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Report RS21338

Navy Ship-Deployments: New Approaches – Background and Issues for Congress

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Abstract. The Navy has implemented new kinds of naval formations, more flexible forward-deployment schedules, and a ship readiness plan (called the Fleet Response Plan, or FRP) for surge-deploying several aircraft carriers in a short period of time to respond to contingencies. The Navy has also forward-homeported additional ships, experimented with long-duration deployments with crew rotation (which the Navy calls Sea Swap), investigated multiple-crewing of ships, and is experimenting with a new forward-deployment concept called global fleet stations, or GFSs. These actions raise several potential issues for Congress.

CRS Report for Congress

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Summary

The Navy has implemented new kinds of naval formations, more flexible forward-deployment schedules, and a ship readiness plan (called the Fleet Response Plan, or FRP) for surge-deploying several aircraft carriers in a short period of time to respond to contingencies. The Navy has also forward-homeported additional ships, experimented with long-duration deployments with crew rotation (which the Navy calls Sea Swap), investigated multiple-crewing of ships, and is experimenting with a new forward-deployment concept called global fleet stations, or GFSs. These actions raise several potential issues for Congress. This report will be updated as events warrant.

Background

New Kinds of Naval Formations. The Navy previously organized itself into aircraft carrier battle groups (CVBGs) and Amphibious Ready Groups (ARGs). An ARG typically included 3 amphibious ships that together were capable of embarking a Marine Expeditionary Unit (MEU), which is a force of about 2,200 Marines, their ground-combat equipment, and an aircraft detachment. ARGs traditionally operated overseas in the company of CVBGs.

Navy officials more recently decided that the CVBG/ARG combination offered insufficient flexibility for deploying significant naval capability in several locations around the world at the same time. They also decided that with the increasing capabilities of Navy ships, naval formations other than the large CVBG/ARG combination could now be sufficient to perform certain missions. As a result, the Navy has implemented a new Global Concept of Operations (CONOPS) that reorganized the Navy into a larger number of independently deployable, strike-capable formations. The most significant change was the conversion of ARGs into independently deployable formations called Expeditionary Strike Groups (ESGs). An ESG is an ARG that has been reinforced with 3 surface combatants, an attack submarine carrying Tomahawk cruise missiles, and perhaps a land-based P-3 Orion long-range maritime patrol aircraft. The Global CONOPS also created independently deployable surface strike groups (SSGs), each consisting of a few surface combatants (most or all Tomahawk-armed), and independent operations by 4 Trident SSGN submarines that have been converted to carry

Tomahawks and special operations forces. CVBGs under the Global CONOPS plan were redesignated Carrier Strike Groups (CSGs). Implementing the Global CONOPS changed the Navy from a fleet with 11 independently deployable CVBG/ARG formations into one with 20 major independently deployable strike groups (11 CSGs and 9 ESGs) and additional independently deployable capabilities in the form of SSGs and Trident SSGNs.

More Flexible Forward-Deployment Schedules. The Navy's traditional means of maintaining forward-deployed presence had been the standard six-month deployment. Although the six-month limit on deployment length and the predictability of the rotational deployment schedule were considered key to the Navy's ability to maintain its forward deployments while meeting its personnel recruiting and retention goals, Navy officials concluded that the deterrent value of forward-deployed naval forces might be enhanced by making naval forward deployments more flexible and less predictable. Navy officials also concluded that orienting Navy readiness toward maintaining standard six-month deployments resulted in a fleet that offered insufficient flexibility for surging large numbers of naval forces in a short time to respond to major regional contingencies. As a result, although six-month (and now seven-month) deployments will still take place, the Navy has put more flexibility into its deployment plans by deploying some CSGs and ESGs for less than or more than six or seven months, as operational needs dictate.

Fleet Response Plan (FRP). The Navy has implemented an initiative called the Fleet Response Plan (FRP) that is intended to increase the Navy's ability to surge multiple formations in response to emergencies. Under the FRP, CSGs and ESGs that have just returned from deployments will be kept, for a time, on alert for potential short-notice redeployment if needed, and CSGs and ESGs that are approaching their next scheduled deployment will be maintained in a higher readiness status so that they, too, could be deployed on short notice, prior to their scheduled deployment dates. Implementing the FRP with 11 CSGs, the Navy says, permits the Navy to deploy up to 6 CSGs within 30 days, and an additional CSG within another 60 days after that. For this reason, the FRP is also referred to as "6+1." A February 2008 Government Accountability Office (GAO) report stated:

