



Trust and Verify

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Clinton speech

On 1 March, US President Clinton gave a speech at the Richard Nixon Center, Washington, DC. the speech was entitled 'American Leadership and Engagement: Reducing the Nuclear Threat'.

Noting that he was speaking four days before the 25th anniversary of the entry into force of the NPT, he said:

Non-nuclear-weapon states that sign on to the Treaty pledge never to acquire them. The nuclear-weapon states vow not to help others obtain nuclear weapons capabilities, to facilitate the peaceful uses of atomic energy and to pursue nuclear arms control and, ultimately, the elimination of nuclear weapons — commitments I strongly reaffirm, along with our determination to seek universal membership in the NPT.

The President also said that he was in discussion with Russian President Boris Yeltsin over future possible cuts to nuclear weapons arsenals and that 200 tonnes of fissile material — 'enough for thousands of nuclear weapons' — would be withdrawn from military holdings and placed under IAEA safeguards.

The composition of the material has not been revealed, although it is likely to be mostly uranium, nor has the timetable for its placing under safeguards as some preparations will have to be made for this. The use of the term 'fissile material' by the President indicates the possibility that not all of this material is weapons-grade.

UK and the NPT

The British Foreign and Commonwealth Office has made the following statement in relation to the NPT:

Our aim at the nuclear Non-Proliferation Treaty Review and Extension Conference is to secure the Treaty's indefinite and unconditional extension by a substantial majority. We are lobbying at ministerial and official levels, both bilaterally and as part of an EU joint action, to achieve this aim.

In a separate statement the Foreign and Commonwealth Office has said:

Under the terms of the Treaty this can be achieved with a simple majority of state parties.

Neither statement made any comment on political consequences of the size of any majority.

START I verification

Verification of the START I Treaty has begun in earnest. Although the treaty entered into force in December 1994, the verification arrangements only started on 1 March this year.

The first inspection made under these provisions began on 3 March when 30 US inspectors arrived in Russia (in three teams of ten). There are 55 declared sites in Russia and all are expected to be visited in the 120 day baseline validation period.

On 8 March, Russian inspectors arrived in the US for their first inspection of the 36 declared sites there.

Anti-Personnel Mines

The issue of control of anti-personnel mines is receiving greater attention internationally in the run up to the review conference of the Inhumane Weapons Convention in September.

Activities in the UK

On 15 March, David Davis, Minister of State, Foreign and Commonwealth Office, announced that the UK would now prohibit the export of non-detectable land mines and would prohibit, with immediate effect, of all types of anti-personnel mines to those states which have not ratified the Inhumane Weapons Convention.

The United Kingdom ratified this Convention on 13 February (see below).

Previously, the United Kingdom had a moratorium only on the export of anti-personnel mines which do not have self-destruct or self-neutralising mechanisms, announced in July 1994. This moratorium has now been described as 'indefinite'.

Activities in other European countries

On 3 March a new law was passed in Belgium which, in addition to creating a moratorium on manufacture, export and stockpiling of anti-personnel mines, will lead to destruction of most of the country's 340,000 anti-personnel mines currently held by the country's armed forces.

This follows a decision by the government of the Netherlands to destroy all 423,000 anti-personnel mines currently in stock, with the aim of achieving a global ban.

Other activities

Moratoria have also been declared by the Argentina, Canada, Czech Republic, Germany, Greece, Israel, Russia, South Africa and Spain.

Licensing agreements

One area that is not covered properly by the policies of states is licensing agreements for production of

Editorial Comment

A Proposal to Expand Security Assurances Prior to the NPT Conference

The nuclear-weapon states should extend the Positive Security Assurance (PSA) aspects of the UN Security Council resolution to be passed prior to the Non-Proliferation Treaty (NPT) Conference that starts in April.

The NPT Conference is unlikely to proceed smoothly and this measure may be able to lubricate certain stiff joints.

The wording of the PSA element of the draft resolution should be changed such that it no longer refers to assistance in the event of use or threat of use of nuclear weapons but to use or threat of use of 'any weapon of mass destruction'.

This may be preceded by a reference to the statement of the President of the Security Council (the UK) of January 1992 which talked about the spread of any weapon of mass destruction being a threat to world peace.

Current situation

The resolution is currently being negotiated as stronger security assurances have been called for by many non-nuclear-weapon states parties to the NPT

The draft resolution already refers to assistance in the event of use or threat of use of nuclear weapons. The new wording would make the same assistance assurance for the other weapons of mass destruction — chemical and biological.

In the sphere of chemical weapons (CW), the Chemical Weapons Convention, which was signed in 1993, contains provisions for assistance to any party in the event of an attack with CW. This Convention will enter into force in the next year or so.

