

with a proposed ceiling of 7,500 on nuclear warheads. Of the 7,500 warheads, no more than 5,500 were to be carried on ballistic missiles and 2,000 (up from 1,500) on ALCMs. SLCMs were not included.

The Reykjavik Summit

This series of proposals had brought the ceilings and numbers of the two sides considerably closer together. President Reagan and General Secretary Gorbachev met to discuss the proposals at Reykjavik in October 1986. The two leaders agreed on reductions to a ceiling of 1,600 launchers and 6,000 warheads, including ALCMs, over a period of five years.

The SLCM issue was discussed again and the two sides agreed that SLCMs would be dealt with outside of the agreed warhead and launcher ceilings. The US declared itself willing to discuss SLCMs if a reliable means of verification could be found.

The attention-getting topic at Reykjavik was the discussion of the complete elimination of nuclear weapons. President Reagan maintained that he was in favour of the complete elimination of ballistic missiles only. Cruise missiles and bombers should remain and ballistic missile defences should be permitted. His position reflected his stated desire to move to a world in which the ballistic missile threat is nullified and the air-breathing missiles and carriers are enhanced. The Soviet Union, with its smaller bomber and cruise missile force, advocated the complete elimination of all nuclear weapons.

On 31 July 1987 the Soviet Union presented a new draft treaty at the negotiations which included a limit of 400 on cruise missiles launched from submarines and with ranges in excess of 600 kilometres. The Soviets maintained that limiting the deployment of SLCMs to certain classes of submarines would enhance verification. Any SLCMs found on any other kind of submarine or on a surface ship would be an automatic violation.

The Washington Summit

At the December 1987 summit Reagan and Gorbachev reiterated their desire to pursue limits on long-range SLCMs which could be verified by a combination of methods, including on-site inspection. The number of ALCMs to be attributed to each bomber was discussed but, as with SALT II, this question continued to be one of the final sticking points. Methods for distinguishing conventional from nuclear ALCMs also remained to be negotiated.

The summit communiqué stated that a ceiling of 4,900 on ballistic missile warheads had been agreed. Since the overall limit remained 6,000 warheads this means that both sides could choose to deploy at least 1,100 on ALCMs. Soviet acceptance of a separation of the limits on ballistic missile warheads from ALCMs marked a dis-

tinct change from previous Soviet positions and was a formal signal of Soviet willingness to restructure their triad and build up their bomber force.

During the first round of negotiations in 1988 the Soviet Union proposed a limit of 600 on conventionally armed SLCMs and added that one type of surface ship could be allowed to carry nuclear SLCMs in addition to the two classes of submarines previously proposed.

Verification

In the absence of significant limits, SLCMs represent a serious opportunity for the expansion of strategic nuclear arsenals above and beyond the numbers under consideration at Geneva. Both sides are proceeding with long- and short-range SLCMs.

In the early stages of development of the cruise missile there was considerable concern that the small size of the missile would make it very difficult to verify in an arms control agreement. In fact, there was less cause for concern than initially thought. Arms control agreements have to date dealt successfully with ALCMs and GLCMs. However, the problems of verifying limits on SLCMs are enormous. There are no obvious differences between nuclear and conventional SLCMs, or between short-range and long-range SLCMs. Other cruise missiles, ALCMs or GLCMs, could be converted relatively easily into SLCMs (an option considered by the US for the GLCMs during the INF negotiations). It is also difficult to count SLCMs. There is no direct correspondence between the launching facilities of a ship or submarine and the number of SLCMs it might have on it.

Some counting rules might yet be developed and the Soviet Union continues to propose possible verification methods. These proposals include inspections and the use of a device to determine whether a ship is carrying nuclear weapons. Whatever the counting rules, highly intrusive verification will be necessary and may prove difficult to negotiate.

CONCLUSION

Long-range cruise missiles were initially developed by the US as a bargaining chip for SALT II. Although the Soviet Union stated its willingness to limit cruise missiles, by the time the dispute over the Vladivostok accord had settled down, the ALCM was seen by the US military as too valuable to bargain away. The roles then became reversed and it became the aim of US negotiators to protect the cruise missile.

The SLCM was initially more militarily successful as a short-range missile and the long-range version has been developed more slowly by both sides. Long-range SLCMs now have the potential to become the fourth leg of strategic nuclear forces. Soviet pressure on this issue indicates that they are eager to limit SLCM deployments. Serious limitations may therefore be possible. However,