assigning the unit that is performing the rescue,
- ensuring that the cooperation, especially communication, is proceeding appropriately, as well as
informing all participating units of the progress of the operation.

The emergency or incident that causes the activation of the rescue service may have occurred in circumstances in which the function of on-scene coordinator is preferable. On and in the vicinity of the coastal zone however, the assignment of an onshore on-scene coordinator will most likely be the more appropriate arrangement.

Activation of a rescue sub-centre does NOT give the right to decide whether to terminate a rescue operation, as this responsibility falls upon JRCC Denmark alone.

5.5.2. THE FUNCTION OF THE ON-SCENE-COORDINATOR
The management of an area is usually performed from a rescue ship or aircraft. The task and principles for the designation to operate as on-scene coordinator are mentioned in chapter 2. The cooperation between the participating units is commenced upon as early as possible before the arrival to the area of operation.

To the extent the functions are handled by an on-scene coordinator, these consist of
- monitoring the movements of the rescue units,
- head the necessary communication
- execution of search and rescue operations according to the directions from the coordinating rescue coordination centre,
- continuously adjusting the performance of the search and rescue task according to the on-site conditions,
- continuously reporting to the coordinating rescue coordination centre on all matters of importance, including weather conditions, whether results have been achieved, implement measures, plans, objectives and recommendations,
- requesting for additional assistance or suggest the disengagement of units that are no longer necessary,
- notifying the number, state and grouping of the rescued in the rescue units.

The function as on-scene coordinator in Danish search and rescue areas is mainly assigned to navy units, (the former) Fishing Directorate fishing control ships and air force rescue aircrafts. If necessary warships, military aircrafts, civilian ships or aircrafts of all nationalities may be appointed, and when in the North Sea, furthermore off-shore traffic controllers.
5.5.3 **THE FUNCTION OF THE LOCAL LEADER**

The local leader is located on shore in the immediate vicinity of the local operation and/or effort area. The principle of the local leader is mentioned in chapter 2. The function is assumed immediately after appointment.

To the extent the functions are handled by an appointed local leader, these are the same as mentioned above for the on-scene coordinator but adjusted to the local conditions.

Furthermore the local leader will perform the following functions which include:

1. managing local communication
2. managing the deployment of local resources and coordinating these resources with assigned/volunteer resources onshore, at sea or by air,
3. advising the coordinating rescue coordination centre concerning special conditions, that may affect the execution of the rescue effort, as well as
4. keeping in close contact with the police, who handle the contact to fire and ambulance services so that survivors and injured may be treated as quickly as possible.

Often a local contingency plan exists which describes the tasks and responsibilities of the local leader in detail and also determines the local cooperation and operational routines and procedures.

5.6. **THE TERMINATION OF SAR OPERATIONS**

The decision to terminate or call off a SAR operation falls upon JRCC Denmark.

5.6.1. **RESCUE OPERATIONS**

When there is certainty that a rescue operation has been brought to an end, the rescue sub-centre, on-scene coordinator or local leader will inform JRCC Denmark, who then terminates the operation and informs all participants.

Rescue sub-centre, on-scene coordinator or local leader at the same time inform JRCC Denmark about:

- name, call sign and destination of ships or aircrafts with survivors, injured or fatalities on board.
- the physical state of the survivors and need for medical or hospital assistance,
- the condition of the wreck, and also if it has caused any impediments to shipping or air traffic.
5.6.2. **SEARCH OPERATIONS**

JRCC Denmark must continue a search until it is estimated that the probability of rescuing survivors no longer exists. Contributing factors are, amongst others:

* the probability that possible survivors are or have been in the search area,
* the probability that the searched object may be localised,
* the probability that the searched persons are still alive given the circumstances, and
* weather conditions.

JRCC Denmark, rescue sub-centres, on-scene coordinators, local leaders and other search participants are consulted regarding the above mentioned factors.

JRCC Denmark may temporarily or conclusively call off a search depending on guidance and recommendations. All parties involved are informed of the decision.

5.7. **ADDITIONAL COOPERATION AND PROCEDURES**

5.7.1. **CHECK LISTS**

The different elements of the rescue service that are expected to cooperate in an operation with several parties, establish and apply check lists to contribute to the most appropriate execution of the vital functions. Check lists are forms that keep record of the actions among other things in connection with the rescue service that may be expected to be performed or implemented and need to be carried out quickly and steadily.

The lists include among other things a number of names of institutions and people that are known to be of help with the execution of operations or that need to be informed. Furthermore the lists may include a column to make note of when an action has been performed.

Information that may help with the execution of a SAR operation (addresses, telephone and telex numbers (Inmarsat-C) information on materials etcetera) must be evident from the lists or any other available material.

Each element draws up its own check lists and keeps these lists and information up-to-date.
5.7.2. **JOURNALS**

The elements of the rescue service must to the extent that it is possible keep a detailed journal (diary, log, report schedule etcetera) of the operations in which they participate. The records must among other things include:

- summary of progress reports,
- time and position of all observations or incidents of importance,
- times of departure and arrival of the rescue units,
- the implementation of arrangements and their obtained results,
- a summary of telephone and radio correspondence,
- dispatch and receipt times for any written correspondence,
- search areas and routes, as well as
- information on the survivors, injured, fatalities etcetera.

The journal is accompanied with a copy of all drawn-up sketches, posters, and written correspondence. Often a local plan with determine in detail how to keep a journal.

5.7.3. **STANDARD FORMATS**

Danish authorities apply standardised formats for the exchange of information and reports and so on during international operations which are published by IMO and ICAO. The IAMSAR SITREP format is shown in appendix 2 to this chapter. Detailed information regarding these formats may be found in IAMSAR Vol.III, Appendix D.

5.7.4 **RADIO MEDICAL**

Parallel to a number of other countries Denmark has established a scheme where medical advice to seafaring and others may be provided. This scheme is called RADIO MEDICAL.

When illness or accidents occur aboard ships or offshore installations et cetera, where there is no available medical assistance, a direct link may be established to a doctor on-call at an appointed hospital via coastal radio stations or satellite communication. The captain may then receive advice and guidance on the treatment of the described symptoms or injuries.
**Commercial vessels**

The Danish Maritime Authority has signed a contract with Radio Medical Denmark that applies to commercial vessels.

If illness occurs on board, or someone is injured, the ship medic on the commercial vessel can procure advice and guidance from a doctor without cost. This is done with a call to a coast radio station with a request for medical advice. The coast radio station then connects the ship with a doctor on Radio Medical Denmark.

In the case where it is not possible to get through on a work station the call can be transmitted as a push notification, initiated with the signal PAN PAN.

Medical advice may also be acquired by calling, emailing or faxing Radio Medical Denmark directly. Lyngby Radio makes no charges for calls made to Radio Medical.

