Information Bulletin

ISSUE 26

2015

Cospas-Sarsat Honoured As a Space Technology Improving Life for All Humanity

The International Cospas-Sarsat Programme was honoured in April 2014 with induction into the Space Technology Hall of Fame. The Hall of Fame was established in 1988 by the Space Foundation, a global, non-profit leader in space awareness activities and educational programs, to recognize "those who transform technology originally developed for space exploration into products that help improve the quality of life here on Earth." With Cospas-Sarsat having now assisted in the rescue of more than 39,000 people since 1982, the induction ceremony cited the Programme as "space technology saving lives on Earth!" The introductory video during the awards ceremony highlighted the advances in satellite search-and-rescue being brought by the new MEOSAR (medium-altitude Earth-orbiting search-and-rescue) distress-alert detection and localization technology being deployed on satellites of the United States (GPS), Russia (Glonass), and the European Union (Galileo). During presentation of the video, the names of all of the Participant countries and agencies were projected on adjacent screens to emphasize the truly international, cooperative nature of Cospas-Sarsat.

Andrey Kushev (Russia/Morsviazsputnik), Eric Luvisutto (France/CNES), Michael Donald (Canada/NSS), Christopher O'Connors (USA/NOAA) and Dr. Lisa Mazzuca (USA/NASA) display the Hall of Fame awards of the four founding Party States of Cospas-Sarsat at the Programme's Council Meeting in October 2014.

Hundreds of dignitaries (including Apollo 11 astronaut Edwin "Buzz" Aldrin) and other gala-dinner attendees watch a video prepared by the Space Foundation describing the International Cospas-Sarsat Programme.

Hall of Fame Video

Cospas-Sarsat Website

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POINTS OF INTEREST

- In **2014**, Cospas-Sarsat alert data assisted in nearly **700 distress incidents** in which over **2,300 persons** were rescued
- **Since 1982**, the System provided assistance in **rescuing more than 39,000 people in over 11,000 SAR events**
- The 406-MHz **beacon population** is estimated to be **1.7 million units**

On the Move: Cospas-Sarsat Secretariat Relocates

During July 2015 the Cospas-Sarsat Secretariat relocated from its offices at 700 de la Gauchetière West, in Montréal, to a building at 1250 René-Lévesque Boulevard West, about 500 metres to the southwest. The new office space, in suite 4215, accommodates the additional staff hired to augment the Programme's type-approval activity, and to better support mission control centres and SAR points of contact during the transition to the MEOSAR space- and ground-segment architecture, and next-generation beacon technology. Through special arrangements made for acquiring the space, the office-space costs to the Programme are very similar to those for the smaller space at 700 de la Gauchetière West. 1250 René-Lévesque Boulevard West, which is located at the Bonaventure Metro station and still is convenient to the International Civil Aviation Organization (ICAO) headquarters, also has an on-site conference centre that the Secretariat will be using to host smaller Programme meetings such as task groups and experts working groups.

With the move, the telephone numbers for the Secretariat have changed. Please be sure to check the back page of this bulletin or the Cospas-Sarsat website for the new telephone numbers before calling.

Aviators: Know Your Switches!

by Daniel Ponzini
Swiss Federal Office of Civil Aviation

If your aircraft is in imminent threat of a crash, and you have the opportunity, manually activate your ELT using the cockpit switch. This improves the chance that your ELT signal will be detected before possible damage to it in a crash. If you have a 406-MHz ELT (as most ELTs manufactured today are 406-MHz models), NEVER activate the ELT from the cockpit if you do not have an emergency. Every 406-MHz ELT activation, regardless of the time during the hour, is treated as a real emergency, setting into motion rescue procedures that may divert resources from a real emergency. Aviation ELTs are falsely activated at a rate 5-12 times higher than marine EPIRBs and personal locator beacons (PLBs). This often is because aviators "test" their ELTs by activating them, rather than using the "test" function properly designed for this purpose. Maintenance personnel similarly must be very careful when testing an ELT. Only the test function should be used unless, if necessary for certain tests, the ELT is activated ONLY into a dummy antenna, with shielding that prevents the signal from radiating from the aircraft, or with advance notification to the nearest rescue coordination centre and air-traffic services centre.

ACTIVATE YOUR ELT USING THE COCKPIT SWITCH IF YOUR AIRCRAFT IS IN IMMINENT THREAT; OTHERWISE ONLY USE THE INTERNAL TEST FUNCTION as described in the ELT manufacturer's manual!

Proper ELT testing procedures can be found in the Handbook of Beacon Regulations and on the Cospas-Sarsat website at:
http://www.cospas-sarsat.int/en/beacon-ownership/testing-your-406-mhz-beacon

Cospas-Sarsat People and Events

Western DDR Meeting, November 2013, Lima, Peru

Central DDR Meeting, March 2014, Bodø, Norway

South Central DDR Meeting, March 2014, Maspalomas, Spain

South West Pacific DDR meeting, April 2014, Singapore

Alert Data Distribution Regions (DDRs)

Cospas-Sarsat uses a network of advanced receivers on orbiting satellites to relay distress signals from beacons anywhere on Earth. But once these signals are detected, and the location of the distress is calculated, how do these alert messages get to rescue authorities?

