"independent" naval activities will be revived at the Helsinki Follow-Up Meeting of the CSCE in 1992. The rapid deterioration of the Soviet Union's economy and confusion within its military after the unsuccessful coup attempt of August 1991 may suggest to some that the era of East-West competition at sea is over, further obviating the need for naval CSBMs. Nevertheless, large standing naval forces remain on both sides of the former East-West divide. Given their continued existence, as well as the tremendous uncertainty which remains regarding the future prospects and direction of the USSR's successor republics, there may yet be a place for such measures. Moreover, there is no reason why CSBMs originally conceived in the context of European or East-West military competition could not be applied, with appropriate modifications, to various other regions of the world where tensions remain high and indigenous naval capabilities continue to grow.

## NAVAL TACTICAL DENUCLEARIZATION

Calls for a total ban on naval tactical nuclear weapons have come from many quarters. Some have argued that such a ban would benefit the West by removing one cause of continuing friction between the US and many of its allies, who resented the former's rigid adherence to an official policy of refusing to confirm or deny the presence of nuclear weapons aboard its visiting warships or at its overseas military installations. In addition, tactical nuclear weapons were judged to be ill-suited for the traditional naval mission of signalling resolve in a crisis; were said to encourage a pre-emptive attack by the other side; and were feared by many naval officers to hamper the use of their forces in more traditional, conventional scenarios. The actual detonation of such weapons in war, it was feared, would severely disrupt electronic sensors in which the US otherwise maintained a comparative advantage. Some critics were concerned over the command and control of such weapons at sea, since they were not provided with the same kind of permissive action links (PALs) to prevent unauthorized or inadvertent launch as were their land-based counterparts. Finally, the increased accuracy and overall lethality of new, precision-guided conventional weapons were rendering naval tactical nuclear weapons unnecessary for many of their traditional missions.

Perhaps the most persuasive case against naval tactical nuclear weapons, however, was that made by President Reagan's senior arms control adviser (and former Secretary of the Navy) Paul Nitze, who in April 1988, called for a ban on the grounds that such weapons were a "great equalizer" for the Soviet Navy. The US, he

warned, risked losing its otherwise unassailable overall superiority at sea if a conflict escalated from the conventional to the nuclear level, where a "single shot" from even a relatively small platform could destroy a capital ship (of which the US had many more) or disrupt a convoy or task force.

Such fears appeared confirmed by the fact that the Soviet Navy traditionally maintained a much larger number of nuclear-capable naval platforms, as well as a wider array (and higher number) of naval tactical nuclear weapons (including nuclear anti-ship missiles and nuclear torpedoes, which the US does not have). The Soviet force-structure and its training indicated a reliance on nuclear weapons for a quick and decisive engagement, rather than the protracted conventional war anticipated by the US. Nuclear weapons at sea were more suited for the Soviet Navy's primary mission of "sea denial," than for the Western navies' predominant task of "sea control." Furthermore, when long-range, land-attack SLCMs were included under the category of "naval tactical nuclear weapons," many strategic analysts argued that the US was far more vulnerable to attack from such systems in the long run, despite its current technological advantages, given the higher concentration of population, industry and military targets in its coastal areas.

In spite of this, it was the USSR that first proposed a ban on tactical nuclear weapons at sea, and the US Navy that vigorously opposed it. However, it was reported in April 1989, that the US Navy had decided to unilaterally phase out, without replacement, three of its shortrange tactical nuclear weapon systems — the ASROC and SUBROC anti-submarine weapons, and the Terrier anti-aircraft missile. These constituted about one-third of its non-strategic naval nuclear weapons. In November 1989, the US Energy Department confirmed that the nuclear warheads from two of the three systems to be phased out had already been retired, while retirement of the third was scheduled for the end of September 1990. Yet the US Navy insisted on carrying this out quietly, without any fanfare or attempt to gain negotiating leverage over the Soviet Union, apparently for fear of compromising its hard-line stance on naval arms control, and to retain some flexibility with regard to possible future deployments.

As late as April 1991, a Pentagon report to Congress argued that limits or a ban on naval tactical nuclear weapons were totally unacceptable. The reasons were many: difficulties of verification; the need to deter nuclear attacks from the shore; naval tactical nuclear weapons' contribution to the doctrine of "flexible