IAMSAR SOLUTIONS
AIR MARINE SEARCH & RESCUE

MARITIME SEARCH PLANNING (MSP)

COURSE DESCRIPTION

This course is designed to provide students with an in-depth understanding of maritime search and rescue (SAR) activities as part of their responsibilities under a Joint Rescue Coordination Centre (JRCC), Maritime Rescue Coordination Centre (MRCC) or a Maritime Rescue Sub-Centre (MRSC).

It primarily focuses on maritime SAR activities from the initial onset of a maritime distress incident until the conclusion of a mission. It is a necessity for anyone conducting the calculation of drift of search objects, the determination of datum in maritime operations, and planning SAR operations with a moving search area. This course consists of the detailed theoretical and practical elements of maritime search planning via manual and software-based methods.

INTENDED AUDIENCE

Any personnel who may be directly or indirectly involved in maritime search and rescue activities. This includes Rescue Coordination Centre personnel, On Scene Coordinators, Maritime Shipping agencies, Coast Guard, Navy, First Responder organizations, Emergency Response contractors, volunteer SAR organizations, Police, Administrators and Management.

REFERENCES

IAMSAR manual Volume I - Organization and Management
IAMSAR manual Volume II - Mission Coordination
IAMSAR manual Volume III - Mobile Facilities
ICAO Annex XII - Search and Rescue
Canadian Aeronautical and Maritime Search and Rescue Manual (CAMSAR)
International Maritime Rescue Federation - SAR Operations
International Convention on Safety of Life at Sea (SOLAS)

GENERAL LEARNING OUTCOME

The candidates will emerge with a solid understanding of the SAR system and the effective prosecution of various types of incidents where Search and Rescue assets are deployed within a maritime environment. Manual drift calculations are taught and practiced using available IAMSAR worksheets in order to accurately drift various search objects across the full spectrum of marine weather and environmental conditions. Software is also taught and utilized to further reinforce drift calculations and provide skills in the use of modern tools to assist the Search and Rescue Mission Coordinators (SMC). This course also discusses aeronautical SAR activities since aircraft are frequently used during maritime SAR incidents. It is a knowledge-based course with a focus on developing a general understanding of maritime drift and on the development of practical skill sets in maritime search planning and marine SAR incident coordination.

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PREREQUISITE
SAR Mission Coordinator course

LANGUAGE
Understanding of the English language both written and spoken preferably with a minimum of ICAO Level 3 English proficiency.

DURATION AND LOCATION
Course duration is 10 training days, available in 2026-2027 under mobile on-site training at your location (*we come to you*), in-house at our facilities in Canada (*you come to us*). For mobile on-site training, the client is to provide a suitable classroom training environment, computers / IT equipment, and the IAMSAR manuals (Volumes II and III).

CLASS SIZE
A maximum of 8 students per instructor.

INSTRUCTING PERSONNEL QUALIFICATIONS
Proposed instructors are qualified Canadian maritime SAR Mission Coordinators from the Canadian Coast Guard with a minimum of 3 years' experience in a Joint Rescue Coordination Center (JRCC).

COURSE TOPICS
Introduction to IAMSAR Manual Volumes 1-3
Stages of a Maritime SAR Incident and Actions
Basic Maritime Search Theory
Maritime Search Planning Steps and Sequence
Search Planning Methodologies
Search Objects & Characteristics
Fundamentals of Marine Weather and the Marine Environment
Cold Exposure Survival Models
Tides and Tidal Currents
Wind, Sea and Coastal Currents
Calculating Total Water Current in Drift Calculations
Fundamentals of Leeway and Leeway Divergence
Determination of Datum
Datum Marker Buoys and Maritime Drift Tools
Uncertainties in Coastal Planning and Drift Calculations
IAMSAR Drift Algorithm and Worksheets
Manual Search Planning Techniques
Accounting for Drift and Position Errors
Search Area Determination

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Search Effort Allocation
Visual and Electronic Search Patterns
Search Pattern Selection
Search and Rescue Units Characteristics & Assignment
Probabilities of Containment, Detection and Success
Flare Sightings and Flare Searches
Maritime Distress Signals, Communications & GMDSS
Drift Methodology using IAMSAR and Monte Carlo Algorithms
Fundamentals of Back / Reverse Drifting
Manual Search Planning Exercises and Case Studies
Advantages and Limitations of Computer-Based Search Planning
Software-Based Search Planning, Exercises and Case Studies

CERTIFICATION
Attending students receive a certificate of successful completion for the Maritime Search Planning course.

COURSE FEE
All-inclusive format. Includes tailored course preparation specific to the client's search and rescue region (SRR), personnel, instructional delivery needs, search planning software, graduation certificates and more. For onsite course deliveries, the course fee includes instructor airfare, hotel, meals, local transportation and incidentals.

AVAILABILITY AND PREPARATION TIME
Course availability is dependent upon IAMSAR Solutions' ongoing training and consulting commitments.

A minimum of 90 days from contract signature is required prior to the start of training. This allows sufficient time to gather appropriate data, develop relevant practical exercises and best prepare course materials that are tailored to the student cadre's area of responsibility.