Dedicated men and women from Cospas-Sarsat's 42 "Participant" countries and agencies cooperate in relaying these messages around the globe among mission control centres (MCCs) to search-and-rescue agencies that have accepted responsibility for launching rescues in the area where the distress is located. A message also is sent to the government of the "home" country of the beacon.

The work of distributing distress-alert data to the proper destinations is divided among six Data Distribution Regions (DDRs) that cover the globe. Periodically the technical and search-and-rescue experts from these regions meet to review existing plans, develop improved procedures, learn about the technical evolution of the Cospas-Sarsat System, and meet face-to-face with the people that they have worked with — sometimes anonymously over thousands of miles — to rescue persons in distress.

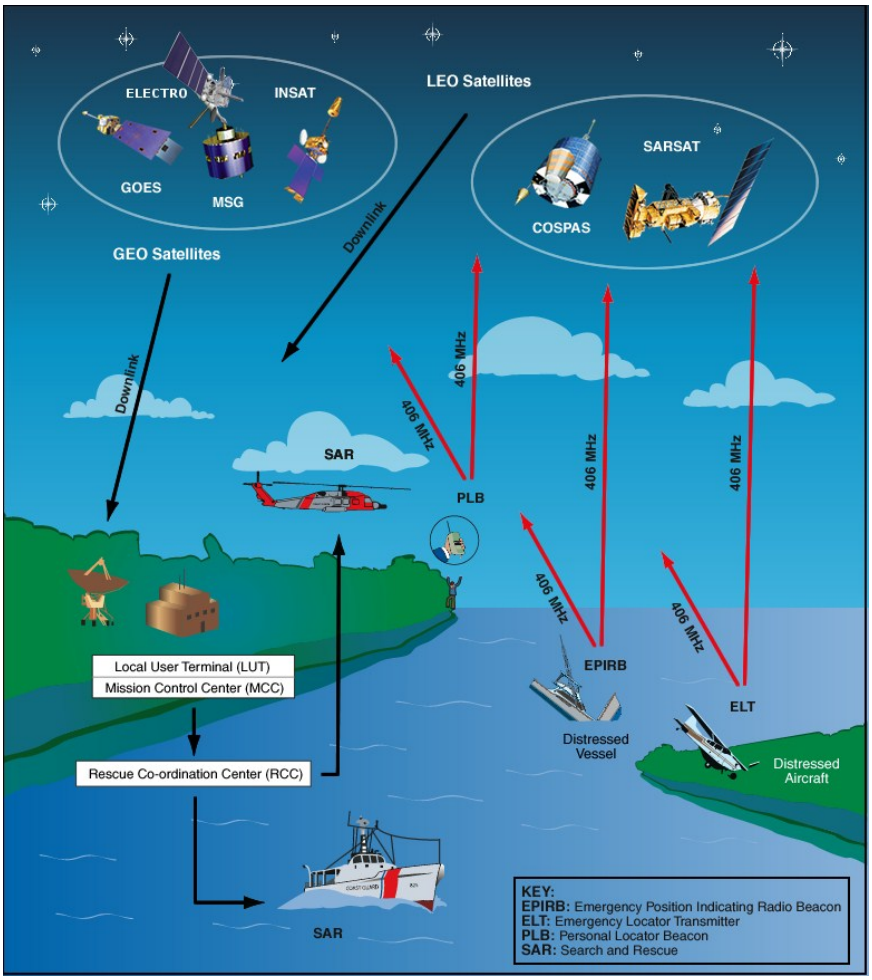
If you meet anyone that you see in these photos, say "hi" and thank them for their service!

CSC-53 Open Council Meeting, October 2014, Montréal

The Cospas-Sarsat Council, under the chairmanship of Andrey Kuropyatnikov (Russia), celebrated its 50th Session in April 2013. Party Representatives Christopher O'Connors (USA), Michael Donald (Canada) and Eric Luvisutto (France) flank Mr. Kuropyatnikov at center.

See the Photo Supplement On-line for More Pictures!

How Does the Cospas-Sarsat System Work?



The Cospas-Sarsat System provides distress alert and location information to search and rescue (SAR) services throughout the world for maritime, aviation and land users in distress. The System is comprised of:

- Satellites in low-altitude Earth orbit (LEOSAR) and geostationary orbit (GEOSAR) that process and/or relay signals transmitted by distress beacons.
- Ground receiving stations, called "local user terminals" (LUTs), which process the satellite signals to locate the beacon.
- Mission control centres (MCCs) that distribute the distress alert information to SAR authorities.

The Cospas-Sarsat System detects distress beacons that operate at 406 MHz. Satellite reception and processing of legacy analogue-technology, 121.5-MHz beacon signals ended on 1 February 2009.

