

The INF Treaty and Beyond

(Testimony at the Joint Hearings on Ratification of the Intermediate-Nuclear Forces Treaty of the Commissions on Foreign Relations of the Supreme Soviet Houses of Soviets and of Nationalities, the Kremlin, 11 AM, 24 March 1988)

Frank von Hippel, Chairman  
Federation of American Scientists' Fund

and

Professor of Public and International Affairs  
Princeton University

It is a great honor to be the first U.S. citizen to be invited to testify in a public hearing by a Commission of the Supreme Soviet. You could not have chosen a more appropriate subject for a public hearing. Reducing the nuclear threat concerns everyone and it is only with broad public understanding and support that such reductions can be achieved. And the fact that you have invited a U.S. citizen to testify on this subject is a dramatic manifestation of your understanding that we are faced with a common threat which we can only remove by cooperation and sharing of our best ideas.

I speak here today as the chairman of the research arm of the Federation of American Scientists (FAS). The Federation was established in 1946 by some of the original U.S. nuclear scientists in order to educate the U.S. government and people about the dangers of nuclear weapons. Its membership is currently about 4000 natural and social scientists including 40 Nobel Prize winners.

I would like briefly to present my views on three subjects:

- i) The significance of the INF Treaty as a landmark in the worldwide development of the understanding that security can only be achieved through cooperation -- what is called here "the new thinking;"
- ii) The significance of the Treaty in laying a basis for drastic nuclear and conventional arms reductions; and
- iii) Some of the next steps that will be required to make drastic reductions actually achievable.



## The INF Treaty as a Landmark on the Path to Common Security

The INF Treaty is a triumph for those throughout the world who have worked to strengthen the new thinking.

- o The U.S. "nuclear weapons freeze" movement and the Western European anti-nuclear weapons movement had a major effect in the early 1980's in stimulating concern among ordinary people about the dangers of trying to achieve security by treating nuclear weapons as if they could be used like traditional weapons -- for what I will call "nuclear warfighting."
- o The Gorbachev leadership in the Soviet Union has continued the movement toward a more cooperative approach to achieving security by its unilateral testing moratorium and its willingness to eliminate entire classes of nuclear-warfighting systems.
- o Finally, Ronald Reagan, who has opposed all previous arms control agreements, showed, when he signed the INF Treaty, that he now believes the security of the United States can be increased by a nuclear arms reduction agreement with the USSR. This broadens the political base in the U.S. for future arms reduction agreements.

## The Significance of the INF Treaty in Laying a Basis for Drastic Nuclear Reductions

The elimination in the INF Treaty of an entire class of nuclear weapons systems is an important precedent. Intermediate-range missiles are a subclass of the so-called "tactical nuclear weapons" -- weapons such as nuclear artillery shells and short-range nuclear missiles that are available for virtually all U.S. and Soviet Army units, fighting ships and fighting aircraft. Because of their wide distribution, these weapons would be difficult to control in even a small conflict between U.S. and Soviet forces. They are also justified by nuclear-warfighting ideas that the new thinking recognizes as insane. I would argue that virtually all of the tactical nuclear weapons should be eliminated. There are about 10,000 such weapons on each side. Ballistic missiles carrying multiple warheads should also be eliminated since they too are primarily justified by nuclear warfighting ideas.

The abolition of warfighting strategic and tactical nuclear weapons would make possible the reduction of the nuclear arsenals on both sides to about one tenth their current size -- 1000-2000 nuclear warheads each. This would still be enough so that each side would know that it could be suicidal to attack the other. But they would not support the fantastic nuclear warfighting ideas that have grown up with the current nuclear arsenals, which contain more than 20,000 nuclear warheads on each side.

The unique on-site verification procedures of the INF Treaty also represent an important precedent since such methods will be required to verify future reductions of strategic nuclear missiles and limits on small



nuclear weapons systems such as submarine-launched cruise missiles, and for the verification of conventional arms reductions as well.