> The Navy has taken several positive steps toward implementing a sound management approach for FRP, but has not developed implementation goals, fully developed performance measures, or comprehensively assessed and identified the resources required to achieve FRP goals. GAO's prior work has shown that key elements of a sound management approach include: defining clear missions and desired outcomes, establishing implementation goals, measuring performance, and aligning activities with resources. The Navy has made progress in implementing FRP since GAO's prior reports. For example, it has established a goal of having three carrier strike groups deployed, three ready to deploy within 30 days of being ordered to do so, and one more within 90 days (referred to as 3+3+1). The Navy also has established a framework to set implementation goals for all forces, established some performance measures that are linked to the FRP phases, and begun efforts to identify needed resources. However, the Navy has not yet established a specific implementation goal for expeditionary strike groups and other forces. In addition, the Navy has not fully developed performance measures to enable it to assess whether carrier strike groups have achieved adequate readiness levels to deploy in support of the 3+3+1 goal. Moreover, the Navy has not fully identified the resources required to achieve FRP goals. Until the Navy's management approach fully incorporates the key

elements, the Navy may not be able to measure how well FRP is achieving its goals or develop budget requests based on the resources needed to achieve expected readiness levels.

The Navy has not fully considered the long-term risks and tradeoffs associated with the changes made as FRP has been implemented, such as carrier operational and maintenance cycles and force structure. The Navy has extended the intervals between carrier dry-dock maintenance periods from 6 years to 8 years and begun a test program that will extend some carrier dry-dock intervals to as much as 12 years, and it has lengthened operational cycles for carriers and their airwings to 32 months. GAO previously advocated that the Department of Defense adopt a risk management approach to aid in its decision making that includes assessing the risks of various courses of action. However, the Navy has not fully considered the long-term risks and tradeoffs of these recent changes because it has not performed a comprehensive assessment of how the changes, taken as a whole, might affect its ability to meet FRP goals and perform its missions. In addition, while the Navy has developed force structure plans that include two upcoming periods when the number of available aircraft carriers temporarily drops from 11 to 10, the plans included optimistic assumptions about the length of the gaps and the availability of existing carriers and did not fully analyze how the Navy would continue to meet FRP goals with fewer carriers. Until the Navy develops plans that use realistic assumptions and accurately identify the levels of risk the Navy is willing to accept during these gap periods, senior Navy leadership may not have the information it needs to make informed tradeoff decisions.[1]

Forward-Homeporting Additional Ships. Homeporting Navy ships in overseas locations, called forward homeporting, can reduce transit times between home port and operating area and thus permit the Navy to provide a larger number of ship days on station in overseas operating areas. The U.S. Navy's principal forward homeporting location is Japan, where the Navy since the early 1970s has forward homeported a CVBG (now a CSG) and an ARG (now the core of an ESG). The Navy traditionally has also forward-homeported a small number of other ships, such as fleet command ships and repair ships, in forward locations such as Italy and the U.S. territory of Guam. The Navy in recent years has forward-homeported four mine warfare ships at Bahrain in the Persian Gulf and three attack submarines at Guam.

Increasing the number of ships forward-homeported in the Pacific can improve the Navy's ability to respond to contingencies in locations such as the Korean Peninsula or the Taiwan Strait.[2] A March 2002 CBO report presented an option for homeporting as many as 11 attack submarines at Guam.[3] The final report of the 2005 Quadrennial Defense Review (QDR) directed the Navy to provide at least six aircraft carriers and 60% of its submarines in the Pacific. The Navy is implementing these two measures, which do not necessarily require additional forward homeporting. (They can be accomplished,

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[1] Government Accountability Office, *Military Readiness[:] Navy Is Making Progress Implementing Its Fleet Response Plan, but Has Not Fully Developed Goals, Measures, and Resource Needs*, GAO-08-264, February 2008, summary page.

[2] For further discussion, see CRS Report RL33153, *China Naval Modernization: Implications for U.S. Navy Capabilities — Background and Issues for Congress*, by Ronald O'Rourke.

[3] Congressional Budget Office, *Increasing the Mission Capability of the Attack Submarine Force*, March 2002.

for example, by moving ships from Atlantic Fleet home ports to San Diego or the Puget Sound area.)