PARTICIPATING COUNTRIES AND ORGANISATIONS

Algeria
Argentina
Australia
Brazil
Canada
Chile
China (P.R. of)
Cyprus
Denmark
Finland
France
Germany
Greece
Hong Kong
India
Indonesia
Italy
ITDC
Japan
Korea (R. of)
Netherlands (The)
New Zealand
Nigeria
Norway
Pakistan
Peru
Poland
Russia
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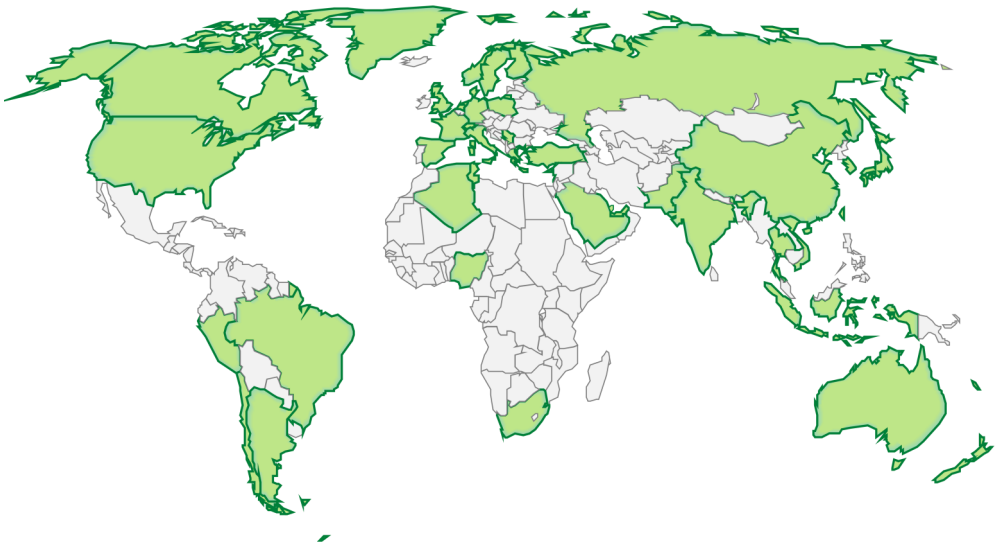
Turkey
UAE
UK
USA
Vietnam

Total: 42



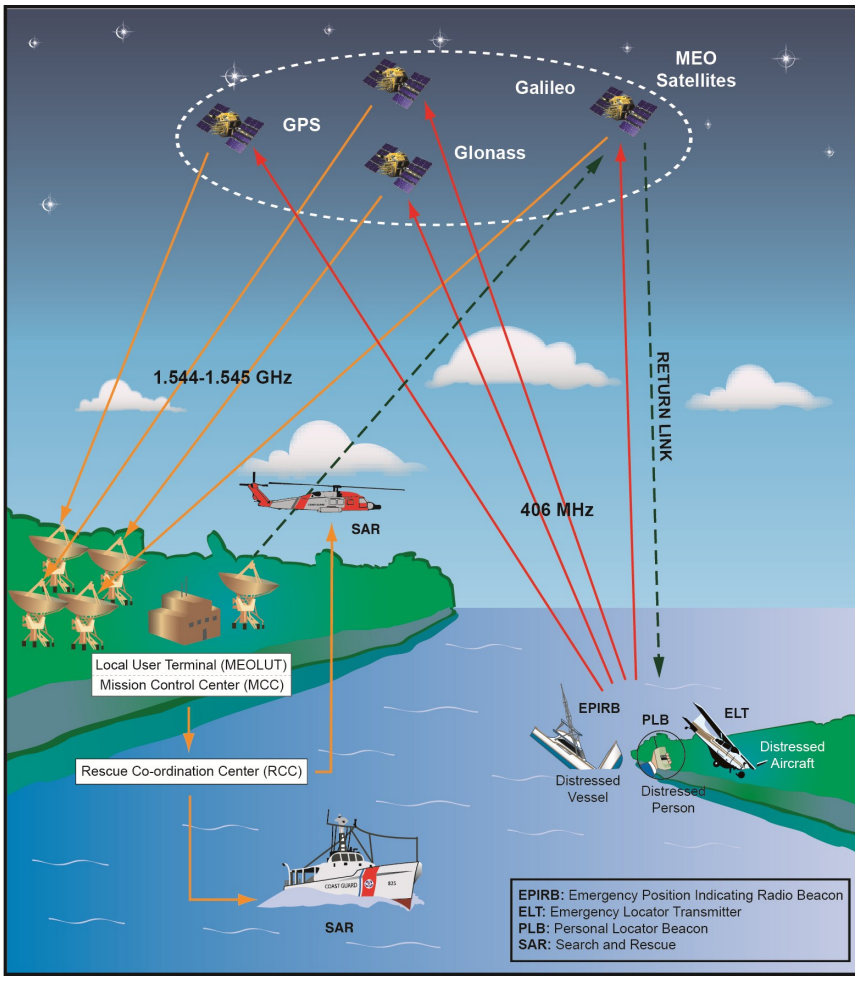
Cospas-Sarsat distress alert and location data are **provided to national SAR authorities worldwide without discrimination**, and independent of whether their government is formally associated with the Programme.

