# The Turkish Navy's Quest for Modernization

by

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## INTRODUCTION

The Turkish Navy has undergone a renaissance in recent years, and the Navy Directorate (NAD) of ODC Turkey has played a major role in this modernization program. The construction of new frigates and submarines, and the acquisition of ex-Knox class frigates obtained through lease from the United States, have virtually remade the Turkish Navy into a modern force, capable of extended operations in support of national and NATO missions, and in support of these vessels, Turkey has often sought the quality, reliability, supportability, and advanced technology of U.S. systems through FMS cases managed by ODC Turkey. Future years will see continued modernization through new construction, possible leases of former U.S. ships, upgrades of existing ships, and continuing support for all systems, whether or not from U. S. sources.

With four U.S. Navy officers, a Captain, Commander, and two Lieutenant Commanders, NAD manages over 250 FMS cases worth almost one billion dollars. In addition to maintaining close liaison with the Turkish Navy, NAD works with the U.S. Naval Air and Sea Systems Commands, the Naval Education and Training Security Assistance Field Activity, the American Embassy in Ankara, many private contractors, and of course, the Navy International Programs Office in Washington, D.C. , to assist Turkey in the modernization of its naval forces.

## THE MODERNIZATION PROGRAM

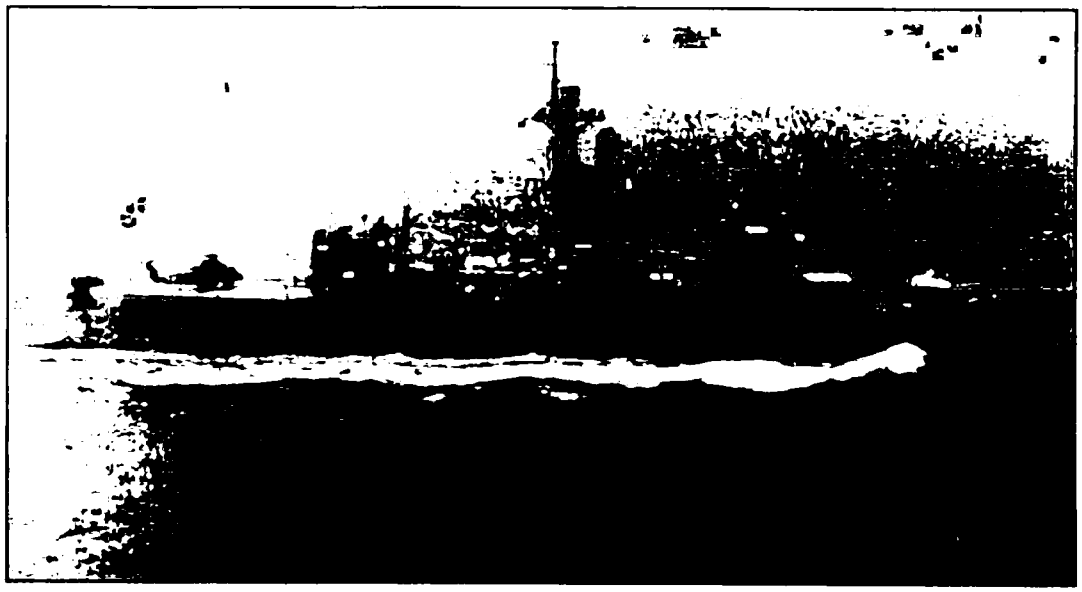
The Turkish Navy commenced its modernization program in 1985 with the construction of MEKO 200 class frigates to complement ex-Carpenter and ex-Gearing class destroyers received from the United States. Although these frigates are co-produced with a German shipyard, they incorporate significant combat systems supplied through FMS channels from U.S. contractors. These systems include the main gun, all missiles, communications and navigation systems, and major sensors. Commencing with frigates number four and five, the Turkish Navy added U.S. manufactured LM2500 gas turbine engines; and just recently, FMS contracts were signed to include an improved vertical launched anti-air missile on frigates number seven and eight, which began construction in 1994. NAD has provided comprehensive management and coordination with naval systems commands and contractors in the U.S. for this frigate construction program, which alone comprises 46 FMS cases worth over $334 million.

As Turkey's ex-Gearing and ex-Carpenter class destroyers aged and their maintenance costs grew, the Turkish Navy began looking for replacements. Perry class frigates from the U. S. Navy were preferred because of their modern combat systems and gas turbine power plants; but since these ships were not yet available for transfer, in late 1992, Turkey asked for eight excess Knox class frigates, and committed $300 million for their lease and outfitting costs. A transfer of this magnitude could be expected to take a year or more, with the requisite training of hundreds of sailors in U.S. Navy schools, weapons allocations, and logistics requirements, but the Turkish Navy asked for delivery of the first four in only nine months. NAD, Navy IPO, and the USN systems commands established 13 FMS cases, covering all aspects of the transfer including training, supply support, weapons, post-transfer maintenance, and Turkish shipyard improve-

ments. Close liaison between all activities enabled the U.S. Navy to transfer the ships two months early.

