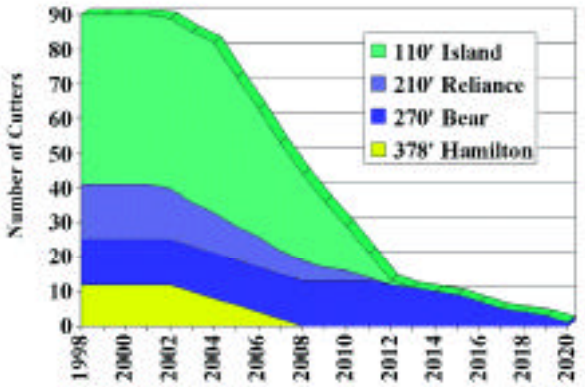
IV. USCG Maritime Security Operational Constraints

As the United States left the 20th century, the Coast Guard had modernized its patrol boats and near-shore assets. However, the Service in early 2000 is hamstrung by, first, obsolescent equipment and the fact that, among the world's 41 deepwater fleets, it is the 39th oldest and would, absent the Deepwater Project, soon be number 41; second, a younger and inexperienced workforce; and, finally, an unsustainable operational tempo exacerbated by budget constraints. Existing Deepwater assets are nearing the ends of their service lives. Performance is increasingly hampered and operational costs are increasing, even as the threats the Service must counter are becoming more sophisticated and capable and the implications of poor mission performance more dire to U.S. maritime security interests. (Appendix F provides data on in-service Coast Guard Deepwater cutters and aircraft. Figures 8 and 9 show cutter and aircraft projections.) There is a compelling need to modernize and enhance the Coast Guard's assets and capabilities to ensure that national maritime security requirements can be satisfied and that the Service's core mission areas can be supported. For example, the Coast Guard's internal Deepwater Mission Analysis Report concluded that

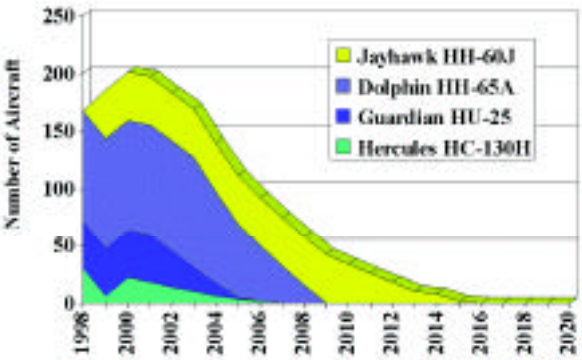
> ...capability improvements must be made, particularly as new mission requirements are added to our workload. Increases in our C4I [Command, Control, Communications, Computers, and Intelligence] capabilities, our ability to classify targets, our abilities to dispatch boarding parties more effectively, and the speed of our surface assets must be addressed.[126]

Figure 8. Projected Inventory USCG Legacy Cutters



[126] *Deepwater Mission Analysis Report,* U.S. Coast Guard Headquarters, 6 November 1995, p. ii. See also, *Deepwater Capabilities Project Mission Need Statement,* U.S. Coast Guard Headquarters, Office of Law Enforcement and Defense Operations (G-O), 3 May 1998, pp. 10-21. Two other functions have been added to the C4I arena: Surveillance (S) and Reconnaissance (R), making the "full-spectrum acronym" usually cited as C4ISR.

Figure 9. Projected Inventory of USCG Legacy Airfcraft



Recent cases illustrate the dilemma the Coast Guard faces every day. In December 1997, the cutter *Storis* (WMEC-38), built in 1942 and nearing 56 years of service, was on drug patrol off southern California. Lacking modern sensors and the ability to embark helicopters, and capable of maximum speed of 14 knots, the Storis was simply no match for the well-funded "high-tech" drug smugglers, armed with satellite telephones, precision navigation systems, and night-vision goggles, who literally could have run rings around the cutter. But *Storis* was all that was available at the time, and the cutter's crew did the best it could.[127] For that matter, the relatively "low-tech" stealthy boats that the Colombian cartels, especially, have used can easily frustrate interdiction efforts. These fiberglass vessels with World War II-type camouflage are virtually invisible to radar and the "Mark-One" eyeball – a cheap boat that defeats U.S. counter-drug operations.