MEOSAR:
The Future of Cospas-Sarsat

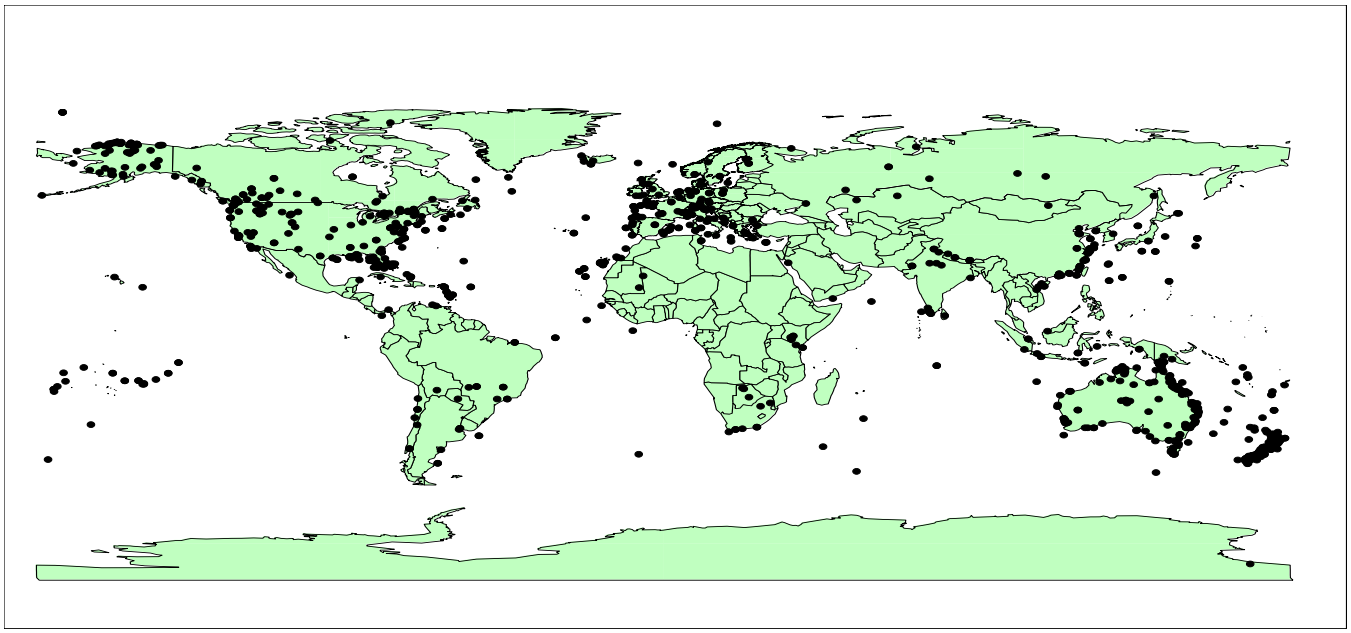
Cospas-Sarsat is in the process of upgrading its system with search-and-rescue repeaters placed aboard Global Navigation Satellites (GPS from the United States, Russian Glonass and European Galileo) orbiting the Earth at altitudes roughly between 19,000 and 23,000 km. These new Cospas-Sarsat space assets will be part of a system known as MEOSAR, for Medium-altitude Earth Orbit Search and Rescue system.

MEOSAR will offer the advantages of both the LEOSAR and GEOSAR systems, without many of their current limitations, by relaying beacon distress messages and simultaneously calculating the beacon location anywhere on Earth nearly the instant that the alert signal is received. The MEOSAR system also will allow an optional "return link" transmission back to beacons. One function this return link feature will provide will be confirmation to the person in distress that their alert message has been received.

In early 2013, Cospas-Sarsat initiated a demonstration and evaluation (D&E) phase for the MEOSAR system development *(see story on page 10)*.



GEOGRAPHIC DISTRIBUTION OF CONFIRMED SAR EVENTS
Assisted by Cospas-Sarsat in 2014



2013-14 Notable "Saves"*

1 Six Rescued from Crash of Sightseeing Float Plane

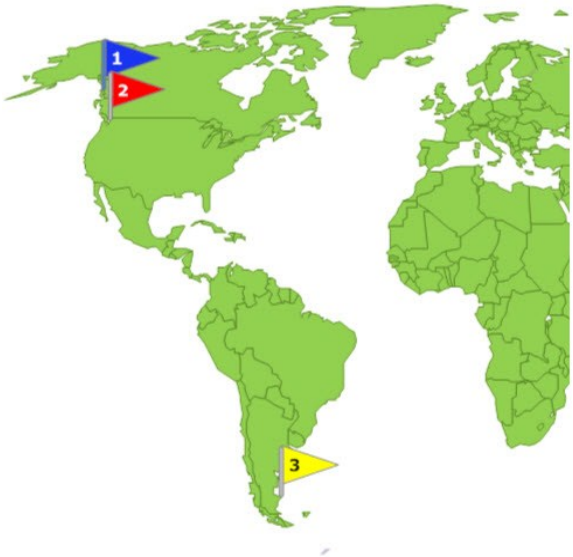
On 4 June 2013 at 23:47 UTC the United States Mission Control Center (USMCC) received an alert relayed from a 406-MHz emergency locator transmitter (ELT) near La Conte Bay, Alaska. A Dehavilland DHC-2 Beaver crashed into mountainous terrain with six passengers on board from a cruise ship tour, as well as the pilot. The Alaska Rescue Coordination Center received the Cospas-Sarsat alert and forwarded it to the Coast Guard District 17 Rescue Coordination Center (CGD17). CGD17 contacted the aircraft's company, which had lost communications with the plane. CGD17 dispatched an MH-60 Jayhawk helicopter from Sitka to the calculated incident location. The aircrew spotted the crash site and later determined that there were six survivors and one fatality. Five of the survivors were members of the same family; parents and their three sons. Two survivors with serious injuries were taken to Seattle for medical treatment and the other four survivors were transported to Petersburg for treatment. CGD17 worked with the Alaska State Troopers to recover the remains of the deceased person.

In this incident, Cospas-Sarsat provided the **only alert**.

