Chaillot Paper

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Effective non-proliferation

The European Union and the 2005 NPT Review Conference

Darryl Howlett & John Simpson, Harald Müller and Bruno Tertrais

Edited by Burkard Schmitt

Institute for Security Studies
Institut d'études de Sécurité
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Préface

Nicole Gnesotto

En 1995, l'une des premières actions communes de l'Union dans le cadre de la PESC concernait la non-prolifération des armes nucléaires. Et ce, avec succès : lors de la conférence de révision du TNP en avril-mai 1995, les pays de l'Union jouèrent un rôle essentiel pour que soit entérinée une prorogation indéfinie du Traité de non-prolifération.

Dix ans plus tard, l'Union ne peut pas ne pas être de nouveau au rendez-vous. La conférence de révision du TNP s'ouvrira en effet en mai 2005, à New York, dans un contexte international nettement plus instable qu'il y a dix ans et alors que l'enjeu de la non-prolifération des armes de destruction massive est devenu crucial pour la stabilité du système international.

Certes, le paysage nucléaire présente au moins un aspect positif : la réduction du nombre des Etats potentiellement proliférateurs. Après l'Afrique du Sud et le Brésil, la Libye a rejoint en 2004 le camp des Etats ayant officiellement décidé de renoncer au nucléaire, tandis que l'Irak, objet de toutes les accusations américaines avant la guerre de 2003, s'est révélé n'avoir en réalité plus aucun programme de prolifération sur son territoire. Toutefois, cette réduction quantitative de la menace nucléaire n'a pas d'équivalent sur le plan qualitatif. Au contraire, les risques de prolifération nucléaire sont devenus multiformes : les révélations récentes sur le trafic illicite des matières fissiles font craindre une connexion possible avec des réseaux terroristes ; la Corée du Nord et l'Iran sont deux pays dont l'éventuel passage à l'acte nucléaire aurait des conséquences catastrophiques tant sur le plan régional qu'international ; la lutte contre la prolifération nucléaire souffre elle-même d'un certain déficit de crédibilité, après notamment le fiasco irakien et les contradictions de la communauté internationale devant la politique des Etats de facto nucléaires tels que le Pakistan, l'Inde et Israël.

D'où l'importance du présent Cahier de Chaillot. *Sous la direction de Burkard Schmitt, adjoint au Directeur de l'Institut, trois des meilleurs experts européens en matière de prolifération nucléaire analysent les enjeux de la prochaine conférence de révision du TNP et proposent*

différents éléments de ce que devrait être une position commune de l'Union en la matière.

La stratégie européenne de sécurité, adoptée par les chefs d'Etat de l'Union européenne en décembre 2003, fait en effet de la lutte contre la prolifération des armes de destruction massive l'un des objectifs stratégiques majeurs de l'Union : à l'initiative de trois pays, celle-ci s'est d'ailleurs investie massivement dans la recherche d'une solution diplomatique à la question soulevée par une éventuelle prolifération nucléaire de l'Iran. Simultanément, les Européens insistent sur l'instrument majeur que représente le TNP comme pierre angulaire d'un système multilatéral efficace de lutte contre la prolifération. La conférence de révision de 2005 représente donc, pour l'Union, une échéance diplomatique essentielle pour la stabilité nucléaire de la planète, comme pour la propre crédibilité stratégique de l'Union elle-même.

Paris, avril 2005

Introduction

Ever since its entry into force in 1970, the nuclear Non-Proliferation Treaty (NPT) has been the cornerstone of the fight against the spread of weapons of mass destruction (WMD). At the same time, it is one of the most universal international legal instruments, with 189 states parties in early 2005 (only India, Israel and Pakistan remain outside the Treaty).

This does not mean, however, that the NPT has been uncontroversial: on the contrary, its inherent bargain between non-proliferation obligations, disarmament commitments and the right to peaceful uses of nuclear energy has always been the cause of tensions and debates. Complaints about its discriminatory nature, the reluctance of supplier states to share nuclear technologies or the unwillingness of Nuclear Weapons States (NWS) to engage in nuclear disarmament began just after its entry into force.

