

The Marine Corps, like the Army, has worn out a lot of equipment in Afghanistan and Iraq, and is facing big bills to pay for the future force the Corps says it needs.

Future Corps

■ By Sydney J. Freedberg Jr.

At the end of April, a squadron of the Marine Corps's new V-22 Ospreys returned from the aircraft's first overseas deployment, a seven-month tour in Iraq. The Corps trotted out pilots and ground crews to talk up the \$67 million machine, a hybrid of helicopter and propeller plane whose revolutionary tilt-rotor technology took 25 years to develop and claimed 30 lives in crashes along the way.





■ FROM THE SEA:

A Marine amphibious assault vehicle (left) enters the well-deck of the USS *San Antonio*. After Cyclone Sidr struck Bangladesh in November 2007, U.S. marines (below) were among the first to deliver humanitarian aid.





- The Corps wants to get away from being a second land army and back to its roots, an **emergency expeditionary force** that can launch from sea.
- The wars have essentially worn out the Marine Corps's helicopter fleet, and the replacement is the **fast but complicated tilt-rotor aircraft**, the Osprey.
- Since 1995, the Marines have been trying to build a tank that swims—the **Expeditionary Fighting Vehicle**—but the program has been plagued with problems.

Largely overlooked in the coverage and the controversy over the V-22 itself, however, is the fact that the aircraft was never meant to stand, or to fight, alone. The Osprey is simply the single most expensive element of an ambitious plan to re-equip the Marine Corps to execute a new kind of sea-based blitzkrieg.

Marine officers began to develop the concept, often called “operational maneuver from the sea,” a quarter-century ago at the height of the Cold War, when the rise of advanced anti-ship missiles was already threatening any fleet massed for a conventional, large-scale landing in the style of Iwo Jima. Today, the V-22 and key technologies like it are finally entering service in a world radically different from the one in which they were conceived—a world in which some of the weapons that the Soviets developed 25 years ago are now in the hands of guerrillas and terrorists in developing countries.

For the Marine Corps, looking forward to a large-scale pull-back from Iraq even as it takes on a new mission in Afghanistan, the vision is not merely about new technology. It is about returning to the Corps's historic role as a shipborne rapid-reaction force after five years of grueling ground warfare alongside the Army.

“We’re not a second land army,” said Maj. Gen. Thomas Benes, the director of expeditionary warfare on the Chief of Naval Operations’ staff. “We can always be used to complement the [Army’s] mission on the ground, and we don’t shy away from a fight,” he emphasized. “But our real traditional role of being a naval force is what we want to get back to.”

To carry out this old role in a new way with new equipment, however, will be expensive. Like the Army, the Marine Corps has worn out in Iraq much of its inventory of weapons, aircraft, and vehicles, most of which were bought during the Reagan-era buildup. Unlike the Army, which has packaged its main modernization programs into a single, high-profile, hard-to-explain and heavily criticized Future Combat System, Marine modernization is scattered across a half-dozen programs, some small enough to fly below most media and congressional radars. What’s more, because the future Marine force will be carried into battle on Navy ships built with Navy money, about a sixth of the total cost to realize the Corps’s vision will not be counted in the Corps’s budget.

Adding up all of the major elements—the new ships, the

V-22, a host of upgrades to conventional helicopters, and a kind of tank that swims called the Expeditionary Fighting Vehicle—the bill comes to about \$100 billion. (This total doesn’t include the Marines’ share of the nascent multiservice F-35 Joint Strike Fighter aircraft.) That is close to the \$129 billion estimate for the Army Future Combat System and well above the cost of the media’s favorite poster child for overpriced weapons systems, the \$63 billion F-22 Raptor fighter jet.

Tight Budgets

Although the Marine modernization cost is spread over many years, it is still busting the budget of what has always been the smallest armed service in the Defense Department. “It’s horribly tight,” said Kevin McConnell, a retired Marine major now serving as a planner with the Corps’s Combat Development Command, based in Quantico, Va. In the long-range forecast for the Expeditionary Fighting Vehicle, for example, “the investment in EFV alone exceeds, yearly, what we would normally think of as the procurement [budget] for the entire Marine Corps,” McConnell said. And in the near term, “we’re fighting a war that’s beating the heck out of our equipment. So I will very much go after supplemental [budgets for Iraq and Afghanistan] as long as they’re available—not only to sustain the force in-theater but to help us modernize. If those supplementals don’t come through, the next decade’s going to be kind of tough.”