Long-Duration Deployments with Crew Rotation (Sea Swap). The Navy in recent years has experimented with the concept of long-duration deployments with crew rotation. This concept, which the Navy calls Sea Swap, is another way to reduce the amount of time that deployed ships spend transiting to and from operating areas. Sea Swap involves deploying Navy ships overseas for periods such as 12, 18, or 24 months rather than 6 or 7 months, and rotating successive crews out to the ships for 6-month periods of duty. Sea Swap can reduce the number of ships the Navy needs to have in its inventory to maintain one such ship on station in an overseas operating area by 20% or more. Potential disadvantages of Sea Swap include extensive wear and tear on the deployed ship due to lengthy periods of time at sea, a reduced sense of crew "ownership" of a given ship (which might reduce a crew's incentive to keep the ship in good condition), and reduced opportunities for transit port calls (which have diplomatic value and are beneficial for recruiting and retention).

The Navy in recent years has conducted Sea Swap experiments with surface combatants and mine warfare ships that Navy officials have characterized as successful in terms of ship days on station, total costs, ship maintenance and material condition, and crew re-enlistment rates during deployment. In 2004, it was reported that a review of the Sea Swap experiment conducted by the Center for Naval Analyses found that although Sea Swap was successful in these terms, crew members participating in the experiment who were surveyed viewed the concept negatively and indicated they would be less likely to stay in the Navy if all deployments were conducted this way. The Navy made changes in later Sea Swap experiments to address issues that led to crew dissatisfaction, including lost liberty calls and increased training and work.

In 2005, Navy officials testified that applying Sea Swap somewhat widely throughout the fleet could help permit the fleet to be reduced from a then-planned range of 290 to 375 ships down to a range of 260 to 325 ships.[4] More recently, Navy officials have expressed less enthusiasm for extending Sea Swap beyond surface combatants. A July 2006 press article reported that the Navy may limit Sea Swap in the surface fleet to smaller combatants such as patrol craft, Littoral Combat Ships (LCSs), and frigates.[5] The Navy plans to use Sea Swap to keep two of its four SSGNs continuously deployed.[6] A May 2008 GAO report stated:

> Rotational crewing represents a transformational cultural change for the Navy. While the Navy has provided leadership in some rotational crewing programs, the Navy has not fully established a comprehensive management approach to coordinate and integrate rotational crewing efforts across the department and among various

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[4] See, for example, Statement of Admiral Vernon Clark, USN, Chief of Naval Operations, Before the Senate Armed Services Committee, February 10, 2005, pp. 17-19.

[5] Jack Dorsey, "Despite Success, Navy Unlikely To Continue Crew Swap Effort With Destroyers," *Norfolk Virginian-Pilot*, July 13, 2006.

[6] For further discussion of this and other aspects of the SSGN program, see CRS Report RS21007, *Navy Trident Submarine Conversion (SSGN) Program: Background and Issues for Congress*, by Ronald O'Rourke

types of ships.... The Navy has not assigned clear leadership and accountability for rotational crewing or designated an implementation team to ensure that rotational crewing receives the attention necessary to be effective. Without a comprehensive management approach, the Navy may not be able to lead a successful transformation of its crewing culture.

The Navy has promulgated crew exchange instructions for some types of ships that have provided some specific guidance and increased accountability. However, the Navy has not developed an overarching instruction that provides high-level guidance for rotational crewing initiatives and it has not consistently addressed rotational crewing in individual ship-class concepts of operations....

The Navy has conducted some analyses of rotational crewing; however, it has not developed a systematic method for analyzing, assessing and reporting findings on the potential for rotational crewing on current and future ships. Despite using a comprehensive data-collection and analysis plan in the Atlantic Fleet Guided Missile Destroyer Sea Swap, the Navy has not developed a standardized data-collection plan that would be used to analyze all types of rotational crewing, and life-cycle costs of rotational crewing alternatives have not been evaluated. The Navy has also not adequately assessed rotational crewing options for future ships. As new ships are in development, DOD guidance requires that an analysis of alternatives be completed. These analyses generally include an evaluation of the operational effectiveness and estimated costs of alternatives. In recent surface ship acquisitions, the Navy has not consistently assessed rotational crewing options. In the absence of this, cost-effective force structure assessments are incomplete and the Navy does not have a complete picture of the number of ships it needs to acquire.