These controversies have increased considerably over the last few years, and never before has the NPT been faced with so many challenges from inside. On one side, the cases of Iraq, North Korea and Libya have revealed the limitations of the regime, and the US administration in particular questions openly the ability of the Treaty to prevent proliferation. On the other, the Non-Aligned Movement (NAM) and the New Agenda Coalition (NAC), supported by many NGOs, criticise the NWS for not respecting their disarmament promises and applying double standards in the treatment of proliferation problems. On top of that, many developing countries emphasise the lack of enthusiasm for transfers of technologies in compliance with Article IV.

Given all this, the 2005 NPT Review Conference takes place in a particularly difficult context. And the stakes are high. Should the international community be unable to send a clear signal in support of the Treaty, the regime as a whole would be further undermined, with potentially severe consequences for international stability in general.

In this context, the European Union has a special responsibility. Both during the negotiations on the indefinite extension of the

NPT in 1995 and the 2000 Review Conference, the Union played an active and constructive role, establishing itself as a recognised actor in this field. As the main defender of a treaty-based multilateral approach to the fight against proliferation, the EU must build on its positive record in this area and make a particularly strong effort to ensure the success of the 2005 Conference. The Union's contribution is in fact not only crucial for supporting the NPT regime, but also a litmus test of the credibility of its policy of effective multilateralism and its 'strategy against proliferation of weapons of mass destruction', adopted in 2003.[1] In both 1995 and 2000 the EU was able to overcome its internal divergences on nuclear issues and to put forward proposals which served as the basis for a broader international consensus. In 2005, the challenge for the Union is again to transform its own diversity into a constructive contribution and to act as a bridge between the extreme position of the US administration and the strong views expressed by the NAC and the NAM.

This *Chaillot Paper* tries to demonstrate that such a contribution is possible. In it, at the invitation of the Institute, four well-known non-proliferation experts assess the main problems of the NPT regime and develop proposals for a common EU policy during and beyond the Review Conference.

The paper is structured around the three pillars of the NPT regime: non-proliferation, disarmament and the peaceful uses of nuclear energy. In the first chapter, Darryl Howlett and John Simpson analyse the current challenges to the NPT compliance mechanisms and develop suggestions for enhancing them. In the second, Bruno Tertrais pleads for a realistic and dispassionate approach towards nuclear disarmament and shows that the EU can make innovative proposals even in this particularly controversial area. In the last chapter, Harald Müller assesses the difficulties and prospects of multinational arrangements for sensitive fuel cycle activities as one option to cope with the inherent dual-use character of nuclear technology.

The chapters are based on presentations made by the authors at a seminar held at the EUISS in December 2004 to which Sergio Duarte, President-designate of the 2005 Review Conference, and Annalisa Giannella, the HR's Personal Representative for the non-proliferation of WMD, participated. The seminar provided the authors the opportunity both to present their initial findings and to receive feedback from a variety of experts, policy-makers and officials concerned with proliferation issues.

1. Council of the European Union, 'EU Strategy Against Proliferation of Weapons of Mass Destruction', Annex to Note 15708/03, 10 December 2003 (text endorsed by the European Council on 12 December 2003).

Nuclear non-proliferation — how to ensure an effective compliance mechanism

Darryl Howlett and John Simpson[1]

1

The NPT regime and non-compliance: a need for change?

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and its associated regime are currently at a turning point. The Treaty is, and will continue to be, the normative and legal basis for the regime and for any enforcement of its agreed rules. If its norms and legal commitments are successfully flouted by a minority of states, however, a situation could emerge where others regard this as justifying either abandoning the Treaty or transferring their non-proliferation efforts to other, less inclusive, international mechanisms. It is paradoxical that these concerns are arising at a time when the NPT is near-universal in its membership. Yet it is this which has made the detection of, and responses to, non-compliance more salient than in the past, for future proliferators will be current NPT members.