In a late April 1999, a Navy surveillance aircraft detected an unmarked 120-foot trawler about 60 miles off Guam, but a Coast Guard cutter – one of only two assigned to Guam (a 55-year old buoy tender and a 110-foot patrol boat) – could not make the interception because of an engine fire.[128] As the trawler neared Guam and was headed toward a reef, a Coast Guard inflatable boat raced out to put a boarding party on the ship and steer it away from the danger at the last minute. A cutter later towed the trawler, with 120 Chinese migrants on board, to nearby Tinian, where they were held at an abandoned World War II air field. It was the third such interception in as many weeks; the first came on 17 April, when a cutter diverted a trawler carrying 147 Chinese to Tinian. With the Coast Guard fully engaged in that case, another smuggling ship with 105 Chinese on board sailed unchecked into Guam's Apra Harbor. "It sailed right into port," Ginger Cruz, a spokesperson for Governor Carl Gutierrez, said. "It was rather embarrassing."

Nor are such challenges experienced by the Coast Guard, alone; the Navy's support to America's war against the drug cartels can at times be stymied, as well.[129] On 4

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[127] *Storis* also figured in a September 1997 incident in which it had detected the Japanese fishing vessel *Yoshi Maru No. 38* illegally fishing within the U.S. EEZ in the Bering Sea. As Storis approached the vessel and ordered it to stop, the Japanese vessel fled, leaving the U.S. cutter in its wake. See also Navarro, "Upgraded Drug Traffic," *op.cit.*, where the drug-runners' sophisticated technologies and operational concepts are reviewed.

[128] "Guam's Own 'China Beach'," *op.cit.*

[129] Molly Moore and John Ward Anderson, "Just What the Smugglers Ordered," *The Washington Post*, 2 August 1998, pp. A1, A38.

March 1998, for instance, a U.S. maritime patrol aircraft spotted a "go-fast" boat, loaded with what appeared to be cocaine, speeding northward near the Costa Rican-Nicaraguan border. The Navy's nuclear-powered, guided missile cruiser *California* (CGN-36) was dispatched to intercept the 40-foot craft, cleared to use "minimum force necessary, including warning shots and disabling fire" to force the boat to stop. But the "go-fast" refused, even after the U.S. warship fired 15 shots from its 5-inch guns. *California* was granted permission to pursue the "go-fast" into the Nicaraguan territorial sea, but played "cat-and-mouse" around Corn Island until the clearance expired at midnight, allowing the drug-runners to evade capture.

Deepwater Cutter Assessment

Although the Coast Guard's mainstay Deepwater Reliance (WMEC-615) 210-foot and *Hamilton* (WHEC-715) 378-foot cutter classes, built in the 1960s and early 1970s, have been modernized, they operate with relatively large and expensive crews, are becoming more difficult to maintain, do not incorporate modern technology, and are to be retired beginning in 2008.[130] One of the Coast Guard's premier Deepwater "over-achievers" in recent years, the high-endurance cutter Chase, shows the challenge of sustaining needed capabilities in this demanding mission area. Propelled by a combined diesel (cruise) or gas-turbine engine (sprint) plant, the cutter's performance is becoming more difficult to maintain. (Always innovative, perhaps, the Coast Guard was the first U.S. service to use gas turbines and controllable-pitch propellers in its ships and led in the post-World War II development of shipboard helicopter operations.) The cutter's turbines are converted Pratt & Whitney FT4A-6s originally used in the 1950s-era Boeing 707 airliner, and have been out of production for more than two decades. The Coast Guard, therefore, had to turn to the used-aircraft market for spares, a factor that continues to impact the class' operating and support costs.[131]