2 Two Helicopter-Crash Survivors Found

On 28 January 2014 at 00:08 UTC the Sarsat 10 satellite detected a distress alert from an ELT, calculating a position near Pitt Meadows, British Columbia, which was consistent with a signal that had also been received by the GOES 13 satellite. With the alert relayed by the Canadian Mission Control Centre to the Joint Rescue Coordination Centre (JRCC) in Victoria, B.C., a Cormorant helicopter, already airborne on a training mission, was tasked along with a Buffalo aircraft to investigate the distress signal. Because the beacon had been properly registered in advance by the aircraft's owner, JRCC Victoria was able to call the owner and learn that the incident's helicopter was supposed to be flying in the same general area from which the alert was detected. At 00:57 the crashed helicopter was located near the calculated location in a creekbed, lying on its side in the water. SAR technicians were deployed and quickly found the pilot and passenger in a nearby cabin north of the crash site. They were transported to hospital for treatment of a broken arm and minor injuries.

Cospas-Sarsat provided the **only alert** in this SAR case.



3 Rescue Following EPIRB Activation Nets Argentines the Exceptional Bravery at Sea Award

On 4 December 2013 two sailors activated their EPIRB (emergency position-indicating radio beacon) after their sailing yacht, "Wild Rose", capsized and began sinking in heavy seas and 80 km/hour winds. The beacon's position was calculated to be approximately 230 km southeast of the Argentine city of Comodoro Rivadavia. The distress signal was detected by the Sarsat-12 satellite and relayed to the Argentine Mission Control Centre in El Palomar. Because the vessel owners had properly registered the beacon in advance, the rescue agencies were able to confirm the type of vessel, which greatly assisted in organizing the rescue effort.

The rescue occurred at night in extreme weather conditions surrounding the rapidly sinking yacht. Despite these factors, rescue swimmers managed to lift the two sailors aboard a Dauphin PA-43 helicopter, rushing them to a hospital to be treated for hypothermia.

The International Maritime Organisation recognized the efforts of Prefecto Julius Alexander Weimann, Chief Jorge Luis De Zan, First Assistant Silvio Ledesma and rescue swimmers Chief Juan Burgoa and Second Assistant Francisco Morales with an Exceptional Bravery at Sea award. The award recognizes those who put their own lives at risk in the performance of acts of exceptional bravery and courage in attempting to save lives at sea. The rescue operation also received the first place award for Best Operation of 2014 at the annual meeting of the European Rescue Swimmers Association in Gijon, Spain in June 2014.

The use of the 406-MHz EPIRB showed that even in extreme conditions, the Cospas-Sarsat System is instrumental in saving lives, in this case providing the **only alert**.

*Persons rescued from life-threatening situations with the assistance of Cospas-Sarsat.

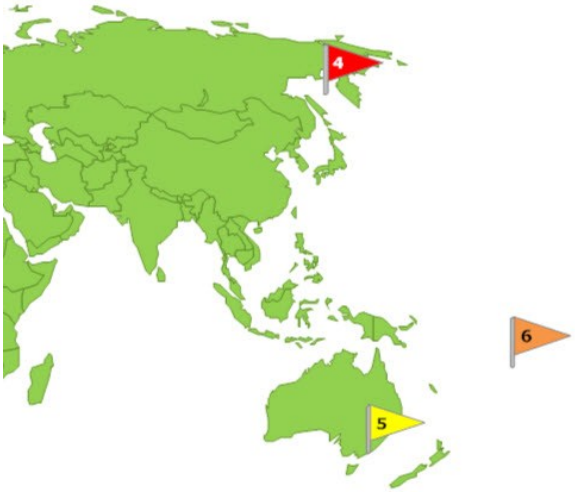
Assisted by Cospas-Sarsat

4 27 Sailors Safe After SAR Operation in the Sea of Okhotsk

On 6 February 2014 distress-alert signals from an EPIRB aboard the fishing vessel "Pacific Orion" were detected in the Sea of Okhotsk. The first alert message with coordinates was received by the Cospas Mission Centre at 05:55 UTC. Attempts to contact the vessel by all available means were unsuccessful. According to a monitoring system, the vessel was moving toward the western coast of Kamchatka, where wind speeds were reaching 30 metres per second, with 7-8 metre waves. A decision was made to direct the nearest vessels to assist. At 14:50 UTC radio communication with the "Pacific Orion" was established. In the storm a wave had broken the front windows on the running bridge. As a result, the steering of the "Pacific Orion" was damaged and the communication equipment was disabled.

The "Pacific Orion" was accompanied safely to port by another vessel, and the 27 crew members aboard the "Pacific Orion" were reported to be well.

In this incident, Cospas-Sarsat provided the **first alert**.



5 Fathers, Daughters Rescued in Canoe Mishap

On 6 December 2014 an alert was received from a personal locator beacon (PLB) at 01:16 local time by the Australian Mission Control Centre. The initial detection by the Cospas-Sarsat System, using Doppler techniques, identified two possible locations for the beacon: one on the Deua River, New South Wales, Australia; the other off the east coast of the South Island of New Zealand.

