Putting Sea Mammals to Work: Dolphins Help Coalition Forces in Iraq

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Putting Sea Mammals to Work: Dolphins Help Coalition Forces in Iraq

In the first month after arriving in Iraq, the dolphin teams achieved a number of successes, including unofficial clearance of 913 nautical miles of water, investigation of 237 objects, and recovery and/or destruction of over 100 mines.

by Nicole Kreger, MAIC

Dolphins Helping Out in Iraq

Iraqi forces laid sea mines in Umm Qasr, Iraq's only deep-water port, as they withdrew from the area in late March. Thus, before humanitarian aid ships could enter, the area had to be cleared of sea mines. This mission marked the first time the NMMP dolphins were used in a combat environment. Military personnel from the United States, Australia and Britain—including 50 divers with sophisticated underwater equipment—spent four days clearing the port with the help of the dolphin teams.

Several dolphins in all helped out in the region; Tacoma and Makai arrived first, and they were later joined by Jefe and Kahili, two males, and Kona and Punani, both females. In mere hours, the team had cleared a path for the Sir Galahad, a humanitarian aid ship. After clearing a 50-mile shipping lane in the port, the teams began clearing hazardous explosives from a wider area. The dolphin teams were also being employed to help clear the Khasr Abdullah waterway, which connects Umm Qasr to the Gulf.

The dolphins were well taken care of during their deployment; veterinarians and handlers monitored their health carefully. The group in Iraq adapted fairly well, probably because the Gulf is similar to their normal environment. One dolphin, Tacoma, left the area for about 48 hours, and some were worried he was gone for good. He did return, however; as their trainer, Aviation Ordnanceman First Class Des Jennings, says, "They take day trips. They're not missing. We do have tracking devices on them, but we don't worry about it. They always come home."

References
2. For more information, see the ICRC website at: http://www.icrc.org/Web/Eng/sitergh.html/blast/Iraq/OpacDocOmen.

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(MAP) since 1997, UNOPS was able to expedite and fine-tune mine awareness programs by developing a mine action database by the year 2000. Between December 2000 and June 2002, the MAP provided mine awareness education to over 143,000 beneficiaries. Meanwhile, UNICEF has launched an impressive MRE campaign in Iraq as well. In an effort to further target children, UNICEF has aired television campaigns to be sure children are educated and aware of the dangers they face. UNICEF is trying to get the Iraqi children back in school as quickly as possible in order to both increase MRE and to keep them off the streets and away from danger. UNICEF is the lead agency for MRE within the UN system.

Conclusion

The work these mine action organizations have completed thus far has already made vast improvements on the quality of life many Iraqis witness today. While much work remains to be done in order to build adequate infrastructure for everyday living, the long road ahead is becoming easier to navigate as these organizations figure out new and more comprehensive ways to teach mine awareness.
**How the Dolphins are Used**

So how do these dolphins put their skill to use for Naval operations? A dolphin uses its natural biological sonar and sends out a sound signal, which bounces off objects nearby. The echoes returning from the objects are received by specially trained dolphins, who then give the dolphin a marker to place in that location. Navy divers go in after the item is marked and dispose of it according to its type. The dolphins are extremely effective in locating the objects they are trained to find.

Many people wonder if the animals are really performing any useful tasks. The sea mines that the dolphins are trained to locate are designed to be set off by large vessels, not by animals. Also, the dolphins are trained simply to mark where the mine is and they know not to touch it. Once they have marked the mines, the animals are removed from the area before clearance or demolition begins. Overall, the dolphins’ survival rate is 97 percent.

**Why Use Marine Mammals?**

Study of marine mammals has shown that dolphins and sea lions are highly reliable, adaptable and trainable marine animals that [can] be conditioned to search for, detect and mark the location of objects, not the object itself. The two main benefits of using these animals to assist the Navy are their diverging abilities and their very different sensory capacities. Whendiving, humanseem to be more easily distracted by the presence of another object. Dolphins, however, do not face these problems, and they can dive deeper, faster and more frequently than human divers. They are especially useful in shallow waters, where hardware systems are less effective. Dolphins’ biological sonar is also much better than any man-made imitations. They can detect objects from more than 100 yards away as well as determine the different densities and possibly even the different materials of these objects. One of the biggest benefits of using dolphins is being able to quickly and effectively locate areas with a few mines, significantly reducing the amount of time it would take to detect clear areas as compared to other methods.