The Marine Corps has already made hard choices. For the past two decades, the Navy continued to buy fighter planes and helicopters, but the Marines mostly held onto aging and increasingly hard-to-maintain aircraft while waiting for the V-22 and their version of the F-35 fighter, now expected to enter service in 2012.

“There were a lot of arguments for and against the V-22,” said Robert Work, a retired Marine colonel who is an analyst at the Center for Strategic and Budgetary Assessments. “Five years ago, I was not a fan. But the bottom line is, now there really is no other option. The war has essentially worn out the Marine Corps helicopter fleet. The V-22 is the answer we’re going to make work.”

Other expensive aspects of the Marine Corps plan are not yet set in stone—above all, the Expeditionary Fighting Vehicle,

which has been cut from a planned purchase of 1,000-plus EFVs to fewer than 600, even as the cost rose to \$16 million per vehicle and the development schedule fell four years behind. “There’s still a lot of debate over the EFV,” Work said. “Do you really even need it? Could you do it a lot cheaper?”

Answering these questions requires going beyond the problems of specific programs to look at the Marine Corps’s overall vision of its future—and, ultimately, at the basic mission of the Corps.

“Who is this force supposed to be used against?” asked Dave Baker, an analyst and author who served in the Office of Naval Intelligence. “Who are we going to invade?”

Big Wars, Small Wars

For 200 years, the Marine Corps has had a split military personality. Even the lyrics to the Marine hymn declare it. “From the halls of Montezuma”—a major 1847 land battle in the Mexican-American War—“to the shores of Tripoli”—a presidentially ordered police action against North African pirates in 1805—

the Corps has swung back and forth between augmenting the Army in prolonged ground combat and serving as a global fire brigade launched from Navy ships.

The split between major war and crisis response goes back to the founding of the Republic. “In the Constitution, Congress has the authority to ‘maintain’ a Navy but to ‘raise’ an Army,” explained D. Robert Worley, a former marine and a senior fellow at Johns Hopkins University’s Institute of Government. “The Department of War was there to mobilize an army when Congress declared war. The Department of the Navy, on the other hand, was a standing organization the president could use without going to Congress.” Combat troops who embarked on Navy ships—marines—carried gunboat diplomacy ashore in what a landmark 1940 operations manual codified as “small wars.” Even the massive conflicts of the 20th century, which led to the merger of the War and Navy Departments into the Defense Department in 1947, never drew the Marine Corps entirely away from its classic crisis-response role, as in Haiti in 1915 and 1994, or the Dominican Republic in 1916 and 1965.

■ Odd Duck



Although controversy over the V-22 Osprey has largely died down, its cost ranks it alongside some of the military’s most fought-over and expensive weapons programs. On the deck of the amphibious assault ship *USS Wasp* (above) in the Gulf of Aqaba, the Ospreys of Marine Squadron VMM 263 prepared in October for the first deployment of the aircraft.

PROGRAM	SERVICE	MISSION	PROGRAM COST
F-35 Lightning	Joint (Air Force, Navy, Marine Corps)	Fighter-bomber	\$240.0 billion
FCS (Future Combat System)	Army	Ground vehicles & equipment	128.5
F-22 Raptor	Air Force	Fighter	62.6
V-22 Osprey	Marine Corps*	Tilt-rotor troop transport	54.8
KC-45†	Air Force	Fuel tanker	40.0

*Includes some Navy and Air Force Special Operations aircraft.

†Contract is still in dispute, and figure is an estimate only.

SOURCES: Government Accountability Office; news reports

PHOTOS: (L TO R) U.S. NAVY/MASS COMMUNICATION SPC. SEAMAN ANDREW BRANTLEY; U.S. NAVY/MASS COMMUNICATION SPC. 2ND CLASS ZACHARY L. BORDEN

“World War I, World War II, those are anomalies,” said Col. Douglas King, a senior planner at the Marine Corps’s Combat Development Command. King and other marines emphasize that the Corps must be prepared for wars big and small, and that the popular imagination still thinks of the Marines in terms of massive seaborne invasions such as the 1945 attack on Iwo Jima. But the Marines conceived of those tactics in the 1930s, perfected them during World War II, reprised them one last time at Inchon in 1950 during the Korean War, and have never undertaken such an assault again.