**Recreational vessels**

Recreational sailors are subject to the land-based health insurance system and are covered with the Danish yellow health insurance card all over Europe.

If illness occurs on board, or someone is injured, recreational sailors must use the ordinary land-based health system, which means that the recreational sailor must contact his/her own GP or the on-call GP. In urgent, life-threatening cases the sea rescue service is contacted via the nearest coast radio station. Lyngby Radio make no charges for calls to ones own GP, the on-call GP or to Radio Medical.

Procedures for the acquisition of medical advice are described in among other places ‘Radio stations in ships, Handbook’, the Danish Maritime Authority medical book, and internationally in the IAMSAR manuals as well as in ITU List of Radio-determination and Special Service Stations.

5.7.5. **PATIENT EVACUATIONS**

Requests for the evacuation of persons that are estimated to be in need of medical treatment from ships and offshore installations may be handed on to JRCC Denmark, who will make the decision concerning the methods of initiation and evacuation. Into this assessment factors such as the following are included

* the nature of the injury/illness and the estimated need for medical treatment,
* concerns for special needs while transferring and transporting the patient, and
* weather conditions.

If it is evident from the information about the patient that he/she is in critical condition and an evacuation is safe, the most appropriate method of bringing the patient back to shore is implemented.

If there is any doubt regarding the condition of the patient JRCC Denmark refers to the RADIO MEDICAL scheme, whose advice will decide on the further processing of the request.

5.7.6. **EMERGENCY PREVENTING OPERATIONS**

The circumstances of an accident or an incident may initially lead to the assessment that there is no immediate or overriding danger to human lives, but at the same time be of such a character that the situation might evolve into an actual emergency situation.

The rescue coordination centres may in these instances if they have knowledge of such a situation, conclude that a number of connecting factors are having or will have such an effect, that the situation will change in an unfavourable manner and in a way that will necessitate the effort of the rescue service. These factors are often of a weather nature or caused by the state of the materials or the personnel.

In such instances the rescue coordination centre may take precautionary measures. JRCC Denmark will then decide to implement an emergency preventing operation and inform all parties involved accordingly.
Appendix to chapter 5

**IAMSAR SITREP FORMAT**

Situation reports (SITREPS) should be composed as follows:

**Short form** – To pass urgent essential details when requesting assistance, or to provide the earliest notice of casualty, the following information should be provided:

- Transmission (Distress/urgency)
- Date and time (UTC or local Date Time Group)
- From: (Originating RCC)
- To:
- SAR SITREP number (To indicate nature of message and completeness of sequence of SITREPs concerning the casualty)
- A. Identity of casualty (Name/call sign, flag state)
- B. Position (Latitude/longitude)
- C. Situation (Type of message, e.g., distress/urgency; date/time; nature of distress/urgency, e.g., fire, collision, medico)
- D. Number of persons
- E. Assistance required
- F. Co-ordinating RCC

**Full form** – To pass amplifying or updating information during SAR operations, the following additional sections should be used as necessary:

- G. Description of casualty (Physical description, owner/charterer, cargo carried, passage from/to, life-saving equipment carried)
- H. Weather on scene (Wind, sea/swell state, air/sea temperature, visibility, cloud cover/ceiling, barometric pressure)
- J. Initial actions taken (By casualty and RCC)
- K. Search area (As planned by RCC)
- L. Co-ordinating instructions (OSC designated, units participating, communications)
- M. Future plans
- N. Additional information (Include time SAR operation terminated)
ADDENDUM A

COMMUNICATION

Appendixes:
1. Monitoring aviation emergency frequencies
2. Lyngby Radio
3. INMARSAT coverage area

1. HANDLING OF THE PUBLIC RADIO SAFETY SERVICE

The public radio safety service is handled by ATC units in the case of aviation. The public radio safety service is handled by Lyngby Radio in the case of shipping.

2. RADIO COMMUNICATION DURING SEARCH AND RESCUE OPERATIONS REGARDING AIRCRAFTS IN DISTRESS:

Besides the normal working frequencies, ATC units, as indicated in appendix 1 to this addendum, continuously monitor aviation emergency frequencies within their respective opening hours.

By ATC units in this context refers to:
- Tower control/approach control unit.
- Area Control Centre (ACC)
- Air field flight information unit.

2.1. GENERAL AVIATION USE CONCERNING FREQUENCIES IN CONNECTION WITH CRITICAL SITUATIONS

Aviation communication utilises frequency area 117,975 to 137,000 MHz, of which the frequency 121,500 MHz is the civilian emergency frequency. The Danish Defence furthermore utilises the frequency 243,000 MHz as military emergency frequency. Both frequencies are also widely used in both aeronautical and maritime emergency locator transmitters.
When a critical situation occurs for an aircraft, the relevant ATC quite often will choose to continue communication on the frequency used, when the critical situation arose in order to avoid further trouble during the critical situation.

The Air Force Air Control Wing continuously monitors the emergency frequency on 243,000 MHz.

2.2. UTILISED FREQUENCIES

The frequencies 3023 kHz, 5680 kHz, 156,300 MHz (channel 6), 156,600 MHz (channel 12) and 156,800 MHz (channel 16) are utilised by the ships and aircraft on the site where a rescue operation is taking place. The frequency 3023 kHz is also used by the actual rescue ships to communicate with SAR aircrafts.

The frequencies 123,100 MHz and 282,800 MHz are available for aircrafts communally on the site where a SAR operation is taking place.

SAR helicopters are equipped with UHF, VHF (FM/AM) and HF (SSB) and may locate frequencies in the frequency area 100-400 MHz and in the frequency area 200-3000 kHz.

Furthermore Danish SAR helicopters are equipped with FM/VHF radio equipment, so that they can communicate with the police and mobile radio systems as well as other authorities participating.

2.3. CALL SIGNS ON RADIO TELEPHONY FOR SAR AIRCRAFTS

The SAR aircrafts of the Danish Defence use the call sign ‘RESCUE’ followed by the aircraft serial number, for example ‘RESCUE 276’.

3. RADIO COMMUNICATION DURING SEARCH AND RESCUE OPERATIONS IN CONNECTION WITH SHIPS AND OFFSHORE INSTALLATIONS IN DISTRESS

3.1. LYNGBY RADIO

Lyngby Radio monitors the maritime emergency and safety frequencies around the clock and usually handles the relations with the regular shipping industry with regard to alarm calls and progress reports during critical situations on sea.