[130] When the *Hamilton* cutters received Fleet Rehabilitation and Modernization (FRAM) upgrades in the late 1980s and early 1990s, the notional manning standard was increased from 152 to 171 people. Naval analyst Norman Polmar stated that if these cutters "...are not replaced, the Coast Guard will in fact as well as name evolve into a coastal patrol force. Unfortunately," he continued, "the *Hamilton*-class modernization included the removal of the ships' 5-inch/38-cal DP [Dual Purpose] guns, which were very useful weapons." Although the 5-inch weapons were replaced by 76-mm Oto Melara, they are not the equivalent to the larger weapons in many naval tasks. A critical shortcoming is the lack of modern electronic countermeasures systems as well as advanced radars and communications capabilities. Polmar, *Ships and Aircraft of the U.S. Fleet*, 15th ed. (Annapolis, MD: Naval Institute Press, 1993), p. 551.

[131] James B. Thatch, "USCG's Urgent Need for Deepwater Replacements," *Sea Power*, April 1998, pp. 82-86, at p. 85. See also Norman Polmar, *Ships and Aircraft of the U.S. Fleet*, 16th ed. (Annapolis, MD: Naval Institute Press, 1997), pp. 503-505.

The Nichols Advanced Marine "Evaluation of the 378', 270' and 210' Class Cutters" report, dated 15 July 1999 and undertaken in support of the Deepwater Project, noted that the Coast Guard in mid-1999 maintained ten spare turbines acquired from Canada to support the *Hamilton* as and *Polar* class cutters. At the time of the evaluation, five of the ten turbines were awaiting overhaul and two were in the rework facility, leaving only three available for use. One important conclusion was that the difficult and labor-intensive nature of providing replacement and support for the Pratt & Whitney gas turbines were indicative of an obsolete system. The cost to replace each turbine and the level of support to operate and maintain the turbines were firm indicators of an increased level of risk to these cutters. Other increased maintenance costs derived from the fact that original supply sources in many instances no longer exist, and as a result available substitutes may match original equipment in function and performance but not in fit, requiring extensive engineering work-arounds and costly modification to existing plants.

Likewise, the engines on the Coast Guard's medium-range patrol aircraft in late 1999 were antiquated, unsupported, and failing at an alarming rate. As a result of such age-driven challenges, the overall logistics effort demands a significant amount of labor hours, leading to increased maintenance costs and

From an operational perspective, the 12 Hamilton and 16 Reliance cutters are labor-intensive, which drives up operating costs and places strains on the Service's personnel quality of life programs. As much as 70 percent of a cutter's life-cycle cost is attributed to its crew. Chase and the other Hamilton -class cutters normally operate with 19 officers and 152 enlisted personnel, two or three times as many as required in a modern, highly automated, and more capable cutter of similar size. These ships possess surface/air search radars and night vision equipment that aid in a variety of missions and tasks, but more modern and capable equipment is available (a critical need is for inverse synthetic aperture radars that would aid in detection, identification, and interception tasks).[132]

The 210s, moreover, show the signs of "mission creep" and advancing age. Designed in the early 1960s with a crew of only 60 and commissioned between 1963 and 1969 for SAR patrol and standby operations, they have assumed almost all Deepwater missions and crew size has grown to 77. Still, at that size the ship's combat information center is manned only by the bridge watchstanders. They have a relatively slow maximum speed of 18 knots, and their maximum range of 6,100 nautical miles at 13 knots is significantly less than the 378s or the 270s. The *Reliance* cutters are fitted with only a surface-search radar, and they have no electronic countermeasures or electronic support measures equipment installed. The 210s can land but not hangar helicopters.