In the 1991 Persian Gulf War, the threat of a Marine landing kept much of Saddam Hussein’s army along the coast while the U.S. Army outflanked it inland, but Army Gen. Norman Schwarzkopf, the Desert Storm commander, never sent the Marines ashore for fear of heavy casualties. By contrast, King said, “since the end of the Cold War, we’ve conducted about 85 responses to crises, anything from raids to humanitarian operations.”

Many of these missions are disaster relief. But the Marines must often go ashore in war zones to serve as peacekeepers or to evacuate U.S. citizens. “Noncombat” can turn into “combat” in a lethal hurry, and the proliferation of powerful weapons in the hands of insurgents and rebel groups around the world only increases the risks. In 1983, a single truck bomb in Beirut killed 241 U.S. peacekeepers, almost all of them marines. In 2006, the Corps returned to Lebanon to extricate 14,000 American nationals from the crossfire between Israel and Hezbollah. Neither side attacked the marines, but the potential danger was underscored by Hezbollah’s use of anti-tank and anti-ship missiles against the Israelis, weapons that were once deployed only by

requisite supplies. Only then could the marines move inland to pursue their actual objectives.

At Iwo Jima there was only one suitable beach, and the Japanese defenders knew it; coming ashore this way was bloody even in 1945. Against Iranian or North Korean forces with shore-launched cruise missiles, shoulder-fired anti-tank rockets, and abundant mines on land and in the sea, such a landing would be suicidal.

The marines’ solution was to bypass the beach. Instead, they would keep the fleet well out at sea, with plenty of maneuvering room, and then launch a sudden, savage, high-speed attack that would come ashore at multiple points—seeking narrow gaps in enemy defenses instead of a single large beach—and keep moving inland without stopping to build up a single, vulnerable beachhead. The only problem with this plan was that the Corps’s existing equipment could not pull it off. So the service set out to build such a capability.

High-Tech Ambitions

Developing technologies to execute the Marine Corps’s new tactics has been a 25-year-long ordeal. The V-22 Osprey program began in 1982 and first deployed to Iraq last fall. The Expeditionary Fighting Vehicle, still at least seven years from fielding, officially began in 1995 but is the successor of two amphibious armored vehicle projects that were abandoned. “This is the solution they came up with 20-plus years ago and have been trying to field ever since,” said T.X. Hammes, a retired Marine colonel who wrote an iconoclastic book, *The Sling and the Stone*, on how low-tech foes can defeat expensive American hardware.

The Corps suffered through all of the classic difficulties of complex military weapons purchases and through painful budget cuts in the 1990s. But its fundamental problem was the revolutionary nature of what it wanted to build. Both the V-22 Osprey and the Expeditionary Fighting Vehicle are hybrids, whose machinery must be physically reconfigured to operate in two distinct modes.

The V-22 tilt-rotor, as the name implies, uses gearboxes and hydraulics to tilt its rotor blades at different angles, allowing it to take off and land like a helicopter but fly long distances like a turboprop airplane. The EFV transforms from ground vehicle to water vehicle by folding up its suspension, retracting its tank-like tracks, deploying stabilizer fins from its back and sides, extending a metal bow plate to better cut the waves, and revving its engine to 2,700 horsepower, which kicks the 40-ton machine bodily out of the water to skim across the surface at about 30 miles per hour. “It’s not just a swimming tank,” Hammes said. “It’s a water-skiing tank.”

It’s no wonder that getting such machinery to work takes money, time, and—in the case of the V-22—lives. The Osprey’s worst crash came in April 2000, when a Marine pilot brought his aircraft down so steeply—dropping much faster than he was moving forward—that one rotor descended into its own downwash of turbulent air and stopped providing lift (a phenomenon called “vortex ring state” or “power settling”). Because the V-22’s test pilots had released the aircraft to operational Marine squadrons to try out new airborne tactics, the crash killed not only the pilot and co-pilot but 17 young riflemen riding in the back.