An overview of the transmitting and receiving systems for Lyngby Radio are pictured in appendix 2.
3.2. **ON FREQUENCIES AND FORMS OF MARITIME RADIO COMMUNICATION IN GENERAL**

The communication between ships and Lyngby Radio in connection with alarms as well as after search and rescue operations happens within one or several of the following frequency bands:

- **Telephony**: 1606.5 – 3800 kHz (emergency traffic channel 2182 kHz)
- **Telephony**: 154 – 174 MHz (emergency traffic channel 156,800 (channel 16)).

The listening duty for spoken alarm calls on 2182 kHz ceased internationally February 1st 1999. In Danish waters, on Danish shore stations and on Danish ships the listening duty ceased on 2182 kHz June 1st 2002.

For alarm calls and establishing contact for subsequent emergency and safety communication on the emergency traffic channels on the MF band (2182 kHz), see section 3.4.

3.3. **COMMUNICATION VIA THE MARITIME SATELLITE SERVICES OF INMARSAT**

Communication between ships that are equipped with transmission systems via the maritime satellite services of INMARSAT, and destinations onshore may also be made via earth stations that are operational in these services. The coverage area of INMARSAT is shown in appendix 3.

Communication with such equipped ships in Danish waters may be made via the Telenor earth station network (Eik).

3.4. **SPECIFIC FREQUENCIES FOR RADIO COMMUNICATION IN CONNECTION WITH ALARM CALLS AS WELL AS SEARCH AND RESCUE OPERATIONS**

Alarm calls are usually made by emergency calls with a digital selective call (DSC) on:

- 2187,5 kHz
- 156,525 MHz (channel 70)

Or with radio telephony (spoken) on the frequency:

- 156,800 MHz (channel 16)

also to a relevant extent via the maritime satellite services of INMARSAT.

The listening duty for spoken alarm calls on 2182 kHz ceased internationally February 1st 1999. In Danish waters, on Danish shore stations and on Danish ships the listening duty ceased on 2182 kHz June 1st 2002.
Subsequent radio communication in connection with search and rescue operations usually happens on one or several of the following frequencies:

- 2182 kHz (telephony)
- VHF channel 16 (telephony)

also to a relevant extent via the maritime satellite services of INMARSAT.

For on-scene communication that is limited to VHF communication between mobile units the frequency 156,300 MHz (channel 6) may also be used.

4. RECEPTION AND POSITIONING SIGNALS FROM EMERGENCY RADIO TRANSMITTERS

4.1. 406 Mhz EMERGENCY RADIO TRANSMITTERS

Signals from maritime and aeronautical emergency radio transmitters EPIRB (Emergency Positioning Indicating Radio Beacon), PLB (Personal Locator Beacon) or ELT (Emergency Location Transmitter) may be intercepted and positioned by the satellite system COSPAS-SARSAT, inter alia within the Danish SAR area of responsibility. The Danish area of responsibility is covered by an earth station in Norway (Mission Control Centre Bodø) with back-up from earth stations in France and England.

Emergency signals that may be assigned to Danish territory or emergency radio transmitters registered in Denmark are forwarded to JRCC Denmark. JRCC Denmark acts as the central operational point of contact of the COSPAS-SARSAT system for the identification of active EPIRB/ELT registered in Denmark. JRCC Denmark has access to databases that are updated by the Danish Transport Authority, the Danish Maritime Authority as well as the former National IT and telecom Agency, for all Danish emergency radio transmitters. In addition to this JRCC Denmark has access to the COSPAS-SARSAT system International Beacon Registration Database (IBRD).

5. OTHER METHODS OF RADIO COMMUNICATION

Numerous ships are equipped with a mobile phone (GSM). Within limited areas at sea a communications line may be established between the ship in question and an onshore destination via this system.

The mobile phone systems do not have the same operational advantages as the maritime radio communication systems. While transmitting emergency calls, ships should therefore mainly use actual maritime radio communication system, to ensure a wider dissemination of information to other units and ships that may provide assistance. Also, the range of mobile phones is limited from the coast, and calls
made on mobile phones may not be instantly located. Communication via VHF has the advantage, that there is full coverage in Danish territorial waters for a fixed VHF system, and also emergency calls on VHF channel 16 and 70 are intercepted directly by the coast radio station.
## MONITORING AVIATION EMERGENCY FREQUENCIES

The listed ATC units monitor the emergency frequencies for aviation:

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
<th>121.500 MHz</th>
<th>243.000 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aalborg TWR/APP</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Aarhus TWR</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Esbjerg TWR/AFIS</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Copenhagen ACC/APP</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Odense AFIS</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Rønne AFIS</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Billund APP/TWR</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sønderborg AFIS</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Air Force Air Control Wing</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Defence ATC units</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Danish military aircrafts</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Navy ships at sea</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Annotation:

Civilian aircrafts monitor 121.500 MHz during flight over larger distances of sea.
Appendix 2 to addendum A

VHF channels and Lyngby Radio
ADDENDUM B

JRCC DENMARK SAR PLAN

Appendix:

1. Maritime Surveillance Centres North and South responsibility zones
2. Danish Maritime Safety Administration rescue stations
3. Placements of the Naval Home Guard flotillas
4. Fishing control ships of the Fishing Directorate
5. JRCC Denmark geographical responsibility zone

1. GENERALLY

The sea rescue service and the flight rescue service are a part of the collective Danish rescue service and are both maintained by JRCC Denmark which is integrated with as well as managed from the Admiral Danish Fleet HQ operations centre in Aarhus.

JRCC Denmark manages and coordinates search and rescue operations concerning people in distress at sea.

Furthermore JRCC Denmark manages and coordinates search and rescue operations concerning missing people, missing or distressed aircrafts and offers assistance to the other responsible authorities of the rescue service.

The JRCC Denmark responsibility zone is shown in appendix 5.

JRCC Denmark establishes and maintains a search and rescue contingency plan (SAR contingency plan) including Navy vessels, Naval Home Guard vessels, rescue stations and rescue vessels, and Air Force aircrafts, adjusted to the immediate situation. JRCC Denmark may continuously change the preparedness or stationing of units as the situation demands.
JRCC Denmark is manned around the clock by a team consisting of an air force and a navy officer as well as their assistants – all have a thorough knowledge of the conditions of the rescue service.

2. **OTHER ASSISTANCE**

JRCC Denmark offers assistance to civilian authorities amongst others, who in accordance with a Danish Defence Command resolution (FKOBST 153-1 of OCT 1991), have been conferred the competence to request for help by the authorities of the Danish Defence. JRCC Denmark provides this help; primarily with SAR helicopters.

Patient air transports include the transfer of patients between hospitals and the transport of patients from islands and isolated locations to a hospital. Patient air transports are only performed when the transport may not be executed by a licensed air line under the conditions required for carrying out the transport.

