

**Questions for the record from the U. S. Commission on Ocean Policy for
Rear Admiral Jay Carmichael, Commander,
Seventh Coast Guard District, Miami, FL**

Questions taken from the Ocean Commission's Letter dated March 28, 2002

Q. We have heard that although Congress has enacted numerous laws to protect our marine resources, lack of enforcement has resulted in inadequate protection. The U.S. Coast Guard has been assigned the largest share of the enforcement responsibilities. Do you agree that our marine laws have not been enforced as well as they ought to be? If under-enforcement is a problem, what are its causes?

A. While the Coast Guard takes its ocean stewardship responsibilities very seriously, the Coast Guard's maritime law enforcement responsibilities extend well beyond the protection of marine resources. Interdicting drugs, stopping illegal migrants and ensuring security and safety in the Marine Transportation System are just some of the Coast Guard's various maritime law enforcement activities that remain important to the nation, both before and after the events of September 11th. An enduring hallmark of the Coast Guard has been the multi-mission nature inherent in its broad range of duties and reflected in the multi-mission capabilities of Coast Guard people and assets. The Coast Guard's flexibility and responsiveness in the face of rapidly changing priorities, as demonstrated in major oil spills, in emergent fisheries enforcement issues, in mass migration events in South Florida and in the aftermath of 9/11, is the direct result of multi-mission people and assets operating under a single Command and Control overhead. These attributes make the Coast Guard a relative bargain for the American taxpayer and provide an unequalled capability for fast response to a wide range of maritime emergencies, including fisheries enforcement. For example, in October 2001, six weeks after September 11th, the Coast Guard Cutter DRUMMOND caught and terminated the voyage of a poacher in the closed Oculina Bank Habitat Area of Particular Concern located off of Cape Canaveral, Florida. Based on local intelligence our aircraft and cutters were able to temporarily surge to this environmentally sensitive area to stop the damaging poaching. The Cutter KEY LARGO, in January 2002, seized almost \$20,000 worth of suspected illegal catch, terminated four voyages for fishing in a closed area, and issued six major violations all in response to the newly created Tortugas Ecological Reserve. These examples demonstrate the Coast Guard can continue to apply resources at the right time and in the right places when necessary and is on track as it moves toward achieving mission balance. The long-term challenge under the new normalcy following September 11th is to increase maritime domain awareness, step up ports, waterways and coastal security operations, and reduce our nation's vulnerability without losing focus on other core, but not less important counternarcotics, migrant interdiction, fisheries enforcement, marine safety, and national defense missions.

Laws to protect marine resources take many forms. Among them are the fisheries laws, which the Coast Guard enforces on behalf of and in cooperation with the

National Marine Fisheries Service. The Coast Guard, largely acting alone, enforces the various marine and port safety mandates established by Congress (primarily the shipping safety laws found in 46 USC). These laws have significant marine resource protection benefits in addition to their primary safety of life focus. The Coast Guard also enforces laws aimed at preventing marine pollution. We don't enforce all laws aimed at curbing sources of marine pollution. Most marine pollution comes from land-based sources well outside of any legitimate Coast Guard jurisdiction (the Federal Water Pollution Control Act (33 USC 1251 et seq), the Ports and Waterways Safety Act (33 USC 1221 et seq), etc.). There are, however, other agencies with significant marine resource protection responsibilities whose enforcement actions do not depend on Coast Guard support. For example, the Clean Water Act addresses numerous sources of marine pollution. Many of these pollution sources are land-based, rather than maritime in nature, even though their effects are primarily felt in the marine environment (e.g., non-point source run-off from agriculture and coastal urban areas). Primary responsibility for enforcing the Clean Water Act for non-point and land-based sources falls to the Environmental Protection Agency (EPA), not the Coast Guard. However, the bigger shortfalls here may lie in inadequate research on treating non-point source pollution and in lack of funding for "big infrastructure" rather than in enforcement *per se*. Because of the number of agencies involved in marine resource protection, this question must necessarily be answered from a broader perspective than that of any single agency.

When addressing the question of enforcement adequacy in marine resource protection, there are several levels at which the question can be answered. One of these would be to look at the adequacy of enforcement resources relative to the requirements for effective enforcement of existing statutory and regulatory mandates. At this level of consideration, the resources available for effective execution of all existing protective mandates are "inadequate." However, a higher order examination of the issue would look at the underlying adequacy and appropriateness of the existing protective regimes. For example, if a fish stock is disappearing as a result of the loss of spawning grounds, even aggressive enforcement of fishing restrictions is a strategy doomed to failure. Ensuring the adequacy of a protective regime starts with understanding the underlying problem(s) affecting the "at-risk" resource and then selecting a protective measure or measures appropriate for the underlying cause(s). Only then can the appropriate kind and number of enforcement resources be identified. As your question notes, the Congress has passed numerous laws to protect marine resources. However, a question remains as to whether or not the current laws provide an acceptable policy framework and the necessary enforcement mechanisms to achieve the resource protection goals set out in the various statutes. It may be that more holistic legislation is needed to replace, or perhaps to integrate, the more narrowly drawn and/or issue-specific statutes now on the books.