Of more recent vintage are the 13 *Famous* or "Bear" (WMEC-901)-class cutters built between 1979 and 1990, but those ships, designed and engineered for a specific north Atlantic fisheries law enforcement mission, have demonstrated shortcomings in almost every other Deepwater mission and task. The class has only a nominal 14-day (maximum 21-day) endurance (food stores, fuel, garbage retention), slow maximum speed (20 knots), limited range (9,900 nautical miles at 12 knots; 3,850 nautical miles at top speed), and poor sea-keeping. Planned national defense features have been foregone, most notably in the anti-submarine warfare area. Key ASW systems were tested but never deployed, for example, because the class' self-generated noise is so great that the intended Tactical Towed Array Sonar System (TACTASS) would have been virtually worthless, especially in the "noisy" and cluttered littoral ASW environment.[133] Other operational shortcomings include:

- Limited berthing for additional personnel
- Poor boat launch/recovery system

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decreased cutter and aircraft operational availability.

[132] At 378 feet length overall, the *Hamiltons* displace 3,050 tons full load. Several NATO navies have corvette or frigate-sized surface ship programs, with missions that are similar to the Coast Guard's Deepwater mission set and operating profiles (albeit not equivalent to the U.S. Coast Guard's evolving international engagement/defense mission), but which have smaller crews. For example, the in-service Danish *Thetis* -class offshore patrol vessel (OPV) has a 369-foot length, displaces 3,500 tons, has a 90-day endurance, and operates with a crew of 60. The in-service Norwegian *Nordkapp* - class OPV has a 346-foot length, displaces 3,240 tons, has a 90-day endurance, and operates with a crew of 62. The Sea Wraith Stealth Corvette, under development by Vosper Thornycroft has a 377-foot length, displacement of 2,500 tons, and crew of 105. See, Surface Matrix Project Team, USCG Deepwater Capability

- Limited ability to maintain real-time video and data links between Coast Guard assets, and no Link-11/16 capability for tactical data links with other U.S.forces
- No close-in weapons system to defend against air threats (a severe constraint given the class' passive-only SLQ-32(V)1 electronic countermeasures system)
- Limited ability to deploy with HH-60 helicopter (only the short-range HH-65 or the out-of-service Navy SH-2F LAMPS can be accommodated in the "A" Class, although the "B" Class can deploy with the HH-60 and also land/refuel the Navy SH-60B LAMPS helicopter)
- No air-search radar for civilian law-enforcement and military tasks

The Deepwater Project's 1999 evaluation of the high- and medium-endurance cutter classes concluded that

> ...the Coast Guard historically keeps their cutters in service far longer than their Navy and foreign service counterparts. Our opinion is that this policy brings with it high life cycle costs for manning, maintenance and logistics. It also prohibits the Coast Guard from taking advantage of modern control, sensor and communication technology that would allow the cutters to not only reduce crewing levels significantly, perhaps by half, but also increase operating effectiveness.
>
> It is apparent...that the Coast Guard incurs a very real and significant opportunity cost by keeping cutters with inadequate and outdated mission equipment out on patrol, rather than replacing or significantly upgrading their capabilities. Given that most of the costs of cutter ownership are crew, fuel, and maintenance, these costs are essentially constant whether the cutter has a modern, up to date sensor and communications capability, or an inadequate one. Further, newer, less maintenance-intensive cutters would allow a greater number of days on patrol.[134]

In addition to the high- and medium-endurance cutters, the service's 49 Island-class (WPB-1301) 110-foot patrol boats, built between 1986 and 1990, have also been assigned Deepwater missions despite their constraints. These small cutters were designed primarily for near-shore/coastal drug interdiction, and cannot meet the full spectrum of Deepwater requirements. Range and endurance (Island A Class) are limited to 3,300 nautical miles at 13 knots and 900 nautical miles at 29.5 knots. The class cannot tow at low speeds because of poor seakeeping and handling, and the poor boat launch/recovery configuration prevents small boat operations in anything greater than sea state 4. Organic sensors and communications links (voice, video, data) are poor. There is very limited space for additional personnel, and they cannot accommodate 50-50 male/female crew mixes.