Patient air transports include the following three categories:

- **Ambulance flights/sorties:** Prompt air transport of patients after an accident or acute illness from the residence or the site of the accident to a treatment facility, as well as prompt transfer of patients from one treatment facility to another.
- **Medic transport:** Transport of a patient who needs to be carried or given medical treatment during the flight.
- **Patient transport:** Transport of a sitting patient who can either walk by him-/herself or with some support on board the aircraft and who does not need any medical treatment during the flight.

Assistance to civilian authorities furthermore entails the following categories:

- **Vital transports:** JRCC Denmark arranges for urgent transports of vital medicines, organs for transplants or transport of doctors needed for treatment of patients in his/her location under circumstances where the transport can not be executed in another manner.
- **Preventive assistances:** In situations where there is a risk of loss of high value materials, JRCC Denmark provides possible assistance in case other forms of help are estimated not to be in time.
Such tasks are especially executed for the fishing fleet, mainly in the form of delivering bilge pumps.

JRCC Denmark furthermore provides assistance to the transport of personnel and materials to islands and remote locations to repair technical damages that if not repaired will put the inhabitants in the area in an emergency situation.

- **Distribution flights:** During situations where islands or other areas have been cut off from the outside world due to ice, heavy snow fall, or other natural phenomena, JRCC Denmark may arrange transport of food and other supplies at the request of the local police.

  It is a condition that the lack of supplies is critical and that the transport can not be performed by civilian airlines under the circumstances.

- **Disaster relief:** JRCC Denmark on request, offers assistance to police, fire brigade and ambulance service in connection with extinguishing larger fires in the wild.

3. **JRCC DENMARK RESOURCES**

JRCC Denmark has the following rescue resources at its disposal:

- Rescue helicopter reserve at Aalborg and Skrydstrup Air Bases as well as Roskilde Airport. At each of these SAR locations a rescue helicopter is stationed on alert, with an alert state that spans from 15 to 30 minutes, depending on time of day and the current situation.

- Rescue helicopter reserve in Ronne Airport, when this is established. Under special weather conditions a rescue helicopter is stationed on alert, which varies from 15 to 30 minutes alert state, depending on time of day.

- Maritime Surveillance Centres North and South and Lyngby Radio.

- Royal Danish Navy ships.

- Naval Home Guard vessels.

- Ship based helicopters.

- Danish Maritime Administration inspection vessels.

- The Danish AgriFish Agency fishing control ships.

- Foreign warships subject to Admiral Danish Fleet.

- OFF-SHORE rescue ships.

JRCC Denmark can also dispose of other military aircrafts to solve tasks in special situations.
Air traffic service (ATS) units and the Royal Danish Air Force Air Control Wing monitor aviation emergency frequencies and manage the alarm service in connection with aircrafts. These units may be designated to disseminate communication between JRCC Denmark and SAR aircrafts.

LYRA manages the listening watch on maritime VHF station 16 and manages the alarm service in connection with the distressed at sea.

JRCC Denmark can request for assistance from foreign rescue authorities for solving search and rescue tasks, respectively, to provide assistance with Danish SAR units.

Both Maritime Surveillance Centres North & South and Lyngby Radio are manned around the clock.

4. MANAGEMENT

JRCC Denmark deploys rescue units including units made available by other rescue coordination centres. If the situation makes it appropriate, the control of an operation may be partially delegated to a maritime surveillance centre/LYRA or a local leader. If foreign units and/or aircrafts participate however, the executive management is always maintained by JRCC Denmark.

Maritime Surveillance Centres North & South stay informed, advise and assist JRCC Denmark during all sea rescue operations within their respective areas of responsibility. Maritime Surveillance Centres North & South must always be prepared to take over parts of an operation immediately.

If and when it is estimated to be appropriate, JRCC Denmark normally appoints an area leader (OSC) according to the following prioritisation:

- War ships,
- Naval Home Guard vessels,
- rescue vessels, state and privately owned,
- ships owned by the Danish state as well as,
- suitable merchant navy ships.
- fixed-wing aircrafts.
- helicopters.

JRCC Denmark may choose to appoint an area leader aircraft (ACO) in connection with search and rescue operations, where several aircrafts participate. Normally, the first search aircraft arriving at the search area
will be appointed ACO. If a fixed-wing SAR aircraft participates in a search this aircraft will primarily be deployed as ACO.

The police handle the coordinating crash site management when aircraft accidents happen on land. In case of an air crash within the airport area or in the vicinity thereof the airport fire and rescue brigade manage the initial rescue effort until the municipal on-site commander arrives at the crash site. JRCC Denmark will by request deploy assistance by aircraft as necessary and be kept informed with the progress of the rescue effort.

The local leader may be established at any relevant naval place of duty. The following places of duty may by designated to handle the local command by JRCC Denmark:
- FLS FRH
- FLS KOR
- VTS the Great Belt

Both Maritime Surveillance Centres designate places of duty that must make the necessary preparations to be able to function as the local leader in their areas of responsibility, respectively.

5. **MARITIME SURVEILLANCE CENTRE NORTH (MOCN)**

Maritime Surveillance Centre North is located in Frederikshavn, Denmark. MOCN planning and responsibility areas include Kattegat, the Danish part of the North Sea, the Little Belt, the Great Belt as well as the Smaalandsfarvand. The MOCN responsibility area is shown in appendix 1.

MOCN has on behalf of JRCC Denmark the following rescue resources at its disposal:
- Primary rescue units:
  * Assigned patrol boats.
  * Naval Home Guard vessel in the MOCN zone.
  * Danish Maritime Administration inspection vessels.
  * The Danish AgriFish Agency fishing control ships.
- Additional rescue units:
  * Are signed up locally or are assigned by JRCC Denmark.
Local rescue units:
* Units that are either available according to plans or rush to the rescue.

MOCN must furthermore be capable of communicating with the participating SAR aircrafts.

MOCN land-based resources contribute to the search and rescue service by surveillance, look-out service, and communication of notifications. MOCN contribute with the establishment of local SAR contingency plans for rescue service in the responsibility area within the district.

6. **MARITIME SURVEILLANCE CENTRE SOUTH (MOCS)**

MOCS is located in the island of Bornholm. MOCS planning and responsibility areas include Western Baltic Sea, the Sound and the waters surrounding Bornholm. MOCS responsibility area is shown in appendix 1.

MOCS has on behalf of JRCC Denmark the following rescue resources at its disposal:

- Primary rescue units:
  * Assigned patrol boats.
  * Naval Home Guard vessel in the MOCS zone.
  * Danish Maritime Administration inspection vessels.
  * The Danish AgriFish Agency fishing control ships.
  * The station cutter ELEFANTEN.

Additional rescue units:
* Are signed up locally or are assigned by JRCC Denmark.

- Local rescue units:
* Units that are either available according to plans or rush to the rescue.