Whether the V-22’s unique design makes it more or less vulnerable to this particular kind of accident than a traditional two-rotor helicopter is an opaque technical debate. But another

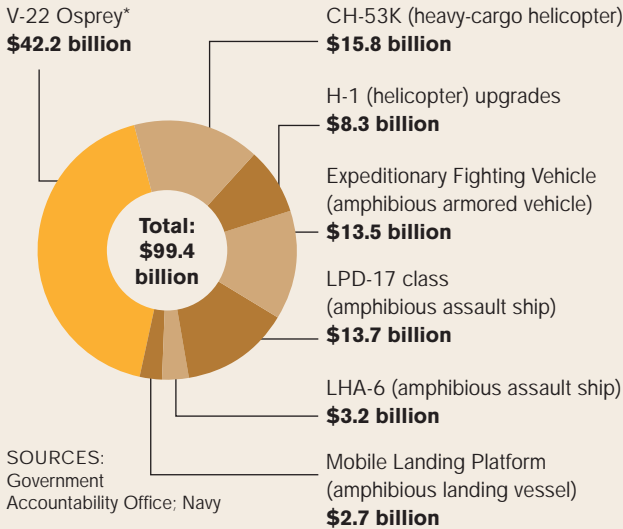


the militaries of nation-states. Hezbollah was able to fire a missile that crippled an Israeli corvette sailing 10 miles offshore.

Such weapons could make a traditional massed landing in the manner of Iwo Jima look like the Charge of the Light Brigade on water skis. The classic tactic is to bring Navy amphibious assault ships within sight of shore to disgorge the landing force, which struggles through the water to seize the miles of gently graded beach necessary to land a sizable force and its

■ Modernization Costs

The V-22 Osprey is the costliest Marine Corps modernization program, but money for new Navy vessels doesn't count against the Corps's budget even though the ships' sole purpose is to transport Marine forces.



■ **MAKING WAVES:** Prototypes of the Expeditionary Fighting Vehicle—a 40-ton armored vehicle that can practically water-ski to the shore—completed only three of a planned 20-plus test events in 2006.

er crash, in December 2000, began with a leak in the aircraft's hydraulics system that turned deadly because of a glitch in the flight software—and both of those systems are unusually complicated in order to handle the aircraft's transition between two modes of flight.

"The Osprey is a wonderful concept," said Philip Coyle, a former Pentagon chief of operational testing who oversaw the aircraft's trial flights, "but in practice it has introduced all kinds of new issues that I don't think the designers appreciated or even contemplated. It has lots of reliability failures. The Marine Corps will tell you that all new aircraft development programs have problems. Not like this, and not after 20 years of development."

Coyle cites news reports and a leaked Marine Corps memo on the Osprey's more recent problems: landing gear that failed to deploy, engines that wore out prematurely, and even a poorly sealed filter that clogged easily and will cost an estimated \$54,500 per aircraft to correct. The Marine Corps insists that fixes are in place or under way and cites figures showing that the Osprey's maintenance demands and breakdown rate compare favorably with the less complex but often geriatric helicopters it is slated to replace.

The Swimming Tank

The Expeditionary Fighting Vehicle, meanwhile, is years behind the V-22 in solving its mechanical problems. In a 2006 test, the main gun jammed, hydraulics leaked, electronics froze up, struts cracked, and the prototypes completed only three out of more than 20 planned events.

"I didn't have a smoking gun," said Marine Col. John Bryant, who took over as program manager in the demoralized days af-

ter the '06 test. "I didn't have one or two things I could fix. I had a very complex platform with failures spread throughout. There were a significant number of failures in the hydraulics system"—used to extend and retract the EFV's assorted flaps, bow plate, and tracks—"which is pretty much unique, but the single largest source of failures was the gun turret. We know how to make turrets."

In part, the Marine Corps was paying for decisions made earlier in the program, when budget cuts forced the Corps to focus on the critical challenge of getting a 40-ton armored vehicle to skim the water like a speedboat and skimp on the more-mundane reliability work. In part, the sheer complexity of the machine overwhelmed the management skills of the smallest military service, which historically relies on the Navy to develop its aircraft and on the Army to develop its ground vehicles.