Finally, the question of enforcement adequacy is a value judgment. There are those for whom no level of enforcement will ever be "enough." Given the multitude of issues at play in our ocean and coastal regions, and given the other high-priority demands on limited government resources, there will always be limitations on the

resources available for marine resource protection and enforcement. This is not an argument against additional enforcement resources. Rather, it is an acknowledgement that government-spending decisions are rarely made in a vacuum and that there will unavoidably be limits on the resources available for enforcement.

Q. What are the most significant effects of the recent increase in port security on the other missions of the Coast Guard? Are additional resources needed? Are additional measures advisable?

- A. In the immediate aftermath of the events of September 11th and with a great deal of uncertainty over the potential for additional attacks on America, the Coast Guard withdrew from much of our forward-deployed and offshore enforcement activities (i.e., drugs and migrant interdiction, fisheries) and concentrated on close-in coastal and port security operations. Our commitment of operational resources/dollars for these homeland security activities grew from 1-2% to something over 50% and we operated for a time in a surge mode far beyond our ability to sustain over the long term. Since that initial surge, we have modified our port security effort, both to avoid burning out our people, boats and other assets, as well as to be able to resume offshore enforcement operations. We have not, however, been able to return to full pre-9/11 activity levels in these other mission areas and will not be able to do so in the short and near terms.

For the future, we believe that between 20 and 25% of the Coast Guard's overall operational budget should be dedicated to newly prioritized homeland security functions. However, we also see a need to continue our pre-9/11 missions with at least the same level of commitment. This would be in keeping with the findings of the 1998 Inter-Agency Task Force on Coast Guard Roles and Missions. This Task Force concluded that the Coast Guard's Roles and Missions are appropriate and necessary functions of government and that they will continue to be important to the nation well into the 21st Century. September 11th does not change those conclusions. Rather, September 11th increased the Coast Guard's relevance to the nation and added to the long list of national priorities that we must serve.

In order to meet our expanded mission requirements and changed priorities, the Coast Guard has embarked on a multi-year growth plan that will see our active duty and civilian workforces grow by some 5,000 to 7,000 people over the next three years, with commensurate growth in operational assets such as boats, aircraft, secure communications capability, etc. Our military Reserve force will also grow and we hope to increase the size of the all-volunteer Coast Guard Auxiliary. A multi-year approach was necessary as there are constraints on how fast the Coast Guard can grow its workforce due to limitations in our recruiting and training capabilities. FY 03 is the first year of this planned multi-year growth process.

The Office of Homeland Security recently published a National Strategy for Homeland Security, which states that the President has proposed to Congress the U.S. Coast Guard be among the principal border and transportation agencies transferred

into the new Department of Homeland Security. The Coast Guard would also be pleased to offer the Commission or the Commission's staff a more detailed briefing on our Maritime Homeland Security Strategy at some future date.

Q. Please provide a copy of the Coast Guard's FY 2003 budget to the Commission.

A. Approximately 20 copies of the Coast Guard's FY 2002 Performance Plan/FY 2001 Performance Report/FY 2003 Budget in Brief have been provided to the Commission's staff. Additionally, more detailed information on our FY 03 budget request has also been provided.

Q. In your testimony you suggest that maritime domain awareness (MDA) is the key to a secure and safe environment, and that coordination between agencies is required to achieve this. What are the priorities for investments for the government that would aid in MDA and enforcement?

A. The initial focus for creating a national Maritime Domain Awareness capability will necessarily be to address the maritime component of the Homeland Security challenge now facing the nation. Accordingly, the Coast Guard and other agencies have begun to create a number of intelligence and information processing centers at the national and regional levels. The national center will be collocated at the Navy's National Maritime Intelligence Center in Suitland, MD. The regional centers will probably be located with or near the Coast Guard's two Area Commanders in the Hampton Roads, VA area (Commander, Atlantic Area) and in Alameda, CA (Commander, Pacific Area). There will also be local information collection and analysis capabilities in the Coast Guard's Captain of the Port offices located around the country. Some capability is in place now, especially at the national and regional levels, and more capability will be added as new resources are brought on line. The Coast Guard is also integrating information from its Vessel Traffic Services (VTSs) into emerging MDA capabilities, where VTSs exist. The Coast Guard is also using VTS technology to enhance port security in many ports such as Hampton Roads, VA and Tampa, FL.