MOCS must furthermore be capable of communicating with the participating SAR aircrafts.

MOCS land-based resources contribute to the search and rescue service by surveillance, look-out service, and communication of notifications. MOCS have no subjugated places of duty that have already been appointed local leader.
MOCS contribute with the establishment of local SAR contingency plans for rescue service in the responsibility area within the district.

7. **COOPERATION WITH POLICE AND EMERGENCY MANAGEMENT UNITS**

Besides the normal cooperation with the police in search and rescue operations, the police force may make a liaisons officer (LO) available according to a special agreement. The task of the LO is to function as the coordinating link between JRCC Denmark and the police district that has the coordinating management on site. The LO is called up by request of JRCC Denmark. If deemed necessary a LO may be called up to MOCN or MOCS also. Further conditions for the use of LO are included in the detail plan.

Alarm calls or requests for assistance from authorities onshore may access JRCC Denmark via the local police. In the Sound, within the boundaries of Greater Copenhagen, an alarm call/initiation will be made through the Police Radio Service (HS), which will then liaise between JRCC Denmark and the police.

8. **PRESS RELATIONS**

Admiral Danish Fleet HQ will inform the press regarding search and rescue operations - usually through a press release once the operation is completed.

If assistance is provided in connection with search and rescue operations managed by foreign rescue centres, all press enquiries will be referred to the rescue centre in question.

If press assistance is deemed necessary during a search and rescue operation, Admiral Danish Fleet HQ will handle all communication with the national press while either MOCN or MOCS may handle the cooperation with local media regarding a sea rescue operation.

9. **TEMPORARY RESTRICTIONS ON AIRSPACE**
The Danish Transport Authority may with an issue of NOTAM impose a temporary ban or a restriction against air traffic in the airspace above and around an area where an accident has occurred, or if there is a need for a temporary ban or restriction on airspace otherwise.

In case it is necessary to impose a temporary ban against or restrictions of air traffic otherwise, proposals thereof must be submitted to the Danish Transport Authority, Aviation Services, who after the final approval of such a proposal will make the necessary publication.

The Danish national police force (Rigspolitiet), the police commissioners and JRCC Denmark will in any unannounced situation request the duty officer at Flight Tactical Command (FTK) to instate a temporary ban against or restriction on air traffic (No fly zone) if it is of importance to solving a SAR or police task. JRCC Denmark will coordinate the issue of NOTAM directly with ACC Copenhagen.

ACC Copenhagen will then, on request from Flight Tactical Command (FTK), with the issue of NOTAM instate a temporary ban against or restriction of air traffic in the airspace above and around an area, where an accident has occurred, or if there is a need for a temporary ban or restriction on airspace otherwise.

The request for the establishment of temporary restrictions in the airspace may during office hours be directed to:

The Danish Transport Authority
Aviation House
Ellebjergvej 50
2450 Copenhagen SW
Denmark

Telephone no.: +45 36 18 60 00
Telefax no.: +45 36 18 60 01
Email adress: dcaa@slv.dk
AFTN: ekcayayx

The request for the establishment of temporary restrictions in the airspace may outside office hours be directed to:
Flight Tactical Command, Royal Danish Air Force
Koelvraa
7470 Karup J
Denmark

Telephone no.: +45 99 62 49 50
Telefax no.: +45 99 62 49 55
Email adress: ftk@mil.dk

The extent, altitude, time span and the form of restriction of the NOTAM area is agreed upon between the applicant and the Danish Transport Authority or Flight Tactical Command.

10. **ADRESSES AND TELEPHONE NUMBERS**

JRCC Denmark
Admiral Danish Fleet HQ
PO Box 1483
8220 Brabrand
Denmark

Telephone numbers:
- Central switchboard: +45 89 43 30 99
- Duty officer regarding sea rescue: +45 89 43 32 03
- Duty officer regarding flight rescue and ambulance flights: +45 89 43 32 06
Telefax no.: +45 89 43 32 30 (Admiral Danish Fleet HQ Operations Centre)
Website: [www.forsvaret.dk](http://www.forsvaret.dk)/sok (a version in English is available)
Email adress: jrc@sok.dk

Maritime Surveillance Centre North (MOCN)
PO Box 180
9900 Frederikshavn
Denmark
Telephone number: +45 99 22 22 55
Telefax no.: +45 99 22 15 38
Website: www.forsvaret.dk/mocn
Email adress: mocn@mil.dk

Maritime Surveillance Centre South (MOCs)
Segenvej 31
3700 Roenne
Telephone no.: +45 56 94 24 00
Telefax no.: 56 91 04 44
Website: www.forsvaret.dk/mocs
Email adress: mocs@mil.dk

Appendix 1 to addendum B
MARITIME SURVEILLANCE CENTRE NORTH AND SOUTH
GEOGRAPHICAL AREAS OF RESPONSIBILITY

Appendix 2 to addendum B
Appendix 3 to addendum B
The division shown below of Naval Home Guard Vessel is valid as of October 2010.
The Danish AgriFish Agency fishing control ships

Appendix 5 to addendum B
THE DANISH NATIONAL POLICE REGULATIONS REGARDING
POLICE SUPPORT TO THE SEARCH AND RESCUE SERVICE

Appendix:  1. Contact information for the police districts
           2. Map of the police districts

1. GENERALLY

Guidelines for police contribution in search and rescue missions are provided according to negotiations between the Danish Defence Command and the Danish National Police.

Every individual police district has the daily management and coordination in connection with incidents encompassed by this addendum. Contact to the involved police district(s) may happen directly or, in case of doubt, to the National Police Centre for Order.

If an incident involves more than one police district, the Chief of the Danish Police may, according to circumstances in conference with JRCC Denmark, appoint a responsible police district to handle the mission. JRCC Denmark will be informed thereof.

General questions or ambiguities of an administrative character and the like should be directed to the National Police Centre for Order.

1.1 NOTIFICATION OF THE POLICE
In cases of suspected or recognised aviation or ship accidents, in which one police district may be assigned, said involved police district will be informed immediately. In other cases where the crash site is yet unknown, or in cases of doubt of which police district to assign the crash site to, the National Police Centre for Order will be notified.

The relevant contact information is shown in section 5 and appendix 1.

1.2 THE COORDINATING MANAGEMENT

The collective effort in emergency incidents which involve more than one emergency authority is generally subject to the coordinating management of the police.

2. SEA RESCUE SERVICE

2.1 SEARCH

When the police receive a report that a vessel containing people is missing, the police must – if necessary in consultation with JRCC Denmark – immediately initiate a search in harbours and along the shore within the area where the vessel, according to the information at hand, might be situated, in order to ascertain whether the vessel has gone towards another port or if it has been anchored close to shore.