"For the most part, in the past, the Marine Corps was not in the developmental business; they were in the procurement business," said Col. William Taylor, a Marine acquisition official widely credited with helping to overhaul the V-22 program. "We're in a transition phase where the pace of the Marine Corps's developmental efforts is slightly out ahead of their capabilities."

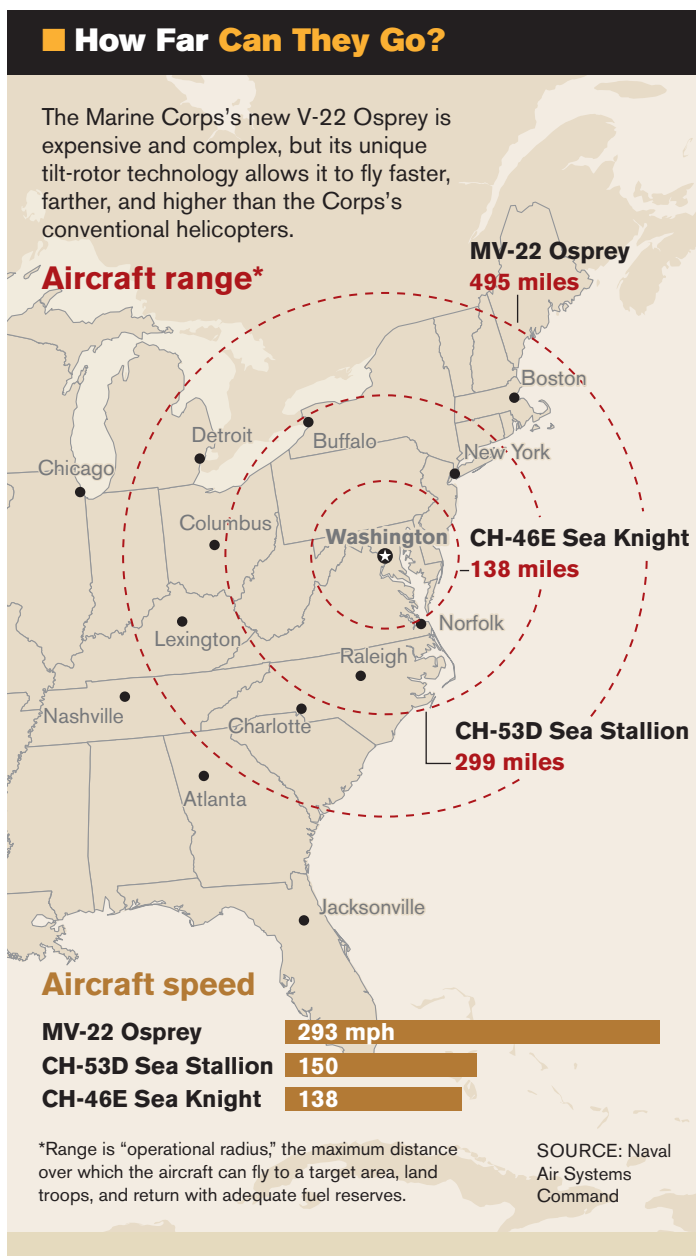
Since the 2006 testing flop, the Marine Corps insists it has gotten religion on reliability: The service accepted a four-year delay to do a top-to-bottom redesign and set up its first acquisition office, headed by Taylor, dedicated to overseeing ground-vehicle programs. The revamped EFV will go before the Pentagon's Defense Acquisition Board in late May; if it is approved, the Corps will issue contracts for a new set of prototypes.

Skepticism remains in powerful places. "We've seen a real embarrassment," said Rep. Henry Waxman, D-Calif., who as

chairman of the House Oversight and Government Reform Committee has made the EFV a particular target. "It's hard to be very confident after looking at the history of this tank."

Even the EFV's top supporters on the House Armed Services Committee, Mississippi Democrat Gene Taylor and Maryland Republican Roscoe Bartlett—who head the panel overseeing Marine procurement—have leaned hard on the Corps to consider major redesigns of either the hull or the engine to better protect the vehicle against the kind of improvised land mines that have proved so deadly in Iraq. "Everybody's committed to the vehicle," Bartlett told *National Journal*. "[But] the Marines are going to be living with this for 30 years, and we feel it's worth a little effort now to make sure we've got it as good as it can be."