Replacement Project, "Comparative Practices of European Frigates and Offshore Patrol Vessels," Naval Architecture Branch/USCG Engineering Logistics Center, September 1997.

[133] See, for example, Lieutenant Commander William L. Ross, USCG, *"Semper Paratus?* The Coast Guard is Not Equipped to Fight," *Naval War College Review*, Winter 1990, pp. 113-130; the Bear-class criticisms are discussed at pp. 120-122. Interviews with U.S. Coast Guard Headquarters staff cutter requirements officers confirmed that the shortcomings discussed in this 1990 article were still the norm at the close of 1999.

[134] Nichols Advanced Marine, *op.cit*., Executive Summary, p. 5.

Deepwater Aircraft Assessment

The Coast Guard's maritime, multimission, and military character will be its foundation for operations in the 21st century, and these same core values will continue to influence the employment strategy of all future Coast Guard aviation assets. Likewise, core aviation capabilities will continue to consist of surveillance and reconnaissance, search and rescue, logistics support, marine environmental response, and detection, classification, identification and interdiction in support of law enforcement and defense missions. In addition to several logistics support (C-20B, VC-4) and special mission (RU-38) aircraft, the current aviation asset mix consists of the following operational aircraft:

- 80 short-range rescue and recovery (SRR) HH-65A Dolphins, which are nearing the ends of their service lives
- 35 medium-range rescue and recovery (MRR) HH-60J Jayhawks, which are approaching the mid-point of their service lives
- 20 medium-range search (MRS) HU-25 Guardians, the first of which entered Coast Guard service in 1982
- 26 long-range search (LRS) HC-130 Hercules, some acquired as early as 1972

While the current SRR, MRR, MRS and LRS designations are derived from an attempt to match platform capabilities with mission requirements, limitations in current platform capabilities suboptimize multimission employment.[135] For example, while the HH-65A is compatible with all WHEC and WMEC flight decks, it is extremely weight critical, which limits its range, precludes its potential use-of-force and logistics-support applications, as well as its ability to carry a state-of-the-art radar and sensor package. On the other hand, while the HH-60J has Deepwater-capable range and endurance, it is compatible only with the 270-foot WMEC flight decks. Deployment capability is further impaired by limited shipboard maintenance and logistics support capability and restrictive pitch and roll limitations, especially at night. Additionally, sensors on the HH-60J consist of a weather radar and an antiquated, stand-alone forward-looking infrared (FLIR) sensor system. The fact that the FLIR, primarily an identification device, is not integrated with the radar, a detection and classification device, severely limits its utility.

USCG Fixed- & Rotary-Wing Aircraft Mission Classifications

Long-Range Search:
Multimission, radius of action greater than 750 nautical miles, total sortie time greater than four flight hours, significant cargo capacity

Medium-Range Search:
Multimission, radius of action of 750 nautical miles, total sortie time of four flight hours

Medium-Range Recovery:
Multimission, radius of action greater than 150 nautical miles, total sortie time greater than 3.5 flight hours, ability to recover four or more people from the water, cargo sling capacity greater than 2,000 pounds

Short-Range Recovery:
Multimission, radius of action of 150 nautical miles, total sortie time of 3.5 flight hours, ability to recover three people from the water, cargo sling capacity of 2,000 pounds

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[135] The Coast Guard has identified an investment strategy and program that will help overcome some of the more critical operational capabilities in the existing aircraft platforms and systems and to ensure that a capabilities "gap" is avoided as the Service looks ahead to acquiring future Deepwater aviation platforms and systems. See LCDR Thomas Cullen, USCG, "Aviation Near-Term Support Strategy" Briefing, Office of Aeronautical Engineering, Headquarters, U.S. Coast Guard, 4 September 1998.