The Coast Guard has established the National Vessel Movement Center to handle vessel arrival notices on a national basis and has extended its Advance Notice of Arrival requirement for vessels arriving from foreign ports from 24 hours to 96 hours. The information content of that notice has also been expanded. Other agencies are also reexamining the kinds of information they require from arriving ships and aircraft. The Customs Service, for example, will be building its new Automated Commercial Environment (ACE) and International Trade Data System (ITDS) with an expanded emphasis on homeland security and inter-agency access. Information exchange between the agencies has expanded considerably in the wake of 9/11. For example, the national and regional information processing and fusion centers mentioned above are staffed by personnel from multiple agencies and access to previously restricted data-bases is increasing.

A significant future contributor to MDA will be the C4ISR capabilities being acquired through the Coast Guard's Integrated Deepwater System project. (C4ISR stands for Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance.) Because the Coast Guard's Deepwater project won't deliver major new assets for several years, and because many legacy assets will be part of the force mix for many years, interim solutions are being fielded now to begin creating the desired MDA supported and enhanced Common Operational Picture. The Coast Guard's National Distress and Response System Modernization Project, now known as RESCUE 21, will also assist with MDA. The Coast Guard awarded the \$611 million contract for the RESCUE 21 project on September 24, 2002. This modernization effort will greatly assist the Coast Guard perform distress call detention, classification, and response coordination in the inland and coastal zones for search-and-rescue and marine safety operations. Included among the significant modernization features are: improved Direction Finding Equipment that will pinpoint a distressed vessel to within plus or minus 2-degrees, and Digital Selective Calling capability that will transmit a vessel's name, exact location, nature of distress and other vital information when used in conjunction with an integrated GPS receiver and properly registered Maritime Mobile Service Identify number. The Automatic Identification System (AIS), which will consist of ship transponders, will be another tool to enhance MDA. AIS carriage requirements, issued by the International Maritime Organization, had been set to phase-in between now and 2008. The U.S. proposed that AIS carriage requirements be advanced to 2004 and consideration is being given to extending the requirement to vessels under 300 gross tons that would not otherwise be covered due to vessel service.

As should be clear from the above, much has already been done to improve our MDA capabilities. However, much more remains to be done. For one thing, MDA coverage will have to be extended into the fisheries protection realm. This would likely require more extensive use of another class of transponder, sponsored by the National Marine Fisheries Service and called Vessel Monitoring Systems (VMS). There is also a need to integrate the maritime surface and over-water air pictures and have extended offshore surface radar coverage. In a cooperative effort involving NORAD, the Office of Homeland Security and numerous other agencies, work has begun on defining the common maritime/air requirements and system interfaces.

We also see MDA potentially playing a role in navigation safety systems of the future. NOAA's Physical Oceanographic Real-Time System (PORTS) is one example of what might be done. PORTS, combined with Dynamic Under-Keel Clearance Systems, might allow us to improve port efficiency without doing as much dredging as would otherwise be required. PORTS systems have been installed in several places around the country but the full utility and benefits of such systems have not been determined. Further, questions remain over who should pay for such systems – government or the principle economic beneficiaries. This might be a topic on which the Commission will want to comment.

The Commission has recently been provided an informal briefing and other additional information on MDA. Given the current lack of full requirements definition for MDA and the lack of a complete build-out plan, it is not possible to fully answer the Commission's MDA priority question at this time. The Coast Guard has an ongoing external comprehensive review of its enterprise architecture and is working on a mini Architecture and Modernization Plan for Command Centers addressing MDA that we hope to complete by the end of calendar 2002. Definitional work and MDA architecture planning is currently a high priority for the Coast Guard and additional information will be provided as available and releasable. Further questions on MDA should be addressed to Coast Guard Headquarters in Washington.

Q. Does implementation of Marine Protected Areas help the Coast Guard's enforcement tasks?

- A. The answer depends on how an MPA is designed and managed; enforcement can be made simple and effective or it can become highly complicated and resource-intensive.