The NPT text contains neither overt mechanisms nor guidelines for reacting to non-compliance, though Art. III.1 does provide for the International Atomic Energy Agency (IAEA) to verify the 'fulfilment of [an NPT non-nuclear weapons state party's] obligations assumed under this Treaty' (i.e. to assure compliance). This is implemented through agreements, known as INFCIRC/153 agreements, between the Agency and individual states or groups of states. Art. VIII.3 also provides for a 'conference of Parties to the Treaty' to 'review the operation of this treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty are being realised'. This gives NPT Review Conferences the authority to both review specific non-compliance issues and change the 'operation' of the Treaty to make compliance and non-compliance and other procedures more effective. Past experience suggests that such changes might be located in the NPT review process itself; in regime mechanisms such as the IAEA Safeguards System and General Conferences; in the United

1. The authors would like to thank Jenny Nielsen for her assistance in researching and drafting this paper.

Nations Security Council (UNSC); or in the Nuclear Suppliers Group (NSG) and its guidelines for national export controls.

Claims that existing arrangements are inadequate can be traced back to several sources. Chief among them is the change in the international environment since the NPT entered into force in 1970, in particular the ending of the global East-West conflict centred upon Europe. More specifically, at least three cases of non-compliance with the non-proliferation provisions of the Treaty have emerged into the public domain (Iraq, the Democratic People's Republic of Korea (DPRK) and Libya) while a fourth, Iran, is currently the subject of an extended investigation by the IAEA. The Iraq experience highlights the difficulties in generating an effective and sustained international response to situations of recognised non-compliance. The Libyan and Iranian cases have also increased the salience of ensuring that activities within states not bound by the Treaty's legal obligations (e.g. Pakistan) do not assist NPT parties to proliferate. Moreover, these cases have highlighted the existence of uncertainties over what constitutes evidence of non-compliance with both the Treaty and the regime and, if it were to be proven, what should be the purpose of possible responses.

International reactions to these developments have so far been limited. Although measures were negotiated to make IAEA safeguards more effective after the Iraq experience, such as agreeing an Additional Protocol, known as INFCIRC/540, to the standard Agency NPT safeguards agreement, the 2000 NPT Review Conference could not reach consensus on this being mandatory for NPT parties, or being a condition of supply to non-parties. It was also unable to agree to any reference being made to the Zangger Committee, a body which meets in Vienna to decide on those items to be exported to non-NPT parties which should trigger IAEA safeguards. One result has been to focus increased attention upon actions by 'coalitions of the willing' like the NSG, and generate new initiatives like the Proliferation Security Initiative (PSI), which is aimed at enhancing the ability of such coalitions to intercept proliferation-related materials in transit.

The discussion above addresses itself mainly to issues regarding compliance and non-compliance with the NPT articles concerning non-proliferation and peaceful use. The regime is almost exclusively focused on these areas. Art. VI, however, contains commitments for all states, including the five NPT nuclear weapons

states (NWS), to negotiate 'in good faith' nuclear disarmament agreements. The issue of compliance and non-compliance with this article has been extremely contentious at all past NPT Review Conferences, and has in some cases prevented agreement on a consensual outcome. This issue will not be addressed in detail in this chapter, though the symbolic significance of maintaining a balance between compliance with each of these three sets of commitments will condition the framing and outcomes of EU policies in this area at the May 2005 NPT Review Conference.

The challenges to NPT compliance mechanisms

International law is based on an expectation that any state entering an international legal treaty will fulfil its obligations. However, some states have been known to use international agreements as a cover to conduct clandestine activities in violation of the obligations they have assumed under it. This possibility was highlighted in the recent UN 'Report of the High-level Panel on Threats, Challenges and Change'. This report also expressed concerns that states would acquire all the materials and expertise needed for weapons programmes while they were party to the NPT and then withdraw from the Treaty and proceed with weaponisation.[2] If several parties were believed to be attempting to do this the cohesion of the states within the Treaty would start to suffer and further uncertainty about the intentions of some states parties could weaken it to the point of collapse.[3] Indeed the High-level Panel noted that many of the 40 states that may be judged to possess the industrial and scientific infrastructure to build nuclear weapons at relatively short notice may do so if the legal and normative constraints of the Treaty regime no longer apply.[4] This suggests that only the creation and implementation of more effective NPT compliance arrangements offers hope for the longer-term vitality of the NPT.