Eight other "special mission" classifications are: Long-Range Command and Control (LRCC), Long-Range Detection (LRD), Medium-Range Intercept (MRI), Medium-Range Apprehension (MRA),

With regard to fixed-wing capability, the dash speed of the Falcon, when combined with the APG-66 radar, makes it a suitable air intercept platform. This capability exists on only eight operational HU-25C aircraft, however. Moreover, use of this platform in search and rescue or maritime patrol applications is suboptimized due to the poor surface search capability of the APG-66 radar. Likewise, range and endurance (maximum range of 1,940 nautical miles at 250 knots), and especially sensor limitations on the HU-25A and the HU-25B models limit their effectiveness in these same mission areas. And, the 20 Falcon aircraft are all more than 14 years old and have major engine supportability problems. Seventeen other Falcons are in storage in early 2000 and would require significant funding to upgrade and return them to operational status.

The ongoing HC-130 sensor upgrade, consisting of an integrated, state-of-the-market FLIR/EO (electro-optical) device and a palletized, roll-on/roll-off advanced tactical workstation, will significantly enhance its multimission utility and provide near real-time data transmission capability.[136] This upgrade, in conjunction with Differential Global Positioning System (DGPS) navigation improvements on all platforms and night vision goggle implementation on helicopters, constitutes Coast Guard aviation's only significant capabilities advance in more than a decade. Thus, while each of these aircraft perform yeoman service across the full spectrum of Coast Guard missions, scrutiny of individual platform capabilities reveals an unintegrated system that falls well short of optimum tactical employment.

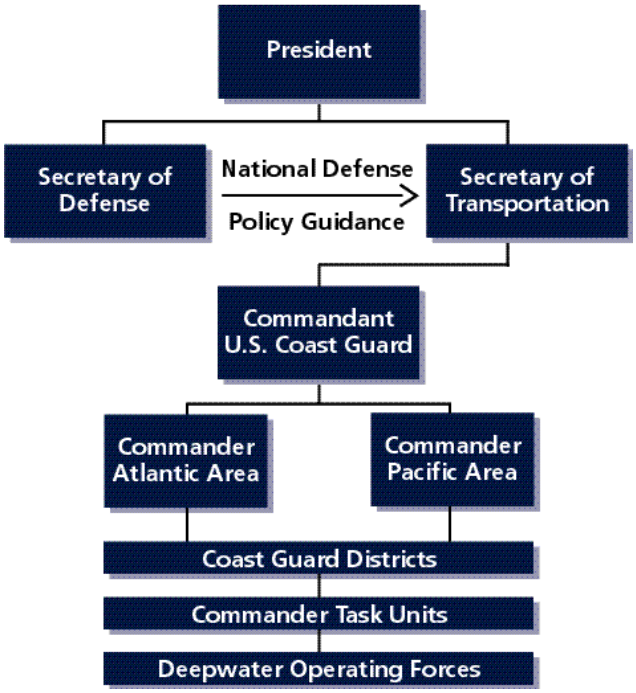
Deepwater C4ISR Assessment

The Coast Guard is unique among the U.S. Armed Forces in that the Commandant serves as both the Service Chief and the Service's senior Operational Commander. As such, the Coast Guard Commandant is responsible for providing trained, ready, and equipped forces for the Coast Guard Field Organization and exercises both Administrative Control and Operational Command of Coast Guard forces for the accomplishment of assigned missions. The Commandant receives national policy direction from the President, Secretary of Transportation, and Secretary of Defense. (See Figure 10.) The Commandant's principal operational commanders, the Commanders, Atlantic and Pacific Areas, also serve as the Commanders, Maritime Defense Zones, Atlantic and Pacific, respectively. Thus, in peacetime and war, the Commanders, Atlantic and Pacific Areas serve as the vital links between the Commandant and subordinate District Commanders and with the Unified Commanders in Chief. The Area Commanders exercise Administrative Control of all Coast Guard Deepwater surface assets; Operational Control of Deepwater cutter forces is exercised through the Coast Guard District Commanders. The District Commanders also exercise both Administrative and Operational Control of Deepwater aviation forces. When the President directs or upon declaration of war, the Coast Guard operates as a service within the Navy.