In the sphere of biological weapons (BW), the Biological and Toxin Weapons Convention is being strengthened through new compliance measures which are currently being negotiated through a process that has become known as 'Verex'. One issue being discussed in Verex is assurances for assistance to any party in the event of an attack with BW. These will almost certainly be given in this context. The Verex measures are to be decided at a Review Conference in September 1996.

Therefore, all that the P-5 will be giving is additional assurances for the next year or two. However, politically, the impact will be far greater than this.

Benefits

The nuclear-weapon states have been presented with many calls for actions to be taken by them in the run-up to the NPT Conference and have been seen to have resisted almost all of them. A beneficial action that has not been fought over would have a positive political impact, especially at a time when NPT-related decisions are being brought to the attention of political leaders by officials in many countries that may be crucial in the extension decision making.

It will also signify the P-5's on-going commitment against the spread of all weapons of mass destruction and ease progress in the CW and BW arenas.

Drawbacks

Two drawbacks have been identified in discussion: that of 'playing the BW card too early'; and 'would this lead to alteration of the negative security assurance?'.

Taking these in order — yes, assurances could be left to the Verex process only; however, the resolution will not define assistance. It would be completely in order to make a later statement that greater assistance would be given to a state attacked with BW if it were a party to the BW Convention, thus retaining the 'carrot'.

On the second matter, the negative security assurance gives an assurance that the nuclear-weapon states will not use nuclear weapons under certain circumstances. As all five have sworn BW and CW, how can they give an assurance not to use them?

Conclusion

While the magnitude of the benefits offered by this proposal may be unspecific, the benefits are clearly there. More importantly, these benefits are obtained at little cost, as the additional assurances of assistance will have to be given in the next year or two anyway, and with no serious drawbacks.

Richard Guthrie

anti-personnel mines in third countries. Anti-personnel mines produced under licence account for many of those deployed in trouble spots around the world.

Licence agreements also make it difficult to verify the country of origin of mines.

In addition, licence agreements are often dealt with by different departments than those dealing with direct exports.

For example, in the UK, the Department of Trade and Industry (DTI), which deals with export controls, keeps no records of overseas production of land mines under licence agreements with UK firms and has stated that this is a matter for the Ministry of Defence.

Inhumane Weapons Convention

On 13 February, the United Kingdom deposited its instrument of ratification for the 1981 Inhumane Weapons Convention with the Secretary-General of the United Nations.

The UK has ratified the treaty without making any of its provisions offences under British law and without ratifying the 1977 Additional Protocols to the Geneva Conventions, which are referred to explicitly in the text of the weaponry convention.

Iraq and Biological Weapons

Concern has been raised that there is still insufficient knowledge of the biological warfare research activities of Iraq.

The United Nations Special Commission on Iraq (UNSCOM) is confident that there is adequate data now on Iraq's nuclear, chemical and ballistic missile programmes to make informed judgements on them.

However, as an UNSCOM spokesman stated:

In the area of biological weapons we are still at the stage that we received a report from the Iraqi side which frankly we don't believe. ... The problem is we don't know what we don't know.

A concern has been the discovery that Iraq imported some 30-40 tons of growth media in 1988-89, the bulk of which cannot be accounted for.

Of concern also is the fact that naturally occurring diseases such as anthrax can be utilised as biological weapons. Iraqi authorities will have access to anthrax spores from clinical and environmental sources within the country.

The primary aim of the UNSCOM on-going monitoring and verification programme is to ensure that such domestic sources cannot be used to promote a weapons programme.

Remote monitoring cameras have been established at Al Hakem (west of Baghdad), a facility suspected by UNSCOM to have been designed to grow bacteria for biological warfare.

UK and sanctions on Iraq

It has been revealed that since United Nations sanctions on Iraq were started in August 1990, 2,370 licences for exports from the United Kingdom to Iraq have been approved by the British government, with 791 being refused.

The licences primarily cover items deemed to be 'essential for humanitarian civilian needs'.

Scott Inquiry

It now appears that the Scott Inquiry into exports to Iraq will produce its first report in June of this year.

However, it is clear that the Inquiry is still taking evidence, having held a private evidence session on 14 February. The last public evidence session was held on 7 July 1994.

Middle East Zone

On 14 February, Egypt presented a proposal to an Arab League meeting for a Middle East Zone Free of Weapons of Mass Destruction. The proposal met with a positive response and was also discussed at later meetings of states in the region.

The proposal has not yet been produced as a draft text. Some of the issues to be resolved include its geographical scope (whether it should include any parties other than the Arab states, Iran and Israel) and its entry into force requirements.

EU and the Environment

The Environment Council (the European Union environment ministers) met on 9 March. The Council set the EU position for the first Conference of the Parties of the Framework Convention on Climate Change.

According to British sources, the Council called for: the negotiation of a protocol to the Convention, setting out new targets and timetables beyond 2000 and for the agreement by all developed countries of policies and measures aimed at reducing emissions of greenhouse gases.

The Council also failed to reach agreement on the proposed Directive on Integrated Pollution Prevention and Control.