Compliance issues have generated a large literature across a range of areas. In the case of the NPT, the focus has been on two questions: what constitutes compliance and non-compliance and how is a judgement to be made on such issues; and what should be the responses to non-compliance? The first involves judgment on both the nature and legal status of the obligations involved; the criteria for deciding when they have been breached; and the mechanisms through which claims of non-compliance will be handled.

2. 'Report of the UN High-level Panel on Threats, Challenges and Change', para. 108.

3. Harald Müller, 'Compliance Politics: A Critical Analysis of Multilateral Arms Control Treaty Enforcement', *The Nonproliferation Review*, vol. 7, no. 2, Summer 2000, p. 79.

4. UN Report, para. 109.

The second concerns the objectives to be sought in responding to 'unambiguous breaches of treaty obligations'.[5] In addition, there is the emerging issue of how to respond to acts of withdrawal from the NPT when in non-compliance with it.

NPT compliance commitments

The most significant formal obligations accepted by NPT parties are those contained in Arts. I, II, III, IV, VI, VIII and X of the Treaty. Art. I requires NWS parties to undertake not to 'transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices' or to 'assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other explosive nuclear devices'. Similarly, Art. II prohibits NNWS from seeking to acquire nuclear weapons or other explosive nuclear devices as a result of transfer or manufacture of such weapons. Art. III outlines the requirement for NNWS to accept safeguards administered by the IAEA. These are to be applied to 'all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere'.

Art. IV is currently the subject of some dispute over states' rights to operate specific 'sensitive facilities', as it contains two contradictory statements relevant to this issue. On the one hand it reaffirms the 'inalienable right' to develop or use nuclear energy for peaceful purposes. This implies that it cannot be limited in any way, and therefore that NNWS parties can develop and operate all types of nuclear facility. On the other hand the Article also stipulates that it has to be implemented 'in conformity with Articles I and II'. One possible answer to this conundrum is that all states are free to voluntarily limit their application of this absolute right and all parties have done so by joining the Treaty.[6]

Art. VI calls on all parties to the Treaty to 'pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control'. The commitments here are less specific than in the earlier articles, although the International Court of Justice in 1996 argued, in an advisory opinion, that a commitment to pursuing negotiations also implied generating a product from them.[7] In 1995 and 2000, however, the Review Con-

5. Müller, op. cit., p. 79.

6. 'Multilateral Approaches to the Nuclear Fuel Cycle: Expert Group Report submitted to the Director General of the International Atomic Energy Agency', INFCIRC 640, 22 February 2005.

7. 'Legality of the Threat of Use of Nuclear Weapons', *ICJ Report* 225, 1996; http://www.lcnp.org/wcourt/opinion.htm.

ference sought to make these commitments more specific by identifying a series of 'practical steps' the parties could take to implement them. This in turn has generated disagreements surrounding their legal and political status, and what their implications are for claims of non-compliance.

Amendments to the Treaty and the requirement to hold Review Conferences every five years are covered in Art. VIII, while withdrawal is dealt with under Art. X.1, which requires any party to give three months notice of this action and specify 'the extraordinary events it regards as having jeopardized its supreme interests'. Compliance with, and interpretation of, this provision have become significant issues since the DPRK announced its withdrawal from the Treaty in 1993, and more recently in the context of Iran where the concern is that it may be seeking to take a similar path in several years time when existing plans to complete a large enrichment facility have been fully implemented. There are thus a range of NPT commitments open to claims of non-compliance, some very specific, others more general. The IAEA is tasked with determining whether most of the more specific commitments are being complied with while the more general ones, such as Arts. IV and VI, have been the focus of political debates within the NPT review process.