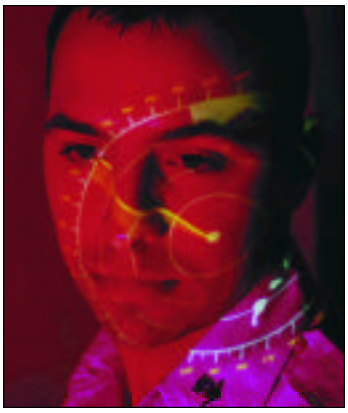
Medium-Range Detection (MRD), Medium-Range Logistics (MRL), Medium-Range Covert Surveillance (MRCS), and Short-Range Covert Surveillance (SRCS). The Coast Guard's lease of the Spanish CASA 212 in the early 1990s was targeted to meet the MRL mission demand.

[136] Since 1983 the Coast Guard has used the APS-135 Side-Looking Airborne Radar (SLAR) and the APS-137 Forward-Looking Airborne Radar (FLAR); the SLAR is particularly useful for iceberg detection. However, both systems are obsolescent, and the SLAR is no longer supportable.

Figure 10. U.S. Coast Guard Operational Command Structure



Until recently, the Coast Guard had not taken an organizational, cross-mission area, and inter-agency view regarding collecting, processing, and disseminating information needed to perform its missions. Nevertheless, the 1995 Deepwater Mission Analysis Report concluded that the "capabilities most in need of upgrading – areas where the biggest improvements in effectiveness could be achieved – are in target classification, boarding enhancements, and...C4I improvements."[137] Since then, numerous shortcomings have been identified for the Deepwater assets across all major mission areas that support national maritime security – the most significant, given the Coast Guard Commandant's dual administrative and operational command responsibilities, being the lack of an overarching and rigorous command and control architecture linking Headquarters with Area and District Commands and with individual units across mission areas.[138]



Sensor Shortfalls

The lack of effective radar and other all-weather/24-hour sensors for aircraft and cutters precludes these assets from covering larger areas with increased probabilities of detection and classification of targets of interest, particularly in high-threat/high-density areas, and at long/over-the-horizon

[137] *Deepwater Mission Analysis Report, op.cit.,* p. I-39.

[138] More detailed and system-specific information is available in the publications that were relied upon for this summary: Department of Transportation, United States Coast Guard, USCG C4I Baseline Architecture, Enclosure (1) to COMDTINST 3090.6. See also, "USCG C4I Objective Architecture and Transition Plan" (OATP), 24 November 1998.

ranges.[139] Likewise, there is a lack of effective capability to search for, detect, maintain track, and locate, especially passively and at night or in inclement weather. This ranges from large commercial vessels (in support of Port State Control program) to small targets-of-interest, such as small-profile vessels, rafts, or individuals in the water. A significant gap exists in the Coast Guard's sensor capabilities in polar regions related to finding thin ice areas. Moreover, there is a general lack of the capability to detect, assess, and monitor oil/hazardous materials spills in all weather conditions and at night. There is also a requirement for greater direct support from National Intelligence Community and other intelligence assets, especially in direct, real-time support of tactical operations (TENCAP – Tactical Exploitation of National Capabilities).

Command, Control and Communications Shortfalls

The lack of reliable connectivity among cutters, aircraft, boats, and operational shore facilities, especially at long/over-the-horizon ranges inhibits practically all operations, a situation that is exacerbated by the fact that communications suites and systems may vary by geographic or operating area. The Service has only limited communications capabilities to support multiple situations, crises, and operations simultaneously in all modes (voice, data, imagery), and there is a lack of ability to receive all distress calls in some portions of U.S. coastal areas where the majority of commercial or recreational traffic exists. Multi-agency operations are made more difficult by the limited capabilities available to Groups, Small Boat Stations, and other Coast Guard resources to interface effectively with the numerous federal, state, and local agencies, as well as international and private organizations, that are involved in various missions and tasks. There are, as well, only limited capabilities available to Groups, Small Boat Stations, cutters, aircraft, and other Coast Guard resources to interface effectively with Defense Department resources.

