
Conclusion

This paper examined various conventional arms reduction proposals presented over the past four years, a period during which the Mutual and Balanced Force Reduction (MBFR) talks gradually yielded to the Conventional Armed Forces in Europe (CFE) negotiations. Although many proposals stressed the importance of an effective verification regime, the NATO and WTO proposals tabled in the third round of the CFE negotiations were the first to discuss in some detail the measures needed in the regime.

Following a survey of overhead surveillance technologies, the paper examined system effectiveness in terms of deterring a militarily significant inadvertent treaty violation. A model derived from the binomial probability distribution was introduced to illustrate several factors that must be considered as the operating parameters for a multilateral aerial monitoring system are negotiated. Specifically, the model demonstrated that to increase overall detection probabilities, the inspector should:

- operate monitoring systems of greater sophistication and/or efficiency (increase $p(i)$);
- increase the "look" rate for the systems (increase r);
- operate monitoring systems with wider search swaths, i.e., satellite systems, for wide-area surveillance (increase s);
- Assign aerial systems to coverage of critical sub-regions (reduce m); and
- Increase the search interval length (increase t).

Finally, the paper asked the question "How much is enough?" when considering the detection standard needed to reinforce treaty compliance among those already committed to the agreement. In many instances, the demands placed upon the system far exceed what is necessary to encourage treaty discipline among the participants. Accepting that the participants do not want to jeopardize the stability and certainty of the treaty environment through their own negligent actions, the standards for system operation can be relaxed. Extensive observation of the coverage area should continue as the monitoring function itself carries with it the greatest deterrent effect. However, there is greater latitude in committing financial, technical and human resources to later stages of the verification process, especially data analysis, while preserving the standards sufficient for routine deterrence.