

## Glossary

Term	Definition
Aircraft Coordinator (ACO)	A person who coordinates the involvement of multiple aircraft in SAR operations.
Aeronautical drift (Da)	Drift caused by bailout trajectory or aircraft gliding distance.
Aeronautical position	Initial position of a distressed aircraft at the time of re-entry, engine failure, aircrew ejection or bailout.
Aircraft glide	Maximum ground distance an aircraft could cover during descent.
Alert Phase	A situation wherein apprehension exists as to the safety of an aircraft or marine vessel, and of the persons on board.
Alerting post	Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue sub-centre.
ARGOS	A satellite-based location and data collection system.
AusSAR	Australian Search and Rescue: a functional description of the Australian Maritime Safety Authority's role in maritime and aviation SAR coordination, communications, and the provision of SAR units. AusSAR does not exist as a discrete entity inside AMSA. Whilst the description "AusSAR" is readily understood by other participants in SAR, the term RCC Australia is preferred.
Awareness range	Distance at which a search scanner can first detect something different from its surroundings but not yet recognise it.
Awareness stage	A period during which the SAR system becomes aware of an actual or potential incident.
Captain	Master of a ship or pilot-in-command of an aircraft, commanding officer of a warship or an operator of any other vessel.
Checksum digit	A digit that is appended to a numeric data element and used to verify its accuracy. Checksum digits are computed by adding the digits of the data element.
Coast earth station (CES)	Maritime name for an Inmarsat shore-based station linking ship earth stations with terrestrial communications networks.
Conclusion stage	A period during a SAR incident when SAR facilities return to their regular location and prepare for another mission.
Coordination	The bringing together of organisations and elements to ensure effective search and rescue response.  One SAR authority must always have <a href="#">overall coordination</a> responsibility and other organisations are to cooperate with this agency to produce the best response possible within available resources.
Coordinated search pattern	Multi-unit pattern using vessel(s) and aircraft.
Coordinated universal time (UTC)	International term for time at the prime meridian.
Cospas-Sarsat System	A satellite system designed to detect distress beacons transmitting on the frequencies 121.5 MHz, 243 MHz and 406 MHz.
Course	The intended horizontal direction of travel of a craft.
Coverage factor (C)	For parallel sweep searches, Coverage Factor (C) is computed as the ratio of sweep width (W) to track spacing (S). $C = W/S$ .
Craft	Any air or sea-surface vehicle, or submersible of any kind or size.
Datum	A geographic point, line, or area used as a reference in search planning.
Datum area	Area where it is estimated that the search object is most likely to be located.
Datum line	A line, such as the distressed craft's intended track line or a line of bearing, which defines the centre of the area where it is estimated that the search object is most likely to be located.
Datum point	A point, such as a reported or estimated position, at the centre of the area where it is estimated that the search object is most likely to be located.
Dead reckoning (DR)	Determination of position of a craft by adding to the last fix the craft's course and speed for a given time.
Digital selective calling (DSC)	A technique using digital codes which enables a radio station to establish contact with, and transfer information to, another station or group of stations.
Direction of current	Direction toward which a current is flowing. Also called set.