NPT compliance mechanisms

By their very nature, multilateral arms control agreements are vulnerable to those who view them as, *inter alia*, convenient devices to hide behind while working to acquire weapons of mass destruction (WMD). Mechanisms to provide assurances of compliance have become standard practice over the last 30 years to safeguard those parties fulfilling their legal obligations under such a Treaty.[8] These measures often consist of formal compliance reporting obligations for all signatories; a comprehensive verification system; and a clear programme of action in the event of non-compliance.[9]

Verification and transparency are integral elements of compliance mechanisms. They reduce unwarranted suspicions of non-compliance, and both deter non-compliance and reveal its existence. At the time of the negotiation of the Chemical Weapons Convention (CWC), the inclusion of such mechanisms led it to be described as a 'third-generation' arms control measure.[10] The NPT, in contrast, is a 'first-generation' agreement without any for-

8. Brad Roberts, 'Revisiting Fred Ikle's 1961 Question, "After Detection—What?" ', *The Nonproliferation Review*, Spring 2001, pp. 12-13.

9. For a discussion of these measures, see Serge Sur (ed.), *Disarmament and Arms Limitation Obligations. Problems of Compliance and Enforcement* (Geneva: UNIDIR/ Dartmouth publishers, 1994).

10. Chantal de Jonge Oudraat, 'Prospects for Development of International Mechanisms: A Comprehensive Approach', in Serge Sur, op. cit, p. 232.

mal institutional body to oversee its implementation, other than its Review Conferences, despite the range of mandatory obligations it contains. Instead, an indirect verification and non-compliance mechanism exists whereby Art. III mandates NNWS parties to sign safeguards agreements with the IAEA covering all nuclear materials within its jurisdiction and to report regularly on their production, location and movement. The IAEA can respond to non-compliance with these agreements by taking action itself or referring its finding to the UNSC.

Unlike the NPT text, the IAEA Statute deals explicitly in Art. XII.C with non-compliance issues. This forms the basis for Part I, para. 19 of NPT states' INFCIRC/153 safeguards agreements. It becomes operative when the IAEA is unable to 'verify that there has been no diversion of nuclear material . . . to nuclear weapons or other nuclear explosive devices' (i.e. compliance). The Agency's Board of Governors may then respond by either suspending the states rights and privileges under the IAEA statute, or by referring the matter to the UNSC. If the latter, 'finds that the situation brought about by the violation could lead to international friction it may, under Chapter VI of the Charter, recommend to the state or states concerned "appropriate procedures or methods of adjustment" '.[11] Additionally, or alternatively, the UNSC could determine that the breach is a threat to international peace and security and recommend measures under Chapter VII, such as the imposition of economic or military sanctions. However, past experience of such cases being referred to the UNSC suggests that even though its members may agree on the existence of non-compliance, they will not necessarily reach agreement on how to respond.[12]

A significant distinction exists between non-compliance with an IAEA safeguards agreement and with Art. II of the NPT. As indicated above, the essence of the NPT-IAEA safeguards agreements is that all fissile material within the jurisdiction of a state should be reported to the IAEA and should be subject to its safeguards. This covers both diversion from declared plants and production from undeclared ones. Breaches of safeguards may also occur in connection with the provision of information on new plants or changes to existing ones, as well as experimentation with materials and techniques. However, the Agency does not have any direct authority to seek out work connected with the development and production of nuclear devices (i.e. weaponisation), involving

11. Jozef Goldblat, *Arms Control. The New Guide to Negotiations and Agreements* (London: Sage Publications, 2002), p. 341.

12. Ibid.

activities such as weapon design, chemical explosive experiments and acquisition of accurate detonation systems.