So what does all of this effort, expense, and mechanical complexity actually do for marines in combat? And considering the Marine Corps's varied operations, exactly what kinds of conflict are the V-22 and the Expeditionary Fighting Vehicle suited for?



Seaborne Blitzkrieg

The V-22 Osprey was conceived at the height of the Cold War for sweeping, high-speed maneuvers from the sea. It entered service 25 years later in Iraq, an all-but-landlocked country where U.S. troops are slogging through a long, slow fight, one neighborhood or village at a time. Some of the expensive capabilities that the Osprey provides are simply irrelevant to Iraq—but by no means all.

The V-22's advantage comes from its hybrid flight. There's an old joke among aviators that helicopters don't actually fly, they just beat the air into submission. The ability to take off and land vertically, without the need for a runway, comes with a price: Helicopters perform poorly in long-distance flight compared with fixed-wing airplanes. By tilting its rotors at different angles, the V-22 can dispense with an airstrip and still fly faster, higher, and—because airplane-style flight is much more fuel-efficient—farther than conventional helicopters. (See map, this page.)

The Osprey's speed and range are arguably overkill for Iraq, where most missions are short-range hops in and out of the many U.S. bases. Its aptitude for altitude, however, has already proven useful: Insurgents have shot down conventional U.S. helicopters with machine guns, but the V-22 can climb to 13,000 feet, too high to hit with small-arms fire. Insurgents have occasionally used shoulder-fired anti-aircraft missiles, which can reach higher targets, but flying higher than conventional helicopters gives Osprey pilots more reaction time to drop flares and evade.

A rumored deployment of V-22s to Afghanistan, where U.S. troops are spread thin over vast distances and at high altitudes, should be a better test of the V-22's performance. But where the Osprey really shines is at even longer ranges. When the marines first deployed from their ships to Afghanistan in 2001, for example, they had to move in laborious stages from the Indian Ocean with the help of landing areas in Pakistan. With the V-22, the same force could have flown over Pakistani territory and hit the Taliban stronghold of Kandahar in two hours.

Over such distances, however, the V-22s can move only marine riflemen, their personal gear, and small loads of vital supplies. (Work is progressing on a mini-jeep that can fit into the Osprey as well.) The larger loads needed to sustain a robust fighting force—bulk supplies, artillery pieces, Humvees—still have to be slung under hulking heavy-lift helicopters, the CH-53s. The Corps is budgeting \$16 billion to buy a more powerful "K" version of this essential aircraft, but it will still be a helicopter, which means it will fly slower, lower, and at shorter ranges than the tilt-rotor V-22.

Farther Offshore

The heaviest Marine Corps equipment—tanks and other armored vehicles—cannot be delivered by air to a battle zone until infantry troops seize an airfield large enough to accommodate Air Force transports. If the Marines need armor in the first phase of an amphibious landing, it must come ashore either on vulnerable landing craft or under its own power—which is where the Expeditionary Fighting Vehicle comes in.

Like the Amtracs of World War II and the current Amphibious Assault Vehicle, the EFV can roll off the back of a Navy transport into the water, motor to the beach, roll onto land, and start fighting. But the Expeditionary Fighting Vehicle's mechanically complex transformation allows it to skim the waves instead of wallow through them, making it easily three times as fast as its predecessors. So rather than come within sight of



In exercises off the California coast, a CH-53 Sea Stallion heavy-lift helicopter, which the Marine Corps plans to build a new version of, gets ready to release an 11-meter rigid inflatable boat used in special operations.

shore to launch the current amphibious armor—thus exposing itself to attack—the fleet could deploy EFVs from over the horizon, 25 or 30 miles away.

But is that enough? “Twenty years ago”—when the Corps’s new tactics were conceived—“we were talking about 25 miles,” said one analyst who works for the Marine Corps. “The EFV is based on the idea that the enemy can’t reach out 25 miles. Now they can.” The C-802 cruise missile used in Hezbollah’s successful strike against the Israeli corvette in 2006, for example, has a maximum range of about 75 miles.