The Service is also challenged by limited and generally cumbersome interfaces for using Coast Guard command-and-control systems, and there is a lack of effective interface for exchanging information between mobile assets and shore facilities, especially high-speed and reliable communications. The Coast Guard's ability to protect sensitive/secure communications, particularly in coastal areas in which smaller Coast Guard resources/platforms are used, needs enhancement, and there is a lack of ability to exchange sensor, intelligence, and other tactical information among cutters, aircraft, and shore facilities. In addition to polar sensor shortcomings, the lack of an effective communications transport path to get ice surveillance information (satellite imagery or reconnaissance information from aircraft) to operational planners and cutters constrains the Service's international ice patrol operations.

Command and Decision Shortfalls

The lack of capability to maintain situational awareness and effective tactical display of an area of responsibility at the District or Group level, including status of reporting resources and monitoring of actions of Coast Guard resources has continued to create problems for effective force allocation. This, plus a general lack of interoperable decision support tools, effective situational risk assessment tools, and access to remote mission reporting information at Groups, has at times resulted in an inability to maintain situational awareness and effective tactical display by units involved in Joint-force operations. Similarly, there is a general inability to provide real-time tactical information and a situational picture on aircraft, small cutters and boats, and at Small Boat Stations. The

[139] In September 1999, the Coast Guard reported excellent results in the use of the S-band AN/SPS-73 surface-search radar in detection and monitoring of fisheries activities in Coast Guard District 1. Ranges out to nearly 49,000 yards were documented, performance that will enhance not only Coast Guard roles and missions but interoperability with Navy warships. CG Message R 280130Z SEP 99 SUI ASN-D00271000065

Coast Guard cannot easily share tactical information effectively on a real-time basis among disparate levels of Coast Guard resources and with other agencies and private organizations. Finally, the limited capability to collect data effectively and to evaluate the effectiveness of operations can either result in too many assets being allocated or too few, as well as decisions to call off operations prematurely.

Operational Constraints Summary

Thus, because of the impending block obsolescence of much of its Deepwater force structure, the Coast Guard's ability to continue to meet current, much less future, maritime security requirements is becoming increasingly problematic. For this reason, the Integrated Deepwater Systems Capability Replacement Project has assumed a central role in planning and programming for the Coast Guard of the 21st century. And, although experiments in 1999 that focused on armed helicopters and very high-speed Deployable Pursuit Boats link to motherships indicated much potential, particularly in drug interdiction operations, much more needs to be done to increase and enhance Coast Guard capabilities across all maritime safety and security missions.[140]

"...the USCG's ships and aircraft often can neither hear nor see the ships, boats and aircraft they are looking for – and even when they do succeed in establishing initial contact they have trouble communicating this important information to those who have a need to know. The cutters now in the Coast Guard inventory have no air-search radars, no modern synthetic-aperture radars, no sonar systems, no infrared sensors, and no night-vision equipment. They also lack the equipment needed to allow the analysis and sharing of tactical information between Coast Guard units. With the best equipment the Coast Guard now has, a cutter may be able to identify a 60-foot vessel at 2,000 yards – but that means that the 25-foot "cigarette boats" favored by drug runners have little to fear."

James B. Thatch
Sea Power, April 1998

[140] Commander Mike Emerson, "Coast Guard Helos: A Call to Arms," U.S. Naval Institute *Proceedings*, October 1999, pp. 30-33; Jack Dorsey, "New High-Powered Boats Help Coast Guard Level Playing Field," *The Virginia Pilot*, 10 November 1999.