A finding by the IAEA of non-compliance with the terms of a safeguards agreement thus does not automatically amount to non-compliance with the NPT. Similarly, if the UNSC was offered incontrovertible evidence of weaponisation, it could in theory choose to find a state in breach of the NPT even though that state was in 'good standing' with IAEA safeguards. Little effort has so far gone into addressing these differences, and bridging the gap between them, for two main reasons. One is that, without guaranteed access to fissile materials, manufacture of a nuclear device cannot proceed. The second reason is lack of both expertise and jurisdiction concerning weaponisation within the IAEA, and the difficulties the NPT itself generates in this context by its commitment to preventing proliferation of knowledge on weapon design and materials to citizens of states other than the NPT-NWS.

Withdrawal from the NPT

The issue of withdrawal from the NPT has become a central aspect of compliance concerns in recent years. One specific reason is that there are concerns that Iran may acquire the technology to make fissile material for weapons under the cover of its civil programme, and then withdraw from the NPT and rapidly become an NWS; a more general one is that there are several states which already have the capabilities to do this and if they did so would generate a proliferation chain reaction. A second is the precedent set by the DPRK, which withdrew from the NPT while non-compliant with its Treaty commitments.[13] The result has been calls for greater clarification and elaboration of the process for withdrawal, and proposals to make it more demanding to deter any state party from embarking on this course of action. In the process, the question of whether an act of withdrawal might itself be non-compliant with the Treaty has emerged as a key issue.

Art. X.1 of the NPT, the withdrawal clause, is based on a similar clause in the text of the Partial Test Ban Treaty (PTBT) of 1963. In his analysis of the NPT negotiations, Mohamed Shaker considered that these additions were intended as 'an additional brake on hasty withdrawal action without limiting the basic right of withdrawal'.[14] In the PTBT context only acts by third parties were seen as legitimate grounds for withdrawal.[15] The scenarios under dis-

13. John Simpson and Jenny Nielsen, 'Fiddling While Rome Burns? The 2004 Session of the PrepCom for the 2005 Review Conference', *The Nonproliferation Review*, Summer 2004, p. 22, footnote 6. The DPRK initially stated it was withdrawing from the NPT in 1993, but then claimed it had suspended this action before the 90-day notice period required for withdrawal was completed. The status of the DPRK thereafter became a matter of conjecture: was it still a full party to the NPT or was it in its declared 'special position' of being suspended but not fully withdrawn? The DPRK then announced on 10 January 2003 that it was withdrawing from the NPT with immediate effect, arguing that it had already served the required 90-day notice in 1994. The parties to the NPT were unanimous that it could not do this and would have to serve a fresh notice of its intention to leave the Treaty. It did this, but did not fulfill some other requirements of the withdrawal clause, including offering an explanation for its action. As a result some parties continued to regard it as legally still party to the Treaty, while others saw no point in contesting its de facto withdrawal.

14. Mohammed Shaker, *The Nuclear Non-Proliferation Treaty: Origin and Implementation 1959-1979, Volume II* (London: Oceana Publications, 1980), p. 893.

15. Ibid.

cussion when the Treaty was negotiated thus assumed that states would only withdraw following (proven?) non-compliance by others. Little attention appears to have been given to situations where a state withdraws from the Treaty in other contexts, as was the case with the DPRK, and whether this would itself constitute non-compliance.

A literal interpretation of the Treaty suggests that for a state to withdraw legally it must:

- give notice of withdrawal to all parties to the NPT;
- give notice of withdrawal to the UNSC;
- provide a statement of the extraordinary events which the state party considers to have jeopardised its supreme interests; and
- provide 90 days notice of withdrawal.

The first and last of these requirements are taken directly from the PTBT. Shaker writes that the second was added on the grounds that the issue would inevitably be referred to the UNSC, as withdrawal was expected to be a reaction to changed security conditions.[16] Aust argues that although the withdrawal provision 'gives a discretion to the withdrawing party', the additional requirement to give a statement of the 'extraordinary events' requires the party to 'have grounds for its decision'.[17] The UNSC thus appears to have the authority to review the grounds for withdrawal, and pass a judgment on them, but ultimately cannot prevent a state from withdrawing, although it should do so in the manner prescribed by the text. If this does not occur, the legal and practical consequences remain uncertain, as the state would be in non-compliance with the Treaty. Action to address this situation would then be the responsibility of the UNSC.