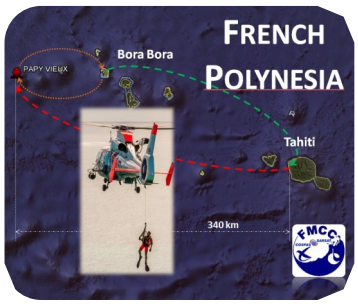
Because the PLB had been properly registered in advance in the Australian beacon registry, rescuers were quickly able to identify it as belonging to an outdoor-adventure hire company that had updated the information to include details of the group that had hired the beacon. Two men and their ten-year-old daughters had hired canoes and were on a weekend trip down the Deua River. Using this information, the Australian Rescue Coordination Centre was able to save precious time by commencing search operations before a subsequent satellite pass (02:57) confirmed the location.

While local police organised ground services, a rescue helicopter was tasked to fly to the calculated location at first light. The canoeists were soon found, trapped on one side of the river where floodwaters had washed away their tents and canoes overnight. The helicopter winched the four canoeists to waiting ground emergency services.

Cospas-Sarsat provided the **only alert** in this SAR case.

6 Ten Fishermen Saved Thanks to Their Personal Locator Beacon

On 18 September 2014 at 01:11 UTC the French Mission Control Center received an alert from a PLB via the GOES-15 satellite. Because the PLB was a model that had an integrated satellite navigation receiver (GPS/Glonass/Galileo), the beacon was able to transmit its location coordinates in the distress message, saving time in the location calculation. The distress alert was relayed immediately to the Maritime Rescue Coordination Centre (MRCC) in Papeete, which is in charge of the search-and-rescue region where the PLB was located.



Although a helicopter was sent to the position of the beacon, the PLB (coded with a French country-code) was not included in a registration database, and it was not possible to know the type of craft involved in the distress (plane or boat) nor the number of persons in distress. The rescue helicopter, after a one-and-a-half-hour flight, found a fishing vessel capsized and 10 people in a life raft. The rescue helicopter took the first seven persons to Bora-Bora, the nearest island with a medical team. Meanwhile, the rescue helicopter's diver waited more than two hours with the remaining crew for the rescue helicopter to return. All ten fishermen were airlifted safe and well.

Information contained in a beacon registration database can make the key difference during a SAR operation. Help us to rescue you by registering your beacon!

In this incident, Cospas-Sarsat provided the **only alert**.

In the News

President of Cyprus Hosts Cospas-Sarsat Delegates

During the JC-27 meeting in Limassol, Cyprus, the President of Cyprus, Mr. Nicos Anastasiades, hosted the delegates at an official dinner. President Anastasiades recognized the work of the Cospas-Sarsat Programme participants in the humanitarian cause of saving lives.

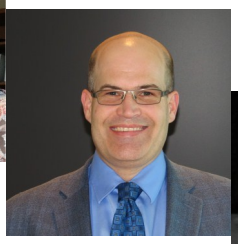
JC-27 Chair Andrey Kushev with President Anastasiades

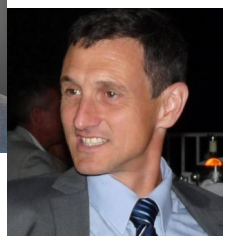
Welcome Aboard the Secretariat

New arrivals to the Cospas-Sarsat Secretariat include:

- Miriam Paknys, Documentation Manager and Website Coordinator;
- Eric Harpell, Technical Officer; and
- Arnaud Sindou, Operations Officer.

Please warmly welcome them when you see them at upcoming meetings.





The Twenty-Seventh Meeting of the Joint Committee, chaired by Mr. Andrey Kushev (Russia, seated fourth from left), was held in Limassol, Cyprus and hosted by the government of Cyprus.

The Twenty-Eighth Meeting of the Joint Committee, chaired by Dr. Lisa Mazzuca (USA, seated sixth from left), was held in Bali, Indonesia, hosted by BASARNAS.

Cospas-Sarsat Operations

Pakistan: Steps for Improving Responsiveness

Two SAR exercises using the Cospas-Sarsat System were hosted in March and April 2013 by the Pakistan Rescue Coordination Centre (PARCC) to validate operational plans, develop liaison relationships and practice skills that are in line with ICAO regulations and standards.

Also, on 8-9 July 2013, 20 officials from SAR-related organizations participated in a basic search-and-rescue course to perform exercises based on real and simulated alerts using the SAR capability matrix of Pakistan, which includes Cospas-Sarsat and the National Space Agency of Pakistan (SUPARCO).

The fourth meeting of the National Coordination Committee (NCC) was held in September 2013 to review the National SAR plan, take measures to prevent unauthorized distress signals, and educate agencies on beacon registration.

On the occasion of the joint celebration of the 70th anniversary of the establishment of ICAO and the 32nd anniversary of the Pakistan Civil Aviation Authority (CAA), on 7 December 2014 SUPARCO made a presentation on the Cospas-Sarsat System and explained its role in Pakistan. The ceremony in Karachi was attended by the provincial governor of Sindh (where Karachi is the capital), the vice chief of the air staff, the director general of CAA, and representatives from aviation sectors in Pakistan, as well as notables of the city.

Join Cospas-Sarsat as a Participating State

If you review the map of Cospas-Sarsat participants on page 4 and you don't see your country listed, rest assured that distress alerts will still be delivered through the Cospas-Sarsat System to the search and rescue point of contact identified by your country.

