



Delivering the Goods

News from the U.S. Coast Guard Acquisition Directorate

November 2008

Iraqi Navy's Boat Purchase Marks Milestone for Coast Guard FMS Program

By Hunter C. Keeter

In October, Coast Guard officials visited Umm Qasr, Iraq, to oversee delivery of the first lot of six new 25-foot response boats. The event marked a milestone in the growth of the service's foreign military sales business and underscored the FMS program's benefits to foreign customers and to the Coast Guard.

"The [Iraqi Navy's] order for 26 boats [25-foot Response Boat-Small] and the other 60 boats that the Coast Guard has [under contract for other international customers] allows the manufacturer, Safe Boats International, to maintain a steady production line," said Gary W. Connor with the Coast Guard's International Sales Program. "That is the real benefit to the Coast Guard because we know that any time we have a requirement, we are not going to be faced with 100 percent increase in the cost of a boat because they have to restart the production line and recreate all the tooling."

For the Iraqis, their \$8.4 million project to acquire 26 craft, spare parts, tools and training represents a significant increase in capability as the country rebuilds its war-ravaged navy. To date, the Coast Guard has delivered six boats, and will deliver another 10 in January 2009, followed by the final 10 in June.

The area where the new boats are deployed is of vital strategic importance to Iraq. Including Al Faw peninsula, bound on one side by the Euphrates River and on the other by Shatt al-Arab waterway, the deployment area has two major cities, al Basra to the north and the port Umm Qasr, which also had been



UMM QASR, IRAQ, Oct. 17—The Iraqi Navy's first Defender-class 25-foot response boats arrive at the country's principal naval base. In preparation for the boats' arrival, the Iraqis made a number of infrastructure improvements, including modified flatbed trailers that are mated to the boats' transport cradles. U.S. Coast Guard photo

a significant naval installation under Saddam Hussein's Ba'athist regime.

In the northern Arabian Gulf, just off al Faw, are Iraq's two principal marine oil terminals: Khor al Amaya and al Basrah Oil Terminal (formerly called Mina Al-Bakr), through which flows more than 90 percent the nation's petroleum wealth.

"By the end of Operation Iraqi Freedom, the Iraqi Navy functionally did not exist," Connor noted. "The oil terminals are critical Iraqi infrastructure and they had no way to protect them. So, developing an Iraqi Navy capable of defending their own maritime interests is important.

The coalition is helping them by establishing the Naval Transition Team, which is a British-led organization with U.S. Coast Guard and some U.S. Navy support."

Last month, a delegation of Coast Guard personnel visited the Naval Transition Team to implement

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the operation and maintenance curriculum that the Iraqis will use to train personnel on their new boats.

Connor underscored the Iraqis' ingenuity in resolving infrastructure challenges at their naval facilities and taking steps to reduce operating and support risks as they receive the new boats. For example, the Iraqis improved pier facilities, developed temporary trailers to maneuver boats to and from the waterfront, and established a classroom facility for training operators and maintenance personnel.

"The Iraqi Navy guys are probably some of the most innovative engineers that I have come across, after doing this for 10 years," Connor said. "Part of their basic culture is, 'we can't fix problems by throwing money at them; so let's see what we can do to make it work.' This indicated to me that the Iraqis were ready to step up to be very effective partners in this program."

FMS PROCESS

In the United States, FMS cases

are arranged through the Security Assistance Program, which is a cooperative effort led by the Departments of Defense and State.

The first step in the process was taken when the Iraqi government contacted the U.S. government with its requirements for response boats.

The next step came in 2007, when the Department of Defense and the Navy consulted with the Coast Guard to draft a government-to-government agreement for goods and services.

"We then went to the marketplace and, working through CG-91 [the Coast Guard's Acquisition Directorate's Senior Procurement Executive & Head of Contracting Activity], created the commercial contract to provide those articles and services," Connor said. "It is really important to acknowledge the significant role that CG-91 plays in this. We asked them to create a contract in compliance with the government-to-government agreement, to deliver the boats and support to Iraq."

The Iraqi government chose to buy the Coast Guard's standard

25-foot Response Boat-Small with modification to the engines and the addition of a generator set to air condition the crew cabin.

"When you consider that, in this region, temperatures of 130 degrees are not unheard of, air conditioning becomes a feature of on-station time," Connor said. "The air conditioning isn't a luxury; it is pretty important to mission capability there. The longer a crew is comfortable and hydrated, the longer they can stay on station and do their job."

As the initial phase of the sale closes out next summer, the Coast Guard hopes to continue its relationship with the Iraqis through training support and follow-on orders. The Iraqi government has outlined long-term naval force structure goals that may lead to future business opportunities, including other patrol boats and offshore patrol vessels.