The EU and existing proposals for creating and/or enhancing compliance procedures

Several proposals are currently being discussed within the international community to enhance nuclear non-proliferation compliance arrangements. Some call for developments in the role of the IAEA and/or the UNSC in dealing with compliance. Others focus on the creation of an NPT compliance body to operate in the gap between the IAEA and UNSC. Yet others have suggested creating codes of conduct in the nuclear non-proliferation area covering the

16. Ibid.

17. Anthony Aust, *Modern Treaty Law and Practice* (Cambridge: Cambridge University Press, 2000), p. 228.

fuel cycle, compliance and non-compliance and withdrawal. All will undoubtedly be raised at the NPT Review Conference, and will form the context for agreement and advancement of any EU proposals in this area.

Changing the IAEA's ability to address non-compliance issues

NPT safeguards non-compliance issues are dealt with currently by the full IAEA Board of Governors, which may include representatives of both states that are not party to the NPT and those inside it that are the subject of non-compliance claims. President Bush's February 2004 speech at the National Defense Academy contained a proposal to address the latter issue by the creation of a special committee of the IAEA Board of Governors. A US working paper to the 2004 NPT Preparatory Committee (PrepCom) contained specific proposals for the 'adoption by the IAEA Board of Governors of practices and procedures that would suspend from the Board or the Special Committee any state . . . under investigation for nonproliferation violations'.[18] Both these proposals are candidates for inclusion in the EU Common Position at the Review Conference.

Enhancing the IAEA safeguards system's detection abilities

Various statements, reports and working papers by state delegates at the 2004 PrepCom called for the existing Comprehensive Safeguards Agreements (INFCIRC/153) plus the Additional Protocol (INFCIRC/540) to be recognised formally as the new safeguards standard for all NPT parties. This would enhance the IAEA's ability to detect, and thus deter, undisclosed nuclear activities and materials. The United States has stressed that the 'implementation of the Additional Protocol should become a key indicator of an NPT party's commitment'[19]– in short, that it should be one criterion for judging a state to be in compliance with the NPT. A number of states have also suggested that it should become a condition of nuclear supply to both NPT and non-NPT parties by the end of 2005.[20] A German proposal has gone further by requiring it to 'be made the "standard" for the implementation of Art. III, and a prerequisite for the granting of cooperation and assistance in line with Art. IV'.[21] These are all proposals that should be supported by the EU.

18. 'Recommendation on IAEA Safeguards' #6, p. 4, NPT/CONF.2005/PC.III/WP.19, 'Recommendations to the 2005 NPT Review Conference on strengthening the implementation of articles I, II, III, IV', working paper submitted by the United States (2004 PrepCom); http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/332/52/PDF/N0433252.pdf?OpenElement.

19. 'Recommendation on IAEA Safeguards' #4, p. 3, NPT/CONF.2005/PC.III/WP.19, 'Recommendations to the 2005 NPT Review Conference on strengthening the implementation of articles I, II, III, IV', working paper submitted by the United States (2004 PrepCom); http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/332/52/PDF/N0433252.pdf?OpenElement.

20. Ibid.

21. Section 1, p.2, NPT/CONF.2005/PC.III/WP.16, 'Compliance', working paper submitted by Germany; http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/331/27/PDF/N0433127.pdf?OpenElement.

These proposals will meet opposition from some states of the Non-Aligned Movement (NAM), especially those in the Middle East, who argue that it is more important for all states (i.e. Israel) to sign and implement a Comprehensive Safeguards Agreement. Thirty-nine states parties have not brought into force an INFCIRC/153 agreement with the IAEA, even though this is mandatory under the NPT. In a working paper, the NAM has indicated that 'international efforts towards achieving universality of comprehensive safeguards' should not 'wither away in favour of pursuing additional measures and restrictions on non-nuclear-weapons-states, which are already committed to non-proliferation norms, and which have renounced the nuclear-weapons option.'[22] However, the NAM demand is one which should also be supported by the EU, and it could back this up by offering practical assistance to non-compliant states that are bringing an INFCIRC/153 safeguard agreement into force.