The search in a larger area (more than one police district), including possibly a search in foreign harbours, may be initiated by the National Police Centre for Order.

In each individual case a telephone call must be made immediately to JRCC Denmark containing the information of the notifying person, the vessel, passengers, rescue equipment, route and times, as well as which rescue measures have been made.

JRCC Denmark handles the command henceforth and will alert civilian and military authorities and instances, if any aid is required. The police will alert the local emergency authorities.
During ongoing searches JRCC Denmark and the police will keep each other informed continuously with progress reports and consecutive messages regarding deployed personnel, materials, and the outcome and so on.

If it is a smaller local search that does not require the assistance of air units, the management may partially be delegated to one of the Maritime Surveillance Centres, who will thus cooperate with the involved police district. Specific plans for these instances have been drawn up by both Maritime Surveillance Centres and transmitted to the Police Commissioners. The implicated Maritime Surveillance Centre and the relevant police district will then keep each other informed of the progress.

JRCC Denmark will announce the termination of a search.

2.2. **ACCIDENTS AT SEA**

When accidents at sea occur, whether assumed or recognised, for example by observation of a distress rocket or flare, a collision, fire, wreckage or severe accidents, as well as the notification of drowning and ice accidents, at the coastline and in fiords, the police must:

- Immediately make a telephone call to JRCC Denmark seeking implementation of the appropriate rescue operation in consultation with JRCC Denmark, as well as
- If necessary issue a supplementary written notification to the National Police Centre for Order who will then forward the notification to JRCC Denmark.

JRCC Denmark will subsequently handle the management of the rescue effort and will alert civilian and military authorities and instances, if any aid is required. JRCC Denmark and the police will keep each other informed continuously with progress reports and consecutive messages regarding deployed personnel, materials, and the outcome and so on.

JRCC Denmark will announce the termination of a search.
If notified of a drowning accident, ice accidents, boating accidents, accidents involving a rubber dinghy, windsurfers and air mattresses and so on in bogs, lakes, streams, harbours et cetera the police must if necessary inform JRCC Denmark directly in preparation for the deployment of a helicopter.

The police will in these instances make the decision to terminate the search and rescue operation.

2.3. TRANSMISSION OF INFORMATION

If seafarers contact the police to notify

- that they suspect that their ship may – due to for example a delay – be searched for by the sea rescue service, or
- that they during sailing have given off or observed/heard visual or radio telephonic emergency signals,

the police must immediately transmit such notifications to JRCC Denmark.

2.4. SHIP ACCIDENTS AT QUAY

Ship accidents at quay are not covered by the SAR service.

Ship accidents at quay are defined as any accident on a ship which is moored to a quay in a harbour. This may be a fire, explosion, collapse or accident involving dangerous chemicals on board the ship.

The responsibility for the effort at such accidents lies upon the relevant municipal on-site commander according to the Emergency Preparedness Act. The coordinating management is handled by the police.

3. FLIGHT RESCUE SERVICE

3.1. SEARCH
Usually any notification of missing or overdue aircrafts will be transmitted to JRCC Denmark from the relevant flight control units. In certain instances the alarm may happen directly to the police that an aircraft is missing. In such instances a telephonic notification must be made to JRCC Denmark who will then implement a search for the aircraft within the area, where it according to the present information might be located.

The telephonic notification will be supplemented with a written report as soon as possible.

JRCC Denmark will take over the management of the search and alert civilian and military authorities and instances, if any aid is required.

During ongoing searches JRCC Denmark and the police will keep each other informed continuously with progress reports and consecutive messages regarding deployed personnel, materials, and the outcome and so on.

When the notification of an overdue aircraft is transmitted directly to JRCC Denmark, JRCC Denmark will then convey the notification via the National Police Centre for Order to the relevant police district(s) with the request for a search.

JRCC Denmark will announce the termination of a search.

3.2. **AIR CRASHES**

At an air crash, either suspected or recognised, the police must alert the fire and ambulance services, notify JRCC Denmark telephonically as well as sealing off and guarding the site as necessary.

Other relevant civilian and military authorities and instances are informed by JRCC Denmark.
In case of air crashes on land the coordinating management is handled by the police. The police and JRCC Denmark keep each other informed of the progress. The police will in these instances make the announcement of the termination of the rescue operation.

The responsibility for recognised air crashes on land lies upon the municipal fire and rescue service. If the accident has happened within a civilian airfield or the area of a military air base, the responsibility falls upon the on-site rescue commander of the airfield/air base in question, until the municipal fire and rescue service arrives. The coordinating management is handled by the police.

4. **THE LIAISON OFFICER ARRANGEMENT**

In SAR operations a liaison officer from the police may be placed in JRCC Denmark. This arrangement serves only rescue related interests and functions as a coordinating link between JRCC Denmark and the police district, which in the specific instance handles the coordinating management.

The police provide the personnel to the arrangement in accordance with an already agreed upon instruction, which should include regulations concerning:

- location,
- chain of command, as well as the
- command structure.

The call for a liaison officer may happen per request of either JRCC Denmark or the police district that has the police related responsibility for the task solution.

If JRCC Denmark chooses to delegate parts of the rescue task to one of the Maritime Surveillance Centres, the liaison officer will convey the relevant information to the police in the police district where the Maritime Surveillance Centre is located.

The police in Eastern Jutland provide the personnel for liaison officers in JRCC Denmark.
5. **ADDRESSES AND TELEPHONE NUMBERS**

The Danish National Police
Traffic and Emergency Response dept.
National Operations and Emergency Response Centre (NOBC)
Anker Heegaards Gade 5, 5.
1780 Copenhagen W
Denmark
Telephone no.: +45 33 14 88 88 extention 5108
Telefax no.: +45 33 43 00 05
Email address: rpcha-opol@politi.dk

Outside office hours contact (particularly in urgent cases) may happen via:

The Danish National Police Communications Centre
Anker Heegaards Gade 5
1780 Copenhagen W
Denmark
Telephone no: +45 33 14 88 88 extention 72 00
Telefax no.: +45 33 32 27 71
Email address: nec@politi.dk

Appendix 1 to addendum C
CONTACT INFORMATION FOR THE POLICE DISTRICTS

Any further information regarding the police districts can be found on: www.politi.dk (an English version of the website is available)

In cases of doubt, enquiries are made to the National Police, Centre for Order, telephone no.: +45 33 14 88 88 extension 5108.

The Danish National Police, National Operations and Emergency Response Centre, telephone no.: +45 45 15 33 15 (during office hours).