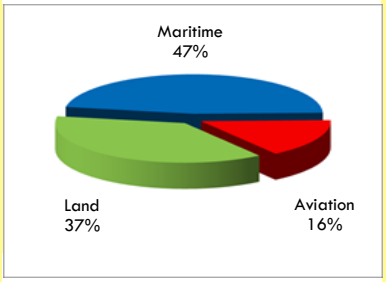
If your government would be interested in participating in decisions about the organization's future and the development of specifications for new technologies and SAR procedures, consider joining the 40 States and two agencies that already contribute to the important work of Cospas-Sarsat. You will be supporting the SAR objectives of the International Maritime Organization, the International Civil Aviation Organization, and wilderness SAR agencies worldwide. For further information on joining Cospas-Sarsat as a participating State, please contact us at mail@cospas-sarsat.int.

Cospas-Sarsat System Status

As of September 2015, the Cospas-Sarsat System comprised:

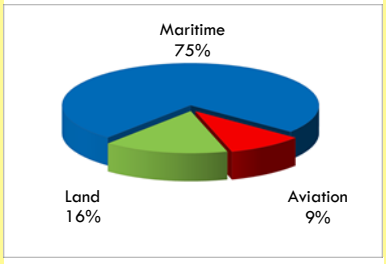
- 5 LEOSAR satellites in low-altitude polar orbit
- 7 GEOSAR satellites in geostationary orbit
- 54 LUT earth station antennas receiving signals transmitted by LEOSAR satellites
- 23 LUT earth station antennas receiving signals transmitted by GEOSAR satellites
- 31 Mission Control Centres distributing distress alerts to SAR services
- 1.7 million 406-MHz beacons estimated to be in service worldwide

Distribution of SAR Events Assisted by Cospas-Sarsat
January - December 2014
(Provisional)



Total: 685 SAR Events
(312 Events Where Cospas-Sarsat Provided the First Alert, 152 Where It Provided the Only Alert)

Distribution of Persons Rescued with the Assistance of Cospas-Sarsat
January - December 2014
(Provisional)



Total: 2,354 Persons

Cospas-Sarsat System Evolution

MEOSAR Demonstration and Evaluation Phase

Phase I of the Demonstration and Evaluation (D&E) of the new MEOSAR system was conducted in 2013 and 2014, as directed by the Cospas-Sarsat Council. During this phase, technical tests were performed to validate the detection and localization performance of MEOLUTs (MEOSAR Local User Terminals) for signals from beacon simulators operated by several Cospas-Sarsat Participant governments.

Phase II, which started in spring 2014 with a first six-week period of tests using production beacons (rather than simulators), continues in 2015 with technical and operational tests being conducted in parallel. Additional MEOSAR assets are participating in this testing, including recently-built MEOLUTs and MEOSAR-ready Mission Control Centres (MCCs) that can process MEOSAR alerts. Data from some of these new-generation MCCs are being provided to rescue coordination centres that have volunteered to evaluate the operational benefits of the MEOSAR system, from beacon activation until delivery of alert messages to SAR authorities. Following Phase II, Phase III will commence when a sufficient number of operational "L-band" satellites will be available.

In parallel to the D&E test activities, the MEOSAR documentation is being prepared by Cospas-Sarsat experts to ensure a smooth integration of the MEOSAR system into the legacy operational Cospas-Sarsat System. The D&E test results and new or updated documents will be further reviewed and refined during 2015, with the aim of beginning the distribution of MEOSAR-detected distress-alert data operationally in 2016.

The MEOSAR system is anticipated to enter its Initial Operational Capability (IOC) phase in 2017, when distress alerts provided by the MEOSAR system will be made operationally available to SAR authorities worldwide. The MEOSAR system is anticipated to reach near-real-time global coverage (Full Operational Capability — FOC) in 2018 when sufficient MEOSAR satellites and ground stations should be available.

Cospas-Sarsat ELTs and New ICAO Aviation Requirements

Since the first Cospas-Sarsat-assisted rescue in September 1982, governments have reported that more than 5,550 persons have been rescued with the assistance of aircraft emergency-locator-transmitter (ELT) distress messages detected by the Cospas-Sarsat System. Despite these accomplishments, the successful transmission of ELT signals after an aircraft crash has been uncertain due to the harsh and highly variable environmental conditions that exist after an aircraft impact. To improve the reliability and usefulness of ELTs in aircraft distress incidents, Cospas-Sarsat Participant governments and agencies have created new operational requirements for ELTs that will be incorporated into next-generation products, to include the capability of activation while the aircraft still is in flight, prior to a crash occurring (in-flight triggering). This will represent a major enhancement for Cospas-Sarsat ELTs used aboard aircraft.

Recognizing the potential benefits of in-flight triggering of ELTs, the Radio Technical Commission for Aeronautics (RTCA) and the European Organisation for Civil Aviation Equipment (EUROCAE) decided to review existing 406-MHz standards contained in international aviation specifications to jointly develop features that will offer new capabilities and improved performance. These may include the triggering of the ELT by the aircraft avionics when flight parameters exceed acceptable limits, or remote activation of ELTs by proper authorities, possibly through a "return link service" to be provided through the Galileo satellite navigation system. The new specifications, harmonized between RTCA and EUROCAE, are expected to be ready for approval at the end of 2016, complementing the timeframe anticipated for Cospas-Sarsat specifications for next-generation beacons. The goal is to allow beacon manufacturers to develop and have ready for sale type-approved and certified beacons with these advanced features at the time that the new MEOSAR system becomes fully operational. MEOSAR is expected to allow accurate measurements of aircraft locations even when they are traveling at high speeds.

