

Exercise Dynamic Monarch concludes

It was reported by NATO from Marmaris Naval Base in Turkey on 22 September that the NATO-led submarine Exercise Dynamic Monarch was concluded that day following two weeks of multi-national training and practice in Submarine Escape and Rescue (SMER) procedures.

Centred around the International Submarine Escape and Rescue Liaison Office (ISMERLO), an organization created in the wake of the *Kursk* tragedy as an international hub for information and coordination on submarine rescue, this exercise had been designed to demonstrate multi-national submarine rescue co-operation and interoperability as well as to share SMER-related knowledge amongst worldwide partners.

Nine NATO Allies participated in the exercise this year with equipment or personnel being provided by Canada, France, Italy, Norway, Poland, Spain, Turkey, the United Kingdom and the United States. In addition, observers from Bangladesh, Indonesia, Japan, Pakistan, Poland, Spain, South Korea, Sweden and the United Kingdom took part in various portions of the exercise.

This exercise ran several scenarios over the two week period focused on both support to escaping submariners and rescue of submariners trapped in a stricken submerged submarine.

If a submarine is in distress at a shallow depth, the sailors may be able to escape from it and get to the surface. During the exercise a special team of Turkish medical personnel called the Submarine Parachute Assistance Group (SPAG) practiced parachuting into open water to set up temporary floating medical support for escaping submariners. This floating medical support would be used until a ship could arrive at the location to assist.

Rescue phases of the exercise aligned with the primary phases of a submarine rescue: (a) locate the distressed submarine, (b) stabilize the environment aboard and (c) extricate the sailors from the distressed submarine. Each situation is considered different and must take into account the dangers and complexity of operating at significant depths.

Once found, rescuers can use the ROV, or send down a rescuer in an Atmospheric Diving Suit to conduct a survey of the submarine and possibly connect cables to ventilate the submarine chambers from a surface ship (bringing in clean air and removing built up carbon dioxide) to stabilize the environment inside the submarine.

To practice rescuing sailors from depth, a variety of equipment was used including two different types of submarine rescue chamber and two types of mini submarine. These vehicles made multiple dives throughout the two weeks to the three submarines participating in the exercise. Upon reaching the submarines they practiced connecting to the submarine escape hatches at depth to bring sailors to the surface.

In addition, the NATO Centre for Maritime Research and Experimentation (CMRE) participated for the first time in Exercise Dynamic Monarch, bringing to the operational players a new digital underwater acoustic communications capability that may increase significantly the effectiveness of distressed submarines escape and rescue operations.

In total, the exercise employed approximately 1,000 personnel and the command and control ship TCG *Gemlik* (Turkey), three submarines two from Turkey and one from Spain (TCG *Burakreis*, TCG *Preveze* and ESPS *Tramontana*), four submarine rescue ships (TCG *Alemdar* with Turkish and US submarine rescue chambers onboard, TCG *Inebolu*, ITS *Anteo* (Italy) and the UK-based Naval Auxiliary *SD Northern River* with embarked NATO Submarine Rescue System (NSRS) operated by the United Kingdom, France and Norway), four Turkish patrol boats, four Turkish aircraft (helicopters, maritime patrol aircraft and a C-130 Hercules), diving teams from Canada, Italy, Poland and Turkey, Medical teams from Canada, Turkey and NSRS (France, Norway and the UK), a Submarine Parachute Assistance Group from Turkey and significant support from host nation Turkey in administration, accommodation, contracting, logistics, transport and personnel.

Picture caption

To find a distressed submarine, Remotely Operated Vehicles (ROVs) were used as well as ship- and helicopter- based sonar.

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