Term	Definition
Direction of waves, swell or seas	Direction from which the waves, swells, or seas are moving.
Direction of wind	Direction from which the wind is blowing.
Distress Phase	A situation wherein there is reasonable certainty that a vessel or other craft, including an aircraft or a person, is threatened by grave and imminent danger and requires immediate assistance.
Ditching	The forced landing of an aircraft on water.
Drift	The movement of a search object caused by environmental forces.
Drift error (De )	See Total drift error.
Emergency Phase	Emergency phases are based on the level of concern for the safety of persons or craft that may be in danger. The three levels of emergency are classified as Uncertainty, Alert, and Distress.
False alarm	Distress alert initiated for other than an appropriate test, by communications equipment intended for alerting, when no distress situation actually exists.
False alert	Distress alert received from any source, including communications equipment intended for alerting, when no distress situation actually exists, and a notification of distress should not have resulted.
Fetch	The distance over which the wind blows in a constant direction, without obstruction.
Field Search Coordinator	Term for SMC who coordinates land searches only.
First RCC	RCC affiliated with the shore station that first acknowledges a distress alert, and which will accept responsibility for all subsequent SAR coordination unless and until coordination is transferred to another RCC.
Fix	A geographical position determined by visual reference to the surface, referencing to one or more radio navigation aids, celestial plotting, or other navigation device.
Forward-looking infrared (FLIR)	An imaging system, mounted on board surface vessels or aircraft, designed to detect thermal energy (heat) emitted by targets and convert it into a visual display.
General communications	Operational and public correspondence traffic other than distress, urgency and safety messages, transmitted or received by radio.
Global Maritime Distress and Safety System (GMDSS)	A global communications service based upon automated systems, both satellite-based and terrestrial, to provide distress alerting and promulgation of maritime safety information for mariners.
Global Navigation Satellite System (GNSS)	Worldwide position and time determination system that includes one or more satellite constellations and receivers.
Great Circle Route	The shortest course between two points on the surface of a sphere. It lies in a plane that intersects the sphere's centre.
Ground speed (GS)	The speed an aircraft is making relative to the earth's surface.
Heading	The horizontal direction in degrees magnetic in which a craft is pointed.
Hypothermia	Abnormal lowering of internal body temperature (heat loss) from exposure to cold air, wind or water.
Indicated air speed (IAS)	The aircraft speed shown on the air speed indicator gauge. IAS corrected for instrument error and atmospheric density equals true air speed.
Initial position error (X)	The estimated probable error of the initially reported position of a SAR incident.
International Maritime Satellite Organisation (Inmarsat)	A system of geostationary satellites for worldwide mobile communications services, and which support the Global Maritime Distress and Safety System and other emergency communications systems.
Instrument flight rules (IFR)	Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.
Instrument meteorological conditions (IMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling less than the minima specified for visual meteorological conditions.
Joint rescue coordination centre (JRCC)	A rescue coordination centre responsible for both aeronautical and maritime search and rescue incidents.
Knot (kt)	A unit of speed equal to one nautical mile per hour.
Last known position (LKP)	Last witnessed, reported, or computed DR position of a distressed craft.
Leeway (LW)	The movement of a search object through water caused by winds blowing against exposed surfaces.

Term	Definition
Local user terminal (LUT)	An earth receiving station that receives beacon signals relayed by Cospas-Sarsat satellites, processes them to determine the location of the beacons, and forwards the signals.
MAYDAY	The international radiotelephony distress signal, repeated three times.
MEDEVAC	Evacuation of a person for medical reasons.
Meteorological visibility	The maximum range at which a large object, such as landmasses or mountains, can be seen. Also referred to as Meteorological Range.
Mission control centre (MCC)	Part of the Cospas-Sarsat system that accepts alert messages from the local user terminal(s) and other mission control centres to distribute to the appropriate rescue coordination centres or other search and rescue points of contact.
Narrow-Band Direct Printing (NBDP)	Automated telegraphy, as used by the NAVTEX system and telex-over-radio.
NAVAREA	One of 16 areas into which the International Maritime Organization divides the world's oceans for dissemination of navigation and meteorological warnings.
NAVTEX	Telegraphy system for transmission of maritime safety information, navigation and meteorological warnings and urgent information to ships. NAVTEX is not supported by Australia - see <a href="#">SafetyNet</a> .
On-scene	The search area or the actual distress site.
On-scene coordinator (OSC)	A person designated to coordinate search and rescue operations within a specified area
On-scene endurance	The amount of time a facility may spend at the scene engaged in search and rescue activities.
Overall Coordination	The responsibility of the SAR authority to prosecute a SAR operation for a given target in accordance with Appendix 1.2 or the SAR authority best placed to coordinate efforts of the response agencies that may become involved in a SAR action.
Overdue	A situation where a craft has failed to arrive at its intended destination when expected and remains missing.
PAN-PAN	The international radiotelephony urgency signal. When repeated three times, indicates uncertainty or alert, followed by nature of urgency.
Personal Locator Beacon (PLB)	Personal radio distress beacon for alerting and transmitting homing signals.
Pilot-in-command	The pilot responsible for the operation and safety of the aircraft during flight time.
Planning stage	A period during a SAR incident when an effective plan of operations is developed.
Position	A geographical location normally expressed in degrees and minutes of latitude and longitude.
Positioning	Process of determining a position that can serve as a geographical reference for conducting a search.
Possibility area	(1) The smallest area containing all possible survivor or search object locations. (2) For a scenario, the possibility area is the smallest area containing all possible survivor or search object locations that are consistent with the facts and assumptions used to form the scenario.
Primary swell	The swell system having the greatest height from trough to crest.
Probability Area	The area in which a missing craft and/or survivors are most likely to be found taking into account possible errors in the navigation of the missing craft and of the search craft.
Probability of detection (POD)	The probability of the search object being detected, assuming it was in the areas that were searched. POD is a function of coverage factor, sensor, search conditions and the accuracy with which the search facility navigates its assigned search pattern. Measures sensor effectiveness under the prevailing search conditions.
Rescue	An operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.
Rescue coordination centre (RCC)	The centre from which a SAR incident is controlled and coordinated. The Centre is known by various terms such as the Rescue Coordination Centre, Major Incident Room, Operations Room or Base Station. For the purposes of this manual these centres will be known generically as the Rescue Coordination Centre or RCC.