Prompted by the difficulties encountered in locating aircraft crashes at sea, both for rescue of survivors and recovery of data for investigation, the International Civil Aviation Organisation (ICAO) requested experts to review possible amendments to Annex 6 of the ICAO Convention, which specifies equipment to be carried aboard aircraft on international routes. An anticipated "performance based" requirement, if adopted, will require that certain aircraft be equipped with a system that would reliably allow an accident site location to be identified within a 6 nautical-mile radius. Special "multidisciplinary" expert group meetings have been held on this issue, and while many aspects of the proposed specifications still are to be determined, it appears that next-generation ELTs with in-flight triggering capabilities may be one of the most suitable choices to address the expected new ICAO requirements.

The benefits of using next-generation ELTs with the capability of in-flight triggering, especially with regard to improvement in the localisation of an accident site, are potentially very significant and several governments are undertaking test campaigns to demonstrate the capability of such features.

A Few Words from the 2014 Council Chair

Chris O'Connors (USA)
NOAA
2014 Council Chair

My sincere thanks to the Cospas-Sarsat community for making 2014 another successful year in our mission to help save lives. I'm very proud to have had the opportunity to chair the Cospas-Sarsat Council this past year and to work with so many men and women dedicated to the mission of search and rescue.

The Cospas-Sarsat Programme faces its most significant challenge since its inception in developing and planning the implementation of the Mid-altitude Earth Orbiting Search and Rescue (MEOSAR) system. Not only will the Participants need to ensure the resources are available to provide this new capability, but we have to be diligent in our efforts to sustain the current operational system. This will be a very daunting task given the constraints of national budgets and competition among priorities within each country. I'm sure through our continued cooperation and communication that we will achieve our goals and continue to provide the global community an outstanding capability to aid search and rescue services in their life-saving mission.

In 2014 the Programme successfully completed Phase I testing of the Demonstration and Evaluation (D&E) phase of MEOSAR implementation, during which our technical experts validated the ability to detect beacons in a timely manner and to locate beacons using the developmental U.S. Distress Alerting Satellite System (DASS) on GPS satellites, and search and rescue instruments on European Commission Galileo and Russian space agency GLONASS satellites. We also created plans for the beginning of Phase II D&E testing, where our evaluation of using MEOSAR data for operations will begin.

These activities are critical to the success of our future system and I congratulate all of the many experts that have worked so hard to conduct these tests.

A Few Words from the Head of Secretariat

Steven Lett
Head of Secretariat

The International Cospas-Sarsat Programme being inducted into the Space Technology Hall of Fame as a "space technology saving lives on Earth" was one of the Programme's highlights of 2014. Those of us who are space enthusiasts would be quick to observe that virtually everything that humankind has done in space has brought benefits on Earth. But examples that touch the hearts of people often have the best resonance. So I was especially proud to stand together with representatives of the founding Party States during the Programme's induction, as well as at a ceremony held during the October 2014 Council meeting.

The induction acknowledged the role of the four Party governments of Canada, France, the Russian Federation and the United States that came together, beginning even in the midst of the Cold War, to build a technology that since then has aided in rescuing more than 39,000 people. My role at the induction was, in part, to remind the assembled guests of the 38 other governments and agencies that are affiliated with Cospas-Sarsat which, themselves, contribute in extraordinary, often disproportionately large, ways to the Programme. One has placed SAR transponders aboard its geostationary satellites. Some of these Participants build earth stations to track and monitor the satellites. Others build the ground facilities that allow us to route distress alerts swiftly, and often automatically, to over 200 countries and territories. And many are cooperating in the rapidly-progressing development of the MEOSAR system and next-generation beacon technologies.

Beyond the cooperation provided by the Programme's member States, Europe separately has made exceptional contributions through hosting SAR payloads on spacecraft of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and, for the future MEOSAR architecture, on the Galileo navigation constellation.

As I extend my thanks to 2013 Council Chair Andrey Kuropyatnikov and 2014 Council Chair Chris O'Connors for their leadership and dedication over the past two years, I also would like to voice the appreciation of the Cospas-Sarsat Programme for all of the Participant contributions; a gratitude that I am certain is shared by all of the persons who have been rescued because of them.

International Cospas-Sarsat Programme

Mission Statement

The International Cospas-Sarsat Programme provides accurate, timely and reliable distress alert and location data to help search and rescue (SAR) authorities assist persons in distress.

Objective

The objective of the Cospas-Sarsat System is to reduce, as far as possible, delays in the provision of distress alerts to SAR services, and the time required to locate a distress and provide assistance, which have a direct impact on the probability of survival of the person in distress at sea or on land.

Strategy

To achieve this objective, Cospas-Sarsat Participant governments and agencies implement, maintain, co-ordinate and operate a satellite system capable of detecting distress alert transmissions from radiobeacons that comply with Cospas-Sarsat specifications and performance standards, and of determining their position anywhere on the globe. The distress alert and location data is provided by Cospas-Sarsat Participants to the responsible SAR services.

Cospas-Sarsat co-operates with the International Civil Aviation Organization, the International Maritime Organization, the International Telecommunication Union and other international organisations to ensure the compatibility of the Cospas-Sarsat distress alerting services with the needs, the standards and the applicable recommendations of the international community.

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