The Navy is so worried about shore-based missiles, mines, and swarms of motorboats armed with suicide bombs that it is developing a new class of “Littoral Combat Ship” specifically designed to venture into shallow waters while the rest of the fleet hangs back. (*See NJ*, 3/15/08, p. 26.) “Once the enemy gets guided weapons, the whole [scenario] becomes totally different,” analyst Work said. “You ain’t going to be operating 25 miles off the coast. You’ve got to operate a hundred miles offshore, and you’re going to use, primarily, aircraft.”

Even at 30-plus mph, the Expeditionary Fighting Vehicle cannot bring troops ashore from 100 miles out. The Navy has a massive hovercraft called the LCAC (Landing Craft, Air Cushion) that can carry one heavy tank or several armored cars over 200 miles of ocean at 45 miles an hour. But the hovercraft is effectively unarmored. Unlike the EFV, which can shrug off machine-gun fire—although not rocket-propelled grenades or large roadside bombs—the LCAC can come ashore only on beaches already secured.

A Narrow Niche

So how would marines get ashore? The V-22 Osprey can take off from a ship 100 miles out at sea and carry troops 400 miles inland; even the CH-53 can manage 200 miles beyond the shoreline in this scenario. (The CH-46 could reach only 40 miles inland, a major reason for its replacement by the V-22.) But any enemy with enough anti-ship weapons to keep the Navy 100 miles out could probably afford enough anti-aircraft missiles to shoot down incoming Marine Corps aircraft.

“You wouldn’t take a landing force and fly them into an integrated air defense without having done something about it first,” said Col. Glenn Walters, a senior aviation planner at Marine Corps headquarters. Cruise missiles, unmanned drones, and jet aircraft—not only from Navy and Marine Corps ships but also from Air Force bases on land—would have to savage an enemy’s network of radar and missile launchers first. Only then could tilt-rotor aircraft move through the gaps in enemy defenses—using their speed, range, and altitude to go around or over the remaining threats—to land riflemen in areas thoroughly “sanitized” by smart bombs.

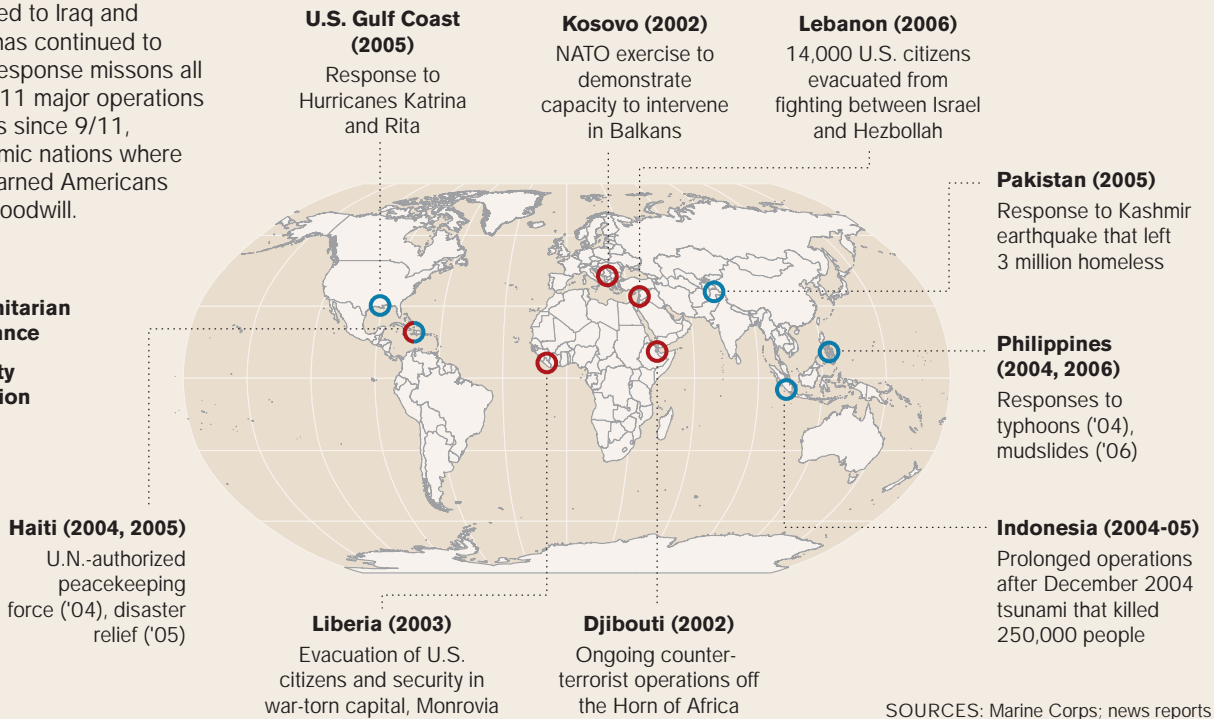
Those troops in turn could tear bigger holes in the defenses to let the CH-53s, flying lower and slower than the Ospreys, bring in heavier weapons. Thus reinforced, light infantry should be able to secure sites for the LCAC hovercraft to land heavy armor.