1 The Northern Jutland Police District +45 96 30 14 48 (ask for the control centre)
2 The Eastern Jutland Police District +45 87 31 14 48 (ask for the control centre)
3 Mid and West Jutland Police District +45 96 10 14 48 (ask for the control centre)
4 South Eastern Jutland Police District +45 76 28 14 48 (ask for the control centre)
5 South and Southern Jutland Police District +45 76 11 14 48 (ask for the control centre)
6 Funen Police District +45 66 14 14 48 (ask for the control centre)
7 South Zealand and Lolland-Falster Police District +45 55 31 14 48 (ask for the control centre)
8 Mid and West Zealand Police District +45 46 35 14 48 (ask for the control centre)
9 Northern Zealand Police District +45 49 27 14 48 (ask for the control centre)
10 Westen Copenhagen Police District +45 43 86 14 48 (ask for the control centre)
11 Copenhagen Police District +45 33 14 14 48 (ask for the control centre)
12 Bornholm Police District +45 56 90 14 48 (ask for the control centre)
ADDENDUM D

SAR AGREEMENTS

1. **GENERALLY**

Denmark has made agreements with a number of countries regarding search and rescue in any areas of common interest.

For the Danish SAR area agreements have been made with the following nations:

- The Nordic Countries (Nordic Rescue Agreement)
- Sweden (aeronautical and maritime SAR agreement)
- Norway (aeronautical and maritime SAR agreement)
- Germany (aeronautical and maritime SAR agreement)
- Poland (flight rescue agreement and operational agreement)
- Great Britain (aeronautical and maritime SAR agreement)

The following will reproduce transcripts of the respective agreements in full:
2. **NORDIC RESCUE AGREEMENT**

AGREEMENT BETWEEN THE KINGDOM OF DENMARK, FINLAND, THE KINGDOM OF NORWAY AND THE KINGDOM OF SWEDEN CONCERNING CO-OPERATION ACROSS NATIONAL FRONTIERS THE PURPOSE OF WHICH IS TO AVOID OR LIMIT DAMAGES TO PERSONS OR PROPERTIES OR THE ENVIRONMENT IN THE EVENT OF ACCIDENTS

The Government of the Kingdom of Denmark, the Government of Finland, the Government of the Kingdom of Norway and the Government of the Kingdom of Sweden

who recognize the necessity of co-operation between the appropriate authorities in the contracting states with the objective to facilitate the requisite mutual assistance in the event of accidents in peacetime and to accelerate dispatching of emergency squads and equipment, and who consider this agreement a framework agreement with the objective of supplementing other Nordic multilateral or bilateral agreements within the scope of this agreement, and who additionally wish to improve the co-operation within the scope of this agreement, have agreed on the following:

**Article 1**

Present agreement concerns the co-operation across the national frontiers with a view to, in the event of accidents and immediate risk of accidents, prevent or limit damages to persons or properties or the environment.

The contracting states shall in their national legislation and other resolutions seek to eliminate obstacles for such a co-operation as much as possible.
Article 2

Each of the contracting states is committed to in the event of an accident or an immediate risk of an accident to perform requisite assistance in accordance with its opportunities and in compliance with present Agreement.

The decisions in articles 3 – 5 shall only come into force unless otherwise stated according to bilateral or other multilateral agreements.

Article 3

1. An authority in a contracting state, which in the event of an accident is responsible for organizations aiming to avoid or limit damages to persons or properties or the environment, can request assistance directly from an appropriate authority in another of the contracting states. The authority which has been requested to assist decides whether assistance can be granted.

2. The authorities in the state requesting assistance are in full responsibility for the management of the work at the scene of the accident except for incidences where the scene of the accident is situated within another contracting state’s territory. Personnel from the assisting state are at disposal under the management of its own non commissioned officers and service under the state requesting assistance in accordance with the service regulations in force of the assisting state.

3. The state requesting assistance shall ensure, that vehicles, emergency equipment and other equipment, which are brought along at a rescue operation, can be brought across the boarders without formalities relating to importation and exportation and which are tax and VAT exempt. Vehicles, rescue equipment and other equipment may be used without special authorisation in accordance with valid regulations in the assisting state. After the rescue operation has been brought to an end, vehicles, rescue materials and other
equipment must be pulled out of the country without delay. The equivalent is applicable in connection with aid exercises.

4. If the effort involves military personnel, state vessels, state aircrafts and military vehicles, for which a special access authorisation is required, the authorities in the state requesting assistance must bring about the necessary authorisation. Until such authorisation exists, no borders must be crossed.

**Article 4**

The expenses for rescue operations in accordance with present agreement must be incurred as follows:

1. The assisting state has the right to compensation from the state requesting assistance for the costs of the actions made, to the extent that these may be ascribed to the assistance provided.

2. The state requesting assistance may at any time withdraw the request for assistance, however the assisting state shall be entitled to compensation for the expenses it has been inflicted.

3. The assisting state must at any point of time be prepared to provide information of the estimated expenses for the assistance.

4. The basis of calculation for the expenses is the costs incurred.

5. These regulations do not restrict the right of the contracting states to seek recourse from a third party with regards to the payment for expenses in accordance with such other regulations and rules in national legislation or the law of nations that may be applicable.
Article 5

1. The state requesting assistance is culpable for any damages the assistance may cause, while it is provided within its territory in accordance with this agreement. The state requesting assistance is obliged to conduct lawsuits or mediate a settlement with regard to any compensation claim made by a third party toward the assisting state or its personnel. The state requesting assistance is accountable for all legal costs and any additional costs attributable to the claims in question.

2. The state requesting assistance must compensate the assisting state for any fatalities or personal injury inflicted upon its personnel, as well as for the loss of or damage to equipment or materials, that has taken place in the territory of the state requesting assistance as a cause of the provided assistance.

3. The assisting state is culpable for any damages that occur in its own territory.

4. The state requesting assistance has the right, if it pursuant to this article has paid compensation, to make a claim for full indemnification toward the assisting personnel, that have caused the damage wilfully or by gross negligence.

Article 6

1. The contracting states must mutually share information of any importance to this agreement concerning organisation of the rescue service and the involved competent authorities, as well as such legislation and such implemented important changes of significance to this agreement. The contracting states must furthermore contribute to the cooperation on this issue.

2. As far as the practical implementation of this agreement the competent authorities in the respective contracting states are expected to keep in direct mutual contact.

3. Within the framework of this agreement meetings will be held when they are found to be appropriate.
Article 7

This agreement will become effective thirty (30) days after the day, when two of the contracting states have notified the Swedish Foreign Department (Utrikesdepartement) in writing that the agreement has been approved by them.

For a contracting state, that after the agreement has become effective announces that the agreement has been approved, the agreement will become effective thirty (30) days after the day, when the Swedish Foreign Department received the announcement.

The Swedish Foreign Department will notify the other contracting states regarding the time of receiving such announcements and the time of commencement of the agreement.