A properly designed *closed* area where vessels may not go to fish (for anything) is simple to enforce. If one of our resources, surface or air, observes a vessel fishing inside the box, it is by definition in violation. Our boarding officers are not required to examine fishing nets, lines or other gear to ensure it is of a size and/or type that complies with a fisheries management plan. Nor are they required to examine the catch to ensure it is in compliance with size and species restrictions. However, what rules make an MPA easy to enforce can also have a negative impact on safety. By completely closing an area, situations can be created where vessels may feel required to make a longer transit around a closed area when avoiding bad weather or returning to port in an emergency. This factor must be carefully weighed and balanced before implementing a completely restrictive MPA. Another significant advantage and one that can solve some of the safety issues is that the resources necessary to enforce a closed area – which, by definition, is a type of MPA – can be significantly reduced if the fisheries management plan incorporates mandated and proven technologies such as Vessel Monitoring Systems (VMS) or other effort leveraging devices. For example, my district staff is currently working with the National Marine Fisheries Service to install radars on remote Coast Guard aids to navigation in order to monitor the newly closed and environmentally sensitive areas of the Tortugas Ecological Reserve. Also our participation in the council management process has resulted in the first requirements for VMS in one of the Southeast's fisheries. The South Atlantic Fisheries Management Council (SAFMC) has approved VMS for the Rock Shrimp fishery and is expected to go on line in about one year. The 400 plus shrimp trawlers targeting Rock Shrimp have been known to violate the Closed Area established to protect Oculina Bank and the unique coral habitat found there. The only place in the world Oculina coral is known to be found is approximately 40 miles off the coast of Cape Canaveral, Florida. Only 20 acres remain. These shrimp trawlers are believed to be a major contributor to the corals serious decline. The proximity of the prime fishing grounds for rock shrimp to the protected Oculina Bank

and these vessels propensity to trawl within the closed area threatens the continued existence of the endemic habitat of *Oculina* Coral and make the fishery ripe for VMS. Recently the National Marine Fisheries Service won its first case based solely on the use of VMS data to confirm the presence of a vessel fishing in a closed area. While there is no replacement for “steel on target” when a violation is noted, or for the deterrent effect of a cutter’s presence in the vicinity of a closed area, VMS significantly reduces the need for a patrol presence 24x7.

Some MPAs, however, are not designed to be enforcement friendly for any number of management reasons. There exist some MPAs that are defined bathymetrically, meaning the contours of the area are defined by the depth of the water. An example of this would be an area delineated by the “20 fathom curve”, an edge that is poorly defined at best, introduces navigational error when plotted, and is nearly impossible to visualize from an enforcement vessel when patrolling. Further, if a violation is observed on the edge of an ill-defined or unclearly bounded MPA, the legal case for prosecution is much more difficult to make.

Adding to these enforcement difficulties, there are MPAs which allow fishing with certain types of gear or for certain species while prohibiting others. This requires fishers to haul out their gear and boarding officers to examine all equipment associated with the fishing operation. This is time-consuming for the boarding officer and counter-productive for the fisher. It is also extremely difficult at times to differentiate between various types of equipment; e.g. a mid-water trawl versus a bottom trawl. This sort of MPA is extremely resource and labor intensive and makes the Coast Guard’s – and other enforcement agencies’ - tasks much more difficult.

As an enforcement agency, we understand that there are many other considerations to be weighed when MPAs are developed. Enforcement-friendly MPAs may not always be conducive to properly addressing other management goals. As long as we are allowed to fully participate and offer our advice during the developmental process and managers weigh the enforcement costs and benefits in their decisions, then we will continue to support these initiatives as fully as our limited resource base permits.

In summary, merely designating an area and its attendant management regime does not inherently ensure the attainment of conservation and management goals. The scheme must *also* be enforceable. Otherwise, the science, planning and legislation involved in its creation are exercises in futility.

Q. On the topic of the difficulties and challenges of working with different agencies on similar issues, you noted during the meeting that you do not see any real problems working with different entities and you do not consider any one agency more difficult to work with than others. Please provide information on lessons to be learned from the Coast Guard experience in this area.

A. The Coast Guard has long depended on cooperative working relationships with other agencies at all levels of government. For example, while the Coast Guard specializes

in Search and Rescue (SAR) under the most hazardous conditions, a significant portion of the nation's SAR is carried out by others working under the coordination and direction of the Coast Guard's maritime Rescue Coordination Centers. Among these other agencies are the US Air Force, the US Navy, the Air National Guard, the Civil Air Patrol, state fisheries and wildlife officers, local police, etc. The unifying forces between the other agencies and the Coast Guard are the shared commitment to serving our fellow citizens, professionalism in the face of danger and mutual respect.