Where the Expeditionary Fighting Vehicle fits in such a scenario is not entirely clear. Unlike tilt-rotors, conventional helicopters, or even hovercraft, the EFV cannot be launched from

■ Marines Around the World

Even while the U.S. Marine Corps is heavily committed to Iraq and Afghanistan, it has continued to conduct rapid-response missions all over the world—11 major operations in nine countries since 9/11, including in Islamic nations where disaster relief earned Americans much-needed goodwill.

- Humanitarian assistance
- Security operation



ships 100 or 200 miles out at sea. Before the Navy would come in closer—even a small amphibious assault ship costs \$1 billion and carries 400 sailors, not counting marines—it would want enemy defenses thoroughly beaten down, which would not leave much for the EFV to fight.

The Expeditionary Fighting Vehicle's revolutionary technology ends up making it suitable for a fairly narrow combat niche: attacking enemies who have enough anti-ship weapons to force the fleet to stay 25—but not 100—miles offshore, and who have enough machine guns to keep the unarmored LCAC hovercraft from landing but not enough rocket-propelled grenades or improvised land mines to penetrate the moderately armored EFV. On top of that, the Marine Corps won't buy enough EFVs to attack such opponents on a large scale.

"Would you ever do a classic amphibious invasion with this? We're only going to have just over 500," said Roger Smith, the deputy assistant Navy secretary who oversees Marine expeditionary warfare procurements. Even the original plan to buy 1,000 or more would hardly allow the Corps to replicate Iwo Jima, Smith acknowledged: "We've got a completely different force."

The Old Is New Again

The Marine Corps, and the Navy for that matter, are simply smaller than they were during the Cold War, let alone World War II. Even the planned, highly expensive expansion of the Marine Corps from its current strength of 189,000 to 202,000 will only return the service to its 1980s peak. The Navy, meanwhile, has gone from having enough amphibious assault ships

to deploy three Marine brigades simultaneously—a fraction of the force at Inchon or Iwo Jima—to not quite enough to carry two. Two brigades happened to be the size of the Marine feint during the Gulf War.

"You could not stage an amphibious invasion of Iran. You couldn't stage an amphibious invasion of North Korea," said Baker, the former naval intelligence analyst. "God knows, you can't invade China."

In the context of the "small wars" and noncombat crises that have historically been the Marine Corps's forte, however, a two-brigade force looms larger. The Corps's plan for the "long war"—the Pentagon's term for the battle against terrorism after the Iraq conflict—calls for returning to the traditional rotation of small, flexible Marine Expeditionary Units standing by on Navy ships around the globe, augmented by new formations specially tailored for "security cooperation" missions: helping allied militaries to train, to hunt terrorists, and to respond to natural disasters. In the future, one January 2008 strategy pamphlet says bluntly, "there will be fewer high-spectrum combat operations that will require our marines to bring the full force of our combined arms capabilities to bear."

Such a future of small forces operating over long distances against relatively limited threats would offer many opportunities for the \$67 million V-22 Osprey. The Expeditionary Fighting Vehicle, relatively cheap at \$16 million apiece, would see less real-world use for the dollar. ■

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