Article 8

Iceland may enter this agreement.

The instrument of access must be deposited with the Swedish Foreign Department. The agreement will become effective in the case of Iceland on the date of the deposit. The Swedish Foreign Department will notify the other contracting states in writing regarding the time of the deposit.

Article 9
This agreement is terminable by written announcement thereof to the Swedish Foreign Department who will notify the other contracting states regarding the time of receiving such announcement and of its content.

The termination is only valid for the terminating contracting state and will become effective six (6) months from the date, when the Swedish Foreign Department has received the notice of termination.

Article 10

The original copy of this agreement will be deposited in the Swedish Foreign Department, who will submit confirmed copies of the same to the other contracting states.

For the confirmation hereof the properly authorised have signed this agreement.

Completed in Stockholm January 20th 1989 in 4 copies in Danish, Finnish, Norwegian and Swedish of which all texts are equally valid.
5. **DENMARK – GERMANY**


Letter regarding cooperation concerning search and rescue entered into between the Ministry of Transport in the Kingdom of Denmark and the Ministry of Transport in the Federal Republic of Germany.

Pursuant to the stipulations in paragraph 2.1.4 in Appendix to the International Convention on Maritime Search and Rescue of 1979 (in the following termed as the ‘SAR Convention’) search and rescue regions must be established per agreement between the involved parties. Two temporary plans for maritime search and rescue have been drawn up for the North Sea and The Baltic Sea that determine the exact boundaries for the search and rescue regions in the areas in question. The plans have been issued by the International Maritime Organisation (IMO) as Circular SAR.2/Circ.2/Rev.2 of November 29th 1990.

On behalf of the Ministry of Industry in the Kingdom of Denmark I hereby confirm that the rescue services in my country will perform search and rescue missions within the regions, that have been detailed in the plans for maritime search and rescue in the North Sea and the Baltic Sea, and that the search and rescue services in my country will cooperate with the equivalent services in Your country, as determined in Chapter 3 in Appendix to the SAR Convention. Under the premise of reciprocity search and rescue units from Your country may instantaneously and without prior authorisation sail into or fly over territorial waters or areas of land that belong to the Kingdom of Denmark, in connection with the search of ships in distress and the rescue of survivors from such ships, given that such units immediately report to the relevant rescue coordination centre their position and the time of their entry into or overflight of the territorial waters or areas of land. The search and rescue agreements that are referred to in paragraph 3.1.8 in Appendix to the SAR Convention concerning mutual usage of facilities, determining joint procedures, joint training and exercises, regular control of the communication lines between the countries, contact visits by the personnel in the rescue coordination centres, as well as the exchange of information concerning search and rescue will be effectuated directly between the rescue coordination centres of the two countries.
The parties further agree that the ‘Agreement between the Government in the Kingdom of Denmark and the Government of the German Democratic Republic on cooperation regarding the rescue of human lives in the Baltic Sea’ of September 14th 1988 as a result of the German reunification on October 3rd 1990 no longer is valid with regards to maritime search and rescue.

Present letter will together with an equivalent letter composed by Your Ministry constitute an agreement between the Ministry of Industry in the Kingdom of Denmark and the Ministry of Transport in the Federal Republic of Germany in accordance with the stipulations in paragraph 2.1.4 in Appendix to the SAR Convention. The agreement will be announced to the Secretary General of the International Maritime Organisation.

Copenhagen, May 27th 1992

Torben Ginnerup

Head of department
ADDENDUM E

INTERNATIONAL REFERENCES/DOCUMENTS

1. Search and Rescue, ATP-10 (NATO)
2. ANNEX 12 ‘SEARCH AND RESCUE’ (ICAO)
   and III’ (IAMSAR) (ICAO/IMO)
4. Radio Regulations (ITU)
5. The Danish Ministry of Foreign Affairs ministerial executive of April 18th 1986 
   of the International Convention of April 27th 1979 on Maritime Search and 
   Rescue
6. International Convention for the Safety of Life at Sea
7. COSPAS-SARSAT Data Distribution Plan.
8. The Submarine Rescue Manual ATP-57/MTP 57 (A)
NATIONAL REFERENCES/DOCUMENTS

1. KFF B.2-14 ‘Circular on the Rescue Council for Shipping and Aviation’ (Copenhagen, 1998)

2. FKOBST 153-1: ‘Military Assistance to Civilian Authorities in Peace Time’

3. FTKBST 152.2 CHAPTER 13-I: ‘SAR Preparedness’

4. HFTK 915.1: ‘Danish Defence Flight Medical Enterprise’
   - Chapter 8: ‘Patient Air Transports’
   - Chapter 10: ‘The participation of doctors in operational flying’

5. The Chief of Police Proclamation B nr.5

6. Law no.: 900 of December 16th 1998 on Safety at Sea

7. Executive order no.: 178 of March 20th on Rules of the Seaways

8. Executive order nr.731 of September 18th 1997 on Radio Channels on Ships and Aircrafts

9. Executive Order nr.186 of May 26th 1965 on Shipping Reassurance

10. Regulations for assistance for the Ships of the Fishing Directorate

11. Handbook for radio telephony stations on ships

12. The state harbours’ harbour guard instruction no. 1. Local planning for areas in and surrounding the state harbours

13. AIP Denmark

14. Fishery Yearbook

15. Regulations for civilian aviation, BL 7-4, flight rescue service

16. The Preparedness Act
ADDENDUM F

SAR DEFINITION

1. **GENERALLY**

Admiral Danish Fleet HQ has the overall responsibility for the sea rescue service, and Flight Tactical Command has the overall responsibility for the flight rescue service. Subordinate to ADM (SOK) and FTC (FTK), the Joint Rescue Coordination Centre Denmark (JRCC Denmark) is responsible for the management and coordination of rescue missions in connection with the rescue of persons in distress within the rescue area of JRCC Denmark.

In cases where JRCC Denmark or others initiate action for the purpose of rescuing or searching for persons in distress, or presumed distressed, a SAR file must be created, as JRCC Denmark assigns an incident identification number and notifies this number to all parties involved. Such cases also include incidents where action is initiated preventively for the rescue of persons. In cases where JRCC Denmark provides assistance to a foreign rescue coordination centre a SAR file must also be created.

1.1. **DEFINITIONS**

The following are the sea and flight rescue service definitions of SAR and an emergency.

- A SAR is the actions that are initiated to relieve an emergency situation.
- An emergency situation is a situation that may possibly cause danger for the life or mobility of one or several persons. An emergency situation exists when a person or a manned ship or aircraft is confirmed or presumed to be missing or in distress and as such is not capable by itself to reach safety.

A SAR may be initiated as emergency preventive when such a situation arises that it may develop into an actual emergency – i.e. in potential emergency situations.