This applies to our Living Marine Resource and Protected Marine Species missions as well. Fisheries and critically protected marine species such as the Florida Manatee, Northern Right Whale, sea turtles, coral, and dolphins are managed, protected, and monitored by a complex and varied group of civilians, non-governmental organizations, Federal, and State agencies. Probably the greatest lesson to be learned from working with such a disparate and sometimes conflicting group is consistent participation in the process, whether in a leadership role or simply in an advisory role. Our participation has allowed us to put Coast Guard resources in areas and missions best suited for a Coast Guard response and to coordinate joint efforts where it is more efficient to rely on other agencies or organizations. In addition, this participation and team building allows Coast Guard strengths and weaknesses to be clearly stated so that only enforceable regulations and plans are put into effect. The Coast Guard's participation and engagement in the myriad of various meetings and operations have certainly enabled us to work jointly and more efficiently.

In other situations, the Coast Guard has a more formal leadership role. For example, under the National Contingency Plan (issued under the Federal Water Pollution Control Act, as amended by the Oil Pollution Act of 1990 (OPA 90)), the Coast Guard has been assigned the responsibility of providing the pre-designated Federal On-Scene Coordinator (FOSC) for oil and chemical spills occurring in the Coastal Zone. (EPA provides the FOSC for inland incidents). The FOSC is responsible for leading multi-agency planning and preparation for oil and chemical spills, and for incidents that pose a danger of such discharges. The planning phase results in local level Area Contingency Plans that incorporate the input of a wide range of federal and state or local agencies, as well as industry input. In the event that an event does occur, the FOSC essentially acts as the President's on-scene representative and is responsible for forging a coordinated response that satisfies the outcome concerns of a large number of stakeholders, some of whom won't necessarily have been involved in the planning process.

The Coast Guard operates a two-week course for FOSCs and it is not possible to condense that curriculum into a relatively short answer for this Commission. However, the underlying message of the FOSC course includes the following points: the FOSC is responsible for achieving the best possible response under the circumstances in order to minimize the negative impacts of the incident but neither the FOSC nor the Coast Guard at large have the skills or knowledge required to do it all by ourselves. Thus, the FOSC's real task is to bring the skills and knowledge of a

wide range of people and organizations together to achieve the goal of executing the best response possible under the circumstances.

The Coast Guard uses the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) to coordinate multi-agency response operations. This flexible command and control system allows our FOSCs to effectively coordinate several diverse response organizations into a single Unified Command. Additionally, the Coast Guard maintains Incident Management Assist Teams (IMATs), composed of highly trained personnel with expertise in both response operations and ICS implementation techniques, that support Incident Commanders when the magnitude of an incident exceeds local capabilities.

In short, the most important Lessons Learned from the Coast Guard's inter-agency leadership and cooperation experiences are the importance of shared goals and the synergy possible in an atmosphere of mutual respect. Of course, having a statutory basis for authority, as is the case with the FOSC position, is a significant help. This does not lessen the value of shared goals, mutual respect and a commitment to cooperation, but when statutory authority may be required for effective inter-agency or inter-governmental leadership, it is essential that it be available.

Q. Please provide your thoughts on ecosystem management.

- A. Ecosystem science is not a particular competency of the Coast Guard. Rather, our focus is on operational execution within the policy and statutory framework set by the Administration and the Congress. That said, however, a couple of comments may be appropriate.

In order to have an effective resource management regime, the "management boundary" must be drawn so as to capture all relevant factors threatening the at-risk resource(s). An earlier example cited the inadequacy of a fisheries management approach to a fishstock threatened by loss of breeding grounds. An alternative scenario might have the same fishstock threatened, not by loss of its spawning grounds, but rather by the loss of its primary foodsource. In the first case, catch restrictions would be an ineffective management strategy. In the second case, a fisheries management approach based on catch restrictions might actually help avoid a catastrophic collapse of the fishstock. In both cases, however, more complete understanding of the fishstock's relationships with other elements of its ecosystem are necessary in order to understand the root cause of problems affecting the resource and to craft an appropriate resource protection strategy. In this view, "ecosystem management" does not necessarily imply that every element of a given ecosystem must be "managed," but it does require that decision-makers have a more comprehensive understanding of the relationships between a "managed" (i.e., protected) resource and the ecosystem(s) of which it is a part.

There is also the issue of legal jurisdictions as they relate to ecosystem management. As discussed in Admiral Loy's responses to your questions following his November

2001 appearance before the commission, neither ecosystems nor individual species respect man's jurisdictional boundaries. Therefore, management regimes should be coordinated across jurisdictional boundaries as necessary to capture all factors relevant to the health of the protected resource. In considering "ecosystem management," I urge you to also give attention to the comments on jurisdiction provided with Admiral Loy's letter of 11 April 2002.