'Gulf War Syndrome'

A single case of exposure by a member of coalition forces to mustard gas has been confirmed.

The incident occurred in the post-War period when Iraqi bunkers were being inspected and one US soldier suffered injuries consistent with exposure to mustard agent. The report of the incident concluded:

It seemed to be the result of accidental contact of the soldier with contaminated soil in a bunker that may have been used previously, (probably during the Iran-Iraq war) for storing mustard.

Chemdemil news

Sweden is to provide Russia with assistance in destruction of the latter's chemical munitions stockpile to the value of 2.6 million Kronor (about US\$350,000).

A Japanese delegation arrived in China on 27 February to look at options for disposal of chemical munitions left by the Japanese Imperial Army during the Second World War.

Korea update

On the Korean peninsula, the first deliveries of fuel oil to the Democratic People's Republic of Korea have taken place. The shipments so far are believed to total some 50,000 tons, about a third of the total to be shipped in 1995.

In addition, the annual US-Republic of Korea 'Team Spirit' military exercises appear to have been cancelled again. These exercises have been the source of controversy in earlier years. It is not clear if a command post exercise, involving no troop movements may be held in their stead.

CBW agreement

It has been revealed in a British Parliamentary Answer from the Ministry of Defence that the 1980 'Memorandum of Understanding on Chemical and Biological Defence between the United States of America, the United Kingdom and Canada' was extended in November 1994. It is not clear how long it has been extended for.

CWC ratifications

The following depositions of instruments of ratification have taken place:

Greece	22 December 1994
Tajikistan	11 January 1995
Mongolia	17 January 1995
Armenia	27 January 1995
Finland	7 February 1995
Oman	8 February 1995
Romania	15 February 1995
France	2 March 1995
Switzerland	10 March 1995

In addition, the Parliament of Belarus finished its ratification process on 13 February.

NPT ratifications

The following deposition of an instrument of ratification has taken place:

Monaco	13 March
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VERTIC understands that Eritrea has deposited its instrument of ratification with the United States.

Hydronuclear Experiments

Hydronuclear experiments (HNEs) have become an issue in the negotiations for a comprehensive test ban treaty (CTBT) at the Conference on Disarmament in Geneva.

HNEs are sometimes referred to as hydronuclear explosions, although this term is essentially misleading.

HNEs are experiments in which a small release of nuclear energy is caused by the compression of pieces of fissile material using conventional explosives. This compression causes some fission energy to be released, but without making the experiment leading to a full-scale chain reaction. The measurement of the released energy provides data that is useful to weapon designers.

In Geneva, there has been discussion between the nuclear-weapon states as to what limits should be placed on HNEs in the CTBT. However, confusion has occurred because of the way the energy output of these experiments is measured. For example, one proposal has been that HNEs should be allowed up to a limit of 4 kg of TNT. This means an experiment which will give off nuclear energy equivalent to the energy released by exploding 4 kg of TNT, in addition to the small conventional explosion used to trigger it.

Historically, the military have rated the energy given out by a nuclear chain reaction in relation to the energy released by exploding a quantity of TNT. This has been convenient for military planners, but does lead to some confusion.

There are key differences between a conventional explosion and a nuclear 'explosion'.

With conventional explosives, the explosive effect occurs because a large volume of gas is suddenly produced, creating a pressure wave. There will also be a release of heat from the chemical reaction that forms the gas.

With nuclear weapons, the explosive effect occurs because an immense quantity of heat is suddenly produced which in turn causes air to expand and solids and liquids to be vaporized. It is this which creates almost the entirety of the blast of a nuclear 'explosion'. This is why a nuclear weapon set off in outer space would have a very minor blast effect.

Thus, a common definition of an HNE is that the non-explosive energy output is no greater than the energy output of the conventional explosives (a few kg) that caused the compression to trigger the experiment.

Conclusion and comment

HNEs could remain a stumbling block to a CTBT unless agreement is reached soon. As lower limit as may be negotiated should be placed on them, with the hope that the nuclear-weapon states will eventually agree, some years after the CTBT has started operation, to abandon their HNE programmes.

HNEs could then be brought within the scope of the CTBT by the nuclear-weapon states agreeing that any experiment involving the release of nuclear energy caused by compression of nuclear materials should be included in the definition of a nuclear test.

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Trust & Verify

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VERTIC is an independent organization aiming to research and provide information on the role of

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VERTIC co-ordinates six working groups comprising 21 UK consultants and 11 overseas advisors.

VERTIC is the major source of information on verification for scientists, policy makers and the press.

VERTIC is funded primarily by grants from foundations and trusts and its independence is monitored by an Oversight and Advisory Committee.

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In addition to *Trust & Verify*, VERTIC publishes the *Verification* (formerly *Verification Report*) series of yearbooks and a variety of research reports each year. Details of VERTIC publications are available on request.

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