Besides capturing opportunities, the Security Assistance Program has other benefits, including peer-to-peer engagement that strengthens relationships with friends and allies abroad.

"The aim of the Security Assistance Program is to create engagement opportunities," Connor said. "[The boat sale] gives the U.S. government a vehicle to talk to the Iraqi Navy. Everybody we train is a chance to touch hearts and minds."

The Coast Guard has established a reputation for supplying small boats, spare parts and training services worldwide. During the last decade, the International Sales Program has delivered more than 200 boats to 36 allied nations, with the most significant efforts in Chile, Colombia, Iraq, Malta, Nigeria, Sri Lanka and Yemen. ■



Coalition Naval Transition Team members observe an educational session for response boat operators and maintainers at the Iraqi Navy's new classroom facility. The Coast Guard, working with industry, helped to establish a comprehensive training curriculum to prepare the Iraqis for deploying and supporting high-performance small boats. *U.S. Coast Guard photo*

Coast Guard Partners with Government, Industry in Unmanned Aircraft System Evaluation

By Hunter C. Keeter

The Coast Guard is working with a number of government agencies and industry to analyze the potential for Unmanned Aircraft Systems to contribute to cutter and sector command center operations. The Coast Guard Research & Development Center, which leads the study group, is partnered with service technical authorities and other organizations from the Departments of Homeland Security, Defense and Energy.

According to Capt. John J. Macaluso, chief of the Coast Guard's Research, Development, Test and Evaluation Office, the Groton, Conn.-based R&D Center has augmented its analytical capabilities through an arrangement with ABSG Consulting, a commercial firm that evolved from the American Bureau of Shipping.

Additionally, since Aug. 24, 2008, the R&D Center has partnered with Sandia National Labs, which serves the project in the status of "trusted advisor." The labs, co-located with Air Force Operational Test Command, have extensive experience with UAS and payload technologies, and will support the R&D Center by reviewing plans, proposals, approaches and recommendations.

The Coast Guard's typically can-do approach to acquiring UAS technology also will make use of joint-service investments and lessons learned.

"We want to make sure that we undertake the right process, get the right answer and make sure that the answer is understandable to everyone who needs to make decisions on how the Coast Guard is going to proceed," Macaluso said. "For the research, development, test and evaluation program, in everything we do, including UAS, we leverage other agencies' investment."



PALMDALE, CALIF.—The Navy's N-1 Global Hawk unmanned aerial vehicle is part of a program to demonstrate the maritime surveillance capabilities of high-altitude, long-endurance UAS. The Coast Guard is working with the Navy and others to determine the best mix of high-end and mid-range UAS for operations in the maritime environment. The Coast Guard may partner with other agencies to subscribe to data from high-end systems like the N-1, without necessarily purchasing such platforms.
U.S. Navy photo

The use of semi-autonomous unmanned systems in military, naval and law enforcement applications dates back approximately 20 years. Broadly speaking, there are four types of UAS platforms that the U.S. government has acquired: micro, hand-launched vehicles for use by individuals or small groups; shipboard, medium-altitude tactical vehicles (such as Northrop Grumman's Fire Scout); land-based medium-altitude tactical vehicles (such as General Atomics' Predator); and high-altitude vehicles (such as Northrop Grumman's Global Hawk).

Already, the Coast Guard has explored several of these technologies through partnerships with other agencies.

For example, during summer 2008, the Coast Guard worked with fellow DHS agency, U.S. Customs and Border Protection, to test the efficacy of the MQ-9 Reaper UAS, and a synthetic aperture radar payload in a maritime surveillance mode. The Reaper exercise demonstrated that, while platforms of the type may prove operational suitable, the Coast Guard will have specific payload requirements for its own UAS.

The sensor payload carried by the Reaper is excellent at imaging structures against a non-variable background, such as on land. At sea, where the surface may create distortion in the RF return signal,

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it becomes much more difficult for synthetic aperture radar to distinguish relatively small objects, such as ships or boats.

“We need UAS with payloads capable of surveillance, detection, classification and identification,” Macaluso said. “For example, we are looking at multi-mode maritime radar, as well as electro-optical sensors [cameras].”

The concept of operations now being developed for Coast Guard UAS includes a layered approach, with complementary vehicles and sensor payloads each contributing information to the end users.

At the high-end of spectrum is the U.S. Navy’s Broad Area Maritime Surveillance program, which is studying the use of a marinated Global Hawk-sized vehicle as a long-endurance platform for theater-level reconnaissance.