### The Next Steps Toward Drastic Reductions

The INF Treaty is important because it demonstrates the increasing strength of the idea of cooperative approaches to security in both our countries and because it establishes important precedents for future arms reduction agreements. However, if we are to achieve truly drastic reductions of nuclear arms, we must control not only the carriers of the nuclear warheads but also the nuclear warheads themselves.

Until we eliminate warheads as well as missiles, the nuclear explosives will remain available for transfer to other missiles not covered by the limitations -- for example, shorter-range air-launched missiles. If we follow this path, our two countries will simply be channeling the arms race into new directions rather than reducing the sizes of our nuclear arsenals.

It is therefore important that, in future agreements, we control nuclear warheads as well as missiles. Such an extended control system would include:

- o A halt to the growth of the amounts of fissile materials available for nuclear weapons,
- o The dismantlement of nuclear warheads and the prevention of the reuse of the materials recovered from them for new nuclear weapons, and
- o The establishment of a verifiable accounting system for nuclear warheads and nuclear weapons materials.

A Halt in the Production of New Nuclear-Weapons Materials. Without plutonium or highly-enriched uranium, it is impossible to make a nuclear weapon. This is why the United States and Soviet Union cooperated in the 1960's and 1970's to persuade about 100 countries -- including the Federal German Republic and Japan -- to sign the Non-Proliferation Treaty. These countries have all accepted the safeguards of the International Atomic Energy Agency on their nuclear facilities to verify that no fissile materials are being diverted from them to make nuclear weapons.

The United States and Soviet Union should now join these other countries in a similar verifiable agreement not to produce new nuclear weapons materials and then to proceed to dismantle most existing warheads and convert their fissile materials to safeguarded nonweapons purposes. If we do not, it is possible that, when the Non-Proliferation Treaty expires in 1995, the nonnuclear-weapon states may not agree to its renewal. If we are serious about reductions, we certainly do not need to add to the enormous stockpiles of nuclear-weapons-useable fissile materials that we have already produced.



Recently, a number of important U.S. arms-control and environmental groups formed a coalition, the "Plutonium Challenge," in support of a U.S.-Soviet agreement to halt production of plutonium and highly-enriched uranium for weapons. The environmental groups joined this coalition in large part because they feared that an accident at a U.S. plutonium production reactor might result in another Chernobyl. U.S. plutonium-production reactors are now about 30 years old and are much less safe than modern nuclear reactors. I understand that Soviet production reactors are similarly old and unsafe. Would it not be better to simply shut down these reactors rather than to continue operating them and investing many billions of dollars and rubles to build new ones?

Conversion of Nuclear-Weapons Materials to Non-Weapons Purposes. Once we have stopped the production of new weapons materials we can begin to verifiably reduce the nuclear arsenals weapons by destroying nuclear warheads and burning most of the fissile material that they contain in nuclear reactors.

A Verifiable Accounting System for Nuclear Warheads and Weapons Materials. We also need to establish an accounting system which will make possible the creation of a verifiable database on the total numbers of nuclear weapons and amounts of nuclear-weapons materials in the nuclear arsenals. Otherwise agreements on drastic reductions may be prevented by fears that thousands of nuclear warheads may have been hidden and kept outside comprehensive nuclear arms reductions agreements. The earlier we establish a verifiable accounting system, the better we will be able to minimize this problem. The verification system should be designed so that it is not necessary to reveal the locations of the nuclear weapons until they are about to be destroyed.

Such technical problems must be solved if we are to have the verification arrangements that will make it possible to agree on drastic reductions of nuclear weaponry. In February 1986, the Committee of Soviet Scientists for Peace and Against the Nuclear Threat, of which Academician Sagdeev is the chairman, and the Federation of American Scientists agreed to look at these problems in a joint study. Our two groups had our first joint working meeting in Florida only last month and I am happy to report to you that we made considerable progress toward the solution of these verification problems. I think that it is possible to hope that, when our two governments are ready to agree to stop the production of nuclear weapons materials and to start destroying nuclear warheads, there will be a basis for the verification arrangements.

#### Conclusion

In conclusion, therefore, I urge you to ratify the INF Treaty. It is our first small but very important step down the road to drastic nuclear arms reductions.

Thank you.