Term	Definition
Rhumb line	A line of constant bearing that cuts meridians at the same angle. It is a straight line between two points on a Mercator projection chart.
SafetyNET	Communications service provided via Inmarsat for promulgation of maritime safety information, including shore-to-ship relays of distress alerts and communications for search and rescue coordination.
SAR Datum Buoy	Droppable floating beacon used to determine actual sea current, or to serve as a location reference.
Scenario	A consistent set of known facts and assumptions describing what may have happened to the survivors and/or craft.
Sea	Condition of the surface resulting from waves and swells.
Sea Current (SC)	The residual current when currents caused by tides and local winds are subtracted from local current. It is the main, large-scale flow of ocean waters.
Search	An operation, normally coordinated by a rescue coordination centre, using available personnel and facilities to locate persons in distress.
Search and rescue authority	The authority within an Administration with overall responsibility for establishing and providing SAR services and ensuring that planning for those services is properly coordinated. The national SAR authority in Australia is the Australian Maritime Safety Authority with each of the States and Territories Polices services and the Department of Defence being the SAR Authorities within their jurisdictions.  In Australia, the SAR Authority takes on the roles of the SAR Coordinator as described in the IAMSAR Manual.
Search action plan	Message, normally developed by the SMC, for passing instructions to SAR facilities and agencies participating in a SAR mission.
Search and rescue briefing officer	An officer appointed, usually by the SMC, to brief departing SAR facilities and debrief returning SAR facilities.
Search and rescue case	Any potential or actual distress about which a facility opens a documentary file, whether or not SAR resources are dispatched.
Search and rescue coordinating communications	Communications necessary for the coordination of facilities participating in a search and rescue operation.
Search and rescue facility	Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.  The terms unit and asset maybe interchangeable with facility.
Search and rescue incident	Any situation requiring notification and alerting of the SAR system and which may require SAR operations.
Search and rescue liaison officer	An officer assigned to promote coordination during a SAR mission.
Search and rescue mission coordinator (SMC)	The suitably trained or qualified official temporarily assigned to coordinate a response to an actual or apparent distress situation. In Australia, the acronym SARMC is also used in some jurisdictions. Throughout this manual, the terms SMC and SARMC are synonymous. Some jurisdictions also use the term A/SARMC to describe the SMC's assistants.
Search and rescue plan	A general term used to describe documents which exist at all levels of the national and international search and rescue structure to describe goals, arrangements, and procedures which support the provision of search and rescue services.
Search and rescue point of contact (SPOC)	Rescue coordination centres and other established and recognised national points of contact that can accept responsibility to receive Cospas-Sarsat alert data to enable the rescue of persons in distress.
Search and rescue region (SRR)	An area of defined dimensions, associated with the national rescue coordination centre ( RCC Australia ), within which search and rescue services are provided.
Search and rescue service	The performance of distress monitoring, communication, coordination and search and rescue functions, including provision of medical advice, initial medical assistance, or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations.
Search and rescue stage	Typical steps in the orderly progression of SAR missions. These are normally Awareness, Initial Action, Planning, Operations, and Mission Conclusion.
Search and rescue unit (SRU)	A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