Gearing class destroyers are being replaced by Knox class frigates.

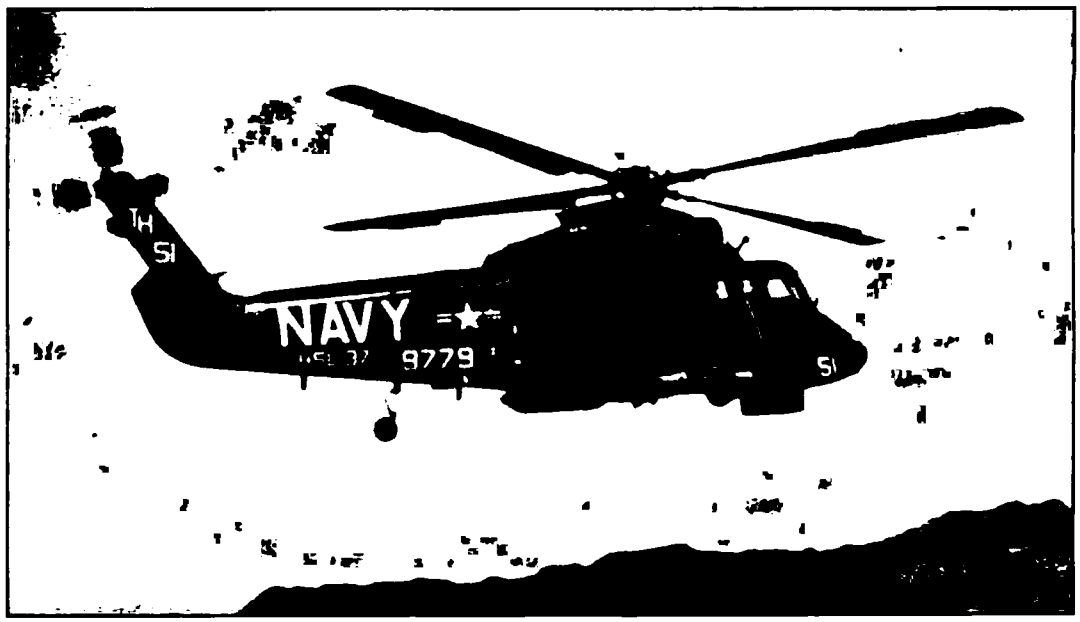
Having accomplished the timely delivery of the first four frigates, NAD and the U.S. Navy were soon challenged again by the Turkish Navy to transfer the second set of four frigates in six months. Again, NAD established the necessary contacts and coordinated a smooth transfer which culminated in a dedication ceremony for all eight frigates at the main Turkish naval base at Golcuk in July 1994, which was addressed by both the Turkish President and Prime Minister. Since their turnover, the ships have operated safely and reliably, and have significantly increased Turkish Navy capabilities.



Knox class frigate underway conducting operations
with a SH-2 Sea Sprite Helicopter.

## MAINTENANCE AND LOGISTICS

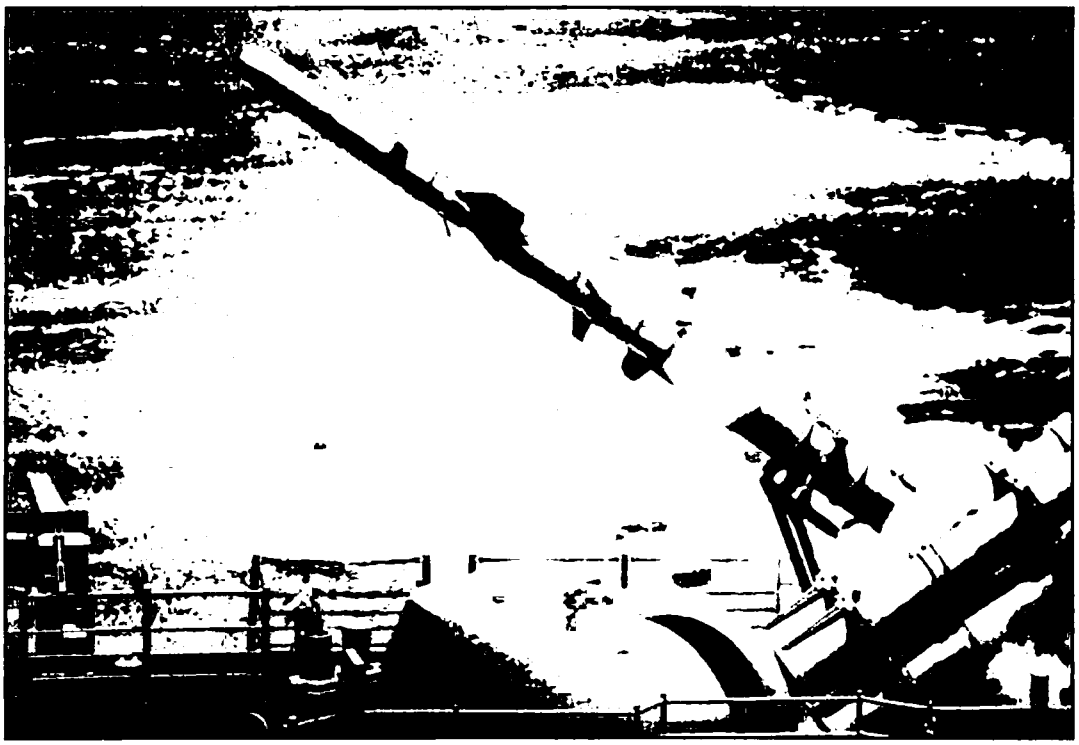
With eight ex-Knox class frigates well integrated and operating within their Navy, Turkish Naval Forces Command (TNFC) has sought the help and advice of NAD in the maintenance and upgrade of the ships. On the maintenance side, NAD has coordinated several site surveys and assistance team visits to Turkish shipyards and is currently assisting with boiler inspections for the Knox class frigates. These visits include surveys of calibration facilities and circuit card repair facilities, as well as a review of capabilities required specifically for the support of Knox class frigates. To assist with the upgrade of Knox capabilities, NAD is coordinating the transfer of 14 excess U.S. Navy SH-2F Sea Sprite helicopters and associated support equipment. The addition of these helicopters to the aviation arm of the Turkish Navy will greatly enhance capabilities in this area. Recent initiatives by NAD have significantly lowered the transfer cost of these aircraft and equipment to further assist the Turkish Navy.