**U.S. Navy Marine Mammal Program**

Since 1959, the U.S. Navy has been studying and working with marine mammals to improve their capabilities. The Navy Marine Mammal Program (NMMP) has studied a variety of animals, such as seals, killer whales, dolphins, sea lions and white whales. Currently, "the Navy cares for, trains and relies on two species—the bottlenose dolphin and the California sea lion.

The NMMP is located at the Space and Naval Warfare Systems Center San Diego (SSC San Diego). SSC San Diego is the U.S. Navy’s research, development, test and evaluation, engineering and fleet support center for command, control and communication systems and ocean surveillance. Before they can be deployed on missions, the dolphins go through a rigorous training process that initially takes several years, depending on the particular animal, and continues on a generally daily basis as long as the animal is employed on that mission.

The marine mammals comprise five groups known as Marine Mammal Systems (MSMs), which perform different functions, named Mark (MK) 4 through MK 8. MK 4, MK 7 and MK 8 are mine hunting systems and are assigned to Naval Special Clearance Team One (NSCOT ONE). MK 5 and MK 6 are mine hunting systems assigned to Navy Explosive Ordnance Disposal Mobile Unit Three (EODMU THREE). The role of the different systems in these tasks is detecting and/or marking the locations of sea mines attached to the bottom of the ocean, locating and marking mines sitting on or buried in the ocean floor and identifying safe areas in shallow waters, and detecting and marking the location of swimmers or divers that might be a threat to ships at anchor or pier.

These duties help create safe paths for troops and equipment to pass and allow for initial shore landings.

**Conclusion**

Dolphins’ natural capabilities have proven incredibly useful in finding underwater ordnance and clearing vital waterways. The Navy is developing unmanned underwater vehicles (UVVs) to eventually replace marine mammal systems. A set of these vehicles was used in conjunction with the dolphins and human divers in Unm Qassar and were substantially effective in the combined mine-clearance effort. Until these systems are more fully tested, the Navy will rely on the skills of marine mammals to help create more success stories like the clearance of Unm Qassar.

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**References**


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**NOTES FROM THE FIELD**

**Genevo Diary: Report from the GICHD**

The Geneva International Centre for Humanitarian Demining (GICHD) has recently published a study titled The Role of the U.S. Navy in Marine Mammals for mine clearance. The study mentions the use of the military in general humanitarian relief activities has been debated for some time. In 1994, the United Nations and the International Federation of the Red Cross (IFRC) produced the so-called "Olea Guidelines," setting out when and under what conditions the military could be used. These included the following:

- The use of military equipment should be considered for use in saving-life and life-supporting operations.
- They should be used only at the request of the government of a conflict state, or at the request of the UN Department of Humanitarian Affairs (now OCHA) with the agreement of that state.
- The assets should integrate with and support existing disaster relief response.
- They should operate under an integrated civilian-military management.
- They should be at no cost to the receiving state.

In 1997, the DAGOCD produced a similar report, which concluded that "military equipment and personnel are needed to improve with proper capacity to respond to large scale need.

The civilian sector is more complex and is more effective in connecting relief to longer term development work.

The GICHD carried out a survey of the military specifically in mine action operations. It was instructed to find out the past 15 years military forces—both local and visiting—have made a significant contribution to mine action. However, their effectiveness has greatly enhanced when they are employed within, and under the auspices of, a planned national mine action programme, and operate according to the International Mine Action Standards (IMAS).

The use of individual visiting military "technical advisers" was found to be useful in the initial stages of a programme, particularly for the training and transfer of technical demining skills. As a programme develops and reaches a more advanced level of training, the military forces are required to operate more autonomously. For some countries, the use of formal mine action assistance will be seen to be an under-utilized resource in mine action assistance.

In the near future, the local military forces deployed directly after a conflict to undertake humanitarian demining with little or no training and equipment, have produced poor results and suffered high casualty rates. Their performance was generally considered as improving with proper training and assistance, but at times it has been controversial if it is perceived as enhancing a combat capability. The GICHD, in the near future, will have the opportunity to identify and work with local military forces, who have been involved in mine action operations and are looking to be improved. The GICHD will be able to assess the capabilities and resources of local military forces, and provide training and assistance. GICHD will be working with the local military forces to identify and work on the issues which are being faced by local military forces.

A report from the GICHD was called for by the General Assembly. The report recommends that the local military forces, who have been involved in mine action operations and are looking to be improved. The GICHD will be able to assess the capabilities and resources of local military forces, and provide training and assistance. GICHD will be working with the local military forces to identify and work on the issues which are being faced by local military forces.