Term	Definition
Search area	The area determined by the search planner to be searched. This area may be sub-divided into search sub-areas for the purpose of assigning specific responsibilities to the available search facilities.
Search endurance (T)	The amount of "productive" search time available at the scene also known as Available Search Hours (ASH). This figure is usually taken to be 85% of the on-scene endurance, leaving a 15% allowance for investigating sightings and navigating turns at the ends of search legs.
Search facility position error (Y)	Probable error in a search craft's position, based on its navigational capabilities.
Search object	A ship, aircraft, or other craft missing or in distress or survivors or related search objects or evidence for which a search is being conducted.
Search pattern	A procedure assigned to an SRU for searching a specified area.
Search radius	The actual search radius used to plan the search and to assign search facilities. It is usually based on adjustments to the optimal search radius that are needed for operational reasons.
Secondary swells	Swell systems of less height than the primary swell.
Sensors	Human senses (sight, hearing, touch, etc.), those of specially trained animals (such as dogs), or electronic devices used to detect the object of a search.
Set	Direction towards which a current flows
Situation report (SITREP)	Reports, from the OSC to the SMC or the SMC to interested agencies, to keep them informed of on-scene conditions and mission progress.
Splash Point	See Last known position
Surface drift	Vector sum of total water current and leeway. Sometimes called Total Drift.
Surface picture (SURPIC)	A list or graphic display from a ship reporting system of information about vessels in the vicinity of a distress situation that may be called upon to render assistance.
Surface position	The position of the search object on the earth's surface at the time of initial distress, or its first contact with the earth's surface.
Sweep width (W)	A measure of the effectiveness with which a particular sensor can detect a particular object under specific environmental conditions.
Swell	Condition of the surface caused by a distant wind system. The individual swell appears to be regular and smooth with considerable distance between rounded crests.
Swell direction	The direction from which a swell is moving. The direction toward which a swell is moving is called the down swell direction.
Swell face	The side of the swell toward the observer. The backside is the side away from the observer. These definitions apply regardless of the direction of swell movement.
Swell velocity	Velocity with which the swells advance with relation to a fixed reference point, measured in knots.
Time of closest approach (TCA)	Time during a satellite pass when the satellite is closest to a signal source.
Total drift error (De )	Sum of the individual drift errors from the time of the incident until datum. Used when determining Total Probable Error (E).
Total probable error (E)	The estimated error in the datum position. It is the square root of the sum of the squares of the total drift error, initial position error, and search facility position error.
Total water current (TWC)	The vector sum of currents affecting search objects.
Track spacing (S)	The distance between adjacent parallel search tracks.
Triage	The process of sorting survivors according to medical condition and assigning them priorities for emergency care, treatment, and evacuation.
True air speed (TAS)	The speed an aircraft is travelling through the air mass. TAS corrected for wind equals ground speed.
Uncertainty Phase	A situation wherein doubt exists as to the safety of an aircraft or a marine vessel, and of the persons on board.
Unreported	A situation where a craft has failed to report its location or status when expected and remains missing.
Vector	A graphic representation of a physical quantity or measurement, such as wind velocity, having both magnitude and direction.

<b>Term</b>	<b>Definition</b>
Visual flight rules (VFR)	Rules governing procedures for conducting flight under visual meteorological conditions. In addition, used by pilots and controllers to indicate type of flight plan.
Visual meteorological conditions (VMC)	Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima.
Wave (or Chop)	The condition of the surface caused by local wind and characterised by irregularity, short distance between crests, whitecaps, and breaking motion.
Wind-corrected heading	The actual heading an aircraft is required to fly to make good an intended course.
Wind current (WC)	The water current generated by wind acting upon the surface of water over a period of time.