SH-2 Sea Sprite Anti-submarine Warfare Helicopter.

The great amount of U.S. supplied equipment in the Turkish Navy has made supply support and weapons procurement and upgrade for this equipment a big part of the NAD effort. In supply support, NAD manages 49 FMS cases worth $219 million and has been able to respond to the supply needs of several World War II vintage ships and submarines still operating in the Turkish Navy. While much of the oversight of parts procurement and management is handled by the Turkish naval supply system, whose procedures closely follow the U.S. Navy system, initiatives by NAD to provide upgrades to this system, including an International Logistic Communication System (ILCS) installation at the Turkish Navy Supply Center, have allowed NAD to reduce manning in this area without any adverse effect on service to the Turkish Navy. In the area of weapons procurement and upgrade, NAD manages 69 FMS cases worth $208.4 million for the delivery and upgrade of Harpoon anti-ship missiles, Seasparrow air defense missiles, and MK 46 torpedoes. The biggest of these programs, Harpoon missiles, encompasses 44 FMS cases totaling $146.6 million and includes both weapons and systems installations on several classes of ships including MEKO frigates, AY class submarines, and fast patrol boats. Also included in these cases is training for both operators and maintenance personnel. To date this program has delivered 84 missiles with another 54 missiles planned for procurement. Likewise, the Seasparrow and MK 46

programs are integral components of the Turkish Navy and have resulted in the delivery of 131 Seasparrow missiles and 78 MK 46 torpedoes.



Harpoon missile, standard on many Turkish ships and submarines.

The Turkish Navy, with the help of NAD, has also made extensive use of the provisions of the Southern Region Amendment (SRA), which provides for the transfer of excess U.S. defense equipment free of charge, to further modernization goals. The SH-2F Sea Sprite helicopter transfers previously discussed in this article are being accomplished through SRA. The Turkish Navy has also received one non-operational Knox class frigate under this program, and will receive another in 1995. These ships will be utilized for spare parts to support the eight operational Knox frigates in the Turkish fleet. The introduction of the Knox frigates has also placed new demands on training facilities within Turkey. To assist in modernization in this area, the Turkish Navy also has requested boiler training simulators and Close-in Weapon System (CIWS) trainers to be furnished through the SRA.

## CONCLUSION

The ODC Turkey Navy Directorate will continue to play an important role in future modernization for the Turkish Navy with several initiatives already underway. These include the transfer of excess training devices; the direct commercial sale of S-70B Seahawk helicopters; co-production of several ship classes, including frigates, patrol boats, and mine warfare ships; the installation of a submarine satellite communication system; oversight of an Oceanographic Data Exchange Agreement (DEA) with the U.S. Navy; and continued upgrades for equipment already delivered. The high level of cooperation between the U.S. Navy, ODC Turkey Navy Directorate, and the Turkish Navy has enabled great improvements in Turkey's maritime capabilities; with sustained efforts, further improvements will occur.

## ABOUT THE AUTHORS

CAPT George B. Allison, a surface warfare officer, is Chief of the Navy Directorate. He commanded the frigate USS OUELLET (FF-1077) and has been selected for major command of the Naval Computer and Telecommunications Area Master Station, Western Pacific.

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