The Coast Guard may be able to subscribe for access to the data collected by a BAMs asset, without having to invest in the platform itself. However, high-altitude UAS will need to be complemented by other systems able to descend and identify targets.

“We need the medium-altitude, tactical UAS to do that,” Macaluso said. “The command center can task a cutter’s UAS, or a land-based system, to go in and investigate something more closely.”

TACTICAL UAS

In the near term, the Coast Guard’s UAS acquisition strategy will focus on vehicles and payloads that extend a cutter commanding officer’s situational awareness. The service’s first tactical UAS will operate from the National Security Cutter, an advanced capability vessel that will use both manned and unmanned



OFF SAN DIEGO, Nov. 6—CGC Bertholf, first of the new Legend-class patrol cutters, will deploy with manned and unmanned aircraft to increase the cutter’s surveillance range. Cutter-based and land-based tactical UAS will be important assets for fleet and sector command center situational awareness. *U.S. Coast Guard photo by PA3 Henry G. Dunphy*

aircraft to support the ship’s 12,000 nautical mile surveillance range.

“We are validating the mission, operating areas, and concepts of operation for using a UAS with the NSC,” Macaluso said. “What we learn about UAS and the NSC, of course, will inform requirements for the Offshore Patrol Cutter and other platforms. There will be a lot of knowledge and experience that we can transfer but we are focused on the NSC; that’s what the [congressional] language has directed us to do, and that just makes sense.”

With many options from which to choose, the Coast Guard plans to select in December a test platform that will demonstrate cutter-based UAS capability. The system selected for testing aboard the NSC may or may not be the UAS that Macaluso and his team ultimately recommend to the Acquisition Directorate.

Meanwhile, the Coast Guard also has a strategy to look at land-based UAS. While the vertical launch and recovery UAS primarily will serve as an asset for the cutter commanding officer, a land-based tactical UAS would provide similar situational awareness for a Coast Guard command center, or a joint operations center, supporting a regional commander.

DATA SHARING

As the R&D Center studies UAS platforms, the Coast Guard also is working on ways to increase the through-put of information from its own and partner agencies’ surveillance assets.

For example, through the DHS, the Coast Guard is monitoring the progress of the Defense Information Systems Agency’s Net-Centric Enterprise Services project, which

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will develop an enterprise service bus through which subscribers can share information, such as that collected from UAS.

Also, since 2006, the Coast Guard has been part of the "Maritime Domain Awareness Community of Interest," which includes discussions with the Navy about the most effective ways to collect, analyze and share information in the maritime operating environment.

Using Automatic Identification System data as a starting point, the MDA COI is working on a schema to be able to share that information by "publishing" it to a central location so that subscribers can gain access to it, Macaluso noted.

"Irrespective of what proprietary systems the publisher and subscriber are using, the information is translated into a common format," he said. "For example, in Trident Warrior 2008, the Coast Guard and

the Navy used the Global Hawk Maritime Demonstrator project to take AIS information and make that data centrally available."

The result will be greater access to actionable intelligence about activity, hazards and potential threats throughout the littoral environment. ■

Dear Master Chief Ayer,

I hear about Deepwater, the RB-M and Rescue 21 all the time. I know those programs are important, but what about our inland ATON fleet, WLRs and WLICs? We have some of the oldest vessels in the Coast Guard.

There is no doubt that our WLR and WLIC fleets are getting old (about 40 years old on average) and increasingly difficult and expensive to keep operating. It is also true that although they are some of the hardest working vessels in the Coast Guard's fleet, they don't get a lot of press coverage. Such is the life of an ATON sailor: all the work and very little of the glory.

Well, don't let the lack of press discourage you, we do have a plan to extend the life of and eventually replace our WLRs and WLICs. We are in the process of updating propulsion, generators, steering systems, and fire suppression on our WLIC fleet, with similar updates for the WLRs in the future.

For the long term, we have been appropriated funds by Congress in the fiscal year 2009 budget to initiate a WLR/WLIC replacement project, which we're calling the "Heartland Waterway Vessel (HWV) Project". The sponsor in CG-7 and the ATON Program Manager in CG-5 are jointly developing the requirements for the HWV. The final form of the HWV depends upon completion of the requirements development process and an alternative analysis, but the HWV may very well take the form of a WLR-like tug and barge but with enhanced C4I capabilities plus a high-speed, multi-mission cutter boat. The good news is this effort has the necessary highest-level support and momentum for the first time in recent history.

[To submit a question for an upcoming Acquisition Directorate newsletter, please email Master Chief Brett F. Ayer directly at: Brett.F.Ayer@uscg.mil or acquisitionwebsite@uscg.mil.]