The Navy has collected and disseminated lessons learned from some rotational crewing experiences; however, some ship communities have relied on informal processes. The Atlantic Sea Swap initiative used a systematic process to capture lessons learned. However, in other ship communities the actions were not systematic and did not use the Navy Lessons Learned System. By not systematically recording and sharing lessons learned from rotational crewing efforts, the Navy risks repeating mistakes and could miss opportunities to more effectively implement crew rotations.[7]

Multiple Crewing. Another strategy for increasing the percentage of time that Navy ships can be deployed is multiple crewing, which involves maintaining an average of more than one crew for each Navy ship. Potential versions include having two crews for each ship (dual crewing), 3 crews for every 2 ships, 4 crews for every 3 ships, 5 crews for every 4 ships, or other combinations, such as 8 crews for every 5 ships. The most basic version of Sea Swap maintains an average of one crew for each ship in inventory, but Sea Swap could be combined with multiple crewing. For many years, the Navy's nuclear-powered ballistic missile submarines (SSBNs) have been operated successfully with dual crews. The above-mentioned March 2002 CBO report presented the option of applying multiple crewing to the attack submarine fleet. Potential disadvantages of multiple crewing include the costs of recruiting, training, and retaining additional crews, the difficulty of achieving fully realistic training using land-based simulators (whose use would be more necessary because a given crew would not always have access to a ship

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[7] Government Accountability Office, *Force Structure[:] Ship Rotational Crewing Initiatives Would Benefit from Top-Level Leadership, Navy-wide Guidance, Comprehensive Analysis, and Improved Lessons-Learned Sharing*, GAO-08-418, May 2008, summary page.

for training), a reduced sense of crew "ownership" of a given ship, and increased wear and tear on the ship due to more intensive use of the ship at sea (which can reduce ship life). The Navy plans to use dual crewing for its first few LCSs, and then switch the LCS fleet to a "4-3-1" crewing strategy when the total number of LCSs grows to a larger number. Under the 4-3-1 plan, four crews would be used for every three LCSs to keep one of those three LCSs continuously deployed.[8]

Global Fleet Stations (GFSs). The Navy is experimenting with a concept, first announced in 2006, called global fleet stations, or GFSs. The core of a GFS is an amphibious ship or high-speed sealift ship that is forward deployed to a region of interest. Smaller Navy ships, such as LCSs, might then operate in conjunction with this core ship to perform various missions. The Navy in 2007 is conducting six-month pilot GFS in the Caribbean built around the high-speed sealift ship Swift, and plans to follow this in late 2007 with a second, year-long, GFS in the Gulf of Guinea, off the western coast of Africa, that is to be built around an amphibious ship.[9] The Navy states that the GFS concept

> offers a means to increase regional maritime security through the cooperative efforts of joint, inter-agency, and multinational partners, as well as Non-Governmental Organizations.... From its sea base, each GFS would serve as a self-contained headquarters for regional operations with the capacity to repair and service all ships, small craft, and aircraft assigned. Additionally, the GFS might provide classroom space, limited medical facilities, an information fusion center, and some combat service support capability. The GFS concept provides a leveraged, high-yield sea based option that achieves a persistent presence in support of national objectives. Additionally, it complements more traditional CSG/ESG training and deployment cycles.[10]

Issues for Congress

Potential oversight issues for Congress include the following: How might the changes discussed above affected the planned size and structure of the fleet?[11] For what kinds of ships should Navy use Sea Swap or multiple crewing? How will FRP and the forward-homeporting of additional ships affect the distribution of Navy ship overhaul and repair work? How many additional ships, of what types, should the Navy forward homeport in the Pacific, and precisely where?

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[8] For more on the LCS program, see CRS Report RL33741, *Navy Littoral Combat Ship (LCS) Program: Oversight Issues and Options for Congress*, by Ronald O'Rourke.

[9] Cynthia Clark, "Global Fleet Station Pilot One Step Closer With Arrival of Swift," *Navy Newsstand*, April 9, 2007; Andrew Scutro, "Navy Tours To Test Global Feet Concept," *Navy Times*, April 1, 2007; Chris Johnson, "Stavridis Confirms High-Speed Vessel Will Serve As Southcom GFS," *Inside the Navy*, March 26, 2007; Chris Johnson, "Stavridis Outlines Plan For Global Fleet Station In Southcom," *Inside the Navy*, February 5, 2007.

[10] U.S. Department of the Navy, *Naval Operations Concept 2006*, Washington, 2006, pp. 30-31.

[11] For more on the Navy's proposed 313-ship fleet, see CRS Report RL32665, *Navy Force Structure and Shipbuilding Plans: Background and Issues for Congress*, by Ronald O'Rourke.