Structuring the UNSC's responses to nuclear proliferation

The UNSC's role in relation to nuclear proliferation has been under discussion since 1991, in part because of the difficulties it had during the 1990s in responding to the challenges posed by the situation in Iraq and the DPRK. The most obvious development in this area was the passing of UNSC Resolution 1540 in April 2004, adopted under Chapter VII of the Charter, setting up machinery to strengthen its ability to monitor the potential threat of nuclear materials and weapons reaching non-state terrorist groups.[23] Its basis was concern that non-state actors, 'may acquire, develop, traffic in or use nuclear, chemical and biological weapons and their means of delivery'.[24] It requires that states, 'the sole legitimate possessor of WMD-related materiel', take measures to prevent non-state actors acquiring, manufacturing or using such materials for weapons, particularly in connection with terrorist activities.[25] These measures include effective domestic legislation embracing physical protection, export controls, accounting and security provisions, criminalisation of such acts and law enforcement.

The UNSC committee created by this resolution has so far concentrated its efforts on monitoring controls over materials within states and making proposals to strengthen them. It may prove

22. NPT/CONF.2005/PC.III/WP.24, working paper submitted by Malaysia on behalf of the Group of Non-Aligned and Other States Parties to the Treaty on the Non-Proliferation of Nuclear Weapons; http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/343/81/PDF/N0434381.pdf?OpenElement.

23. UN Security Council Resolution 1540, April 28, 2004; <http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/328/43/PDF/N0432843.pdf?OpenElement>.

24. Quoted in Barry Kellman, `Criminalization and Control of WMD Proliferation. The Security Council Acts', *The Nonproliferation Review*, Summer 2004, p. 143.

25. William Walker, 'Weapons of Mass Destruction and International Order', *Adelphi Paper* 370, p. 74.

possible to extend this to the provision of advice on effective standards of state governance to prevent non-authorised nuclear-related development work taking place, as well as manufacturing activities that contribute to transnational procurement networks. A legal framework to criminalise illegal trading would also support these arrangements. Furthermore, the President of the UNSC made a Declaration in January 1992 that the proliferation of WMD represented a threat to international peace and security, but the Council has yet to discuss specific measures to address this.

It will be important, therefore, that the EU should support developments facilitating the UNSC's ability to take action in these areas. One option would be to create a semi-permanent Committee on WMD Proliferation alongside the Committee on Terrorism to monitor and hold information on alleged proliferation activities. Also, the IAEA has great difficulty in acting as a forum for the discussion of non-compliant weaponisation by NPT NNWS parties, and currently the UNSC is the only venue for this, given the precedent of its handling of Iraq's WMD disarmament from 1991 onwards. This role needs to be developed. So too does the establishment of predetermined procedures for dealing with actions that either have proliferation significance or are related to NPT withdrawal. Germany has taken the lead in this by proposing that the UNSC should draw up a 'Code of Conduct' for 'dealing with serious violations of the NPT', including provision for automatic responses. All of these ideas need to be pursued and detailed by the EU with a view to reaching consensus on them at the Review Conference.

Creating NPT institutions that are competent to address non-compliance issues

The NPT text does not provide for any permanent Treaty institutions. There is moreover a gap concerning weaponisation between the objectives of the IAEA safeguards system and NPT non-compliance. As a consequence several NPT parties have put forward proposals for the creation of more permanent NPT institutions over the last 15 years, though none has been agreed and implemented. Canada has now focused on this issue, with a series of working papers to the PrepCom for the 2005 Review Conference on the 'institutional deficit'.[26]

26. NPT/CONF.2005/PC.III/WP.1, 'Overcoming the institutional deficit of the NPT', working paper submitted by Canada; http://daccessdds.un.org/doc/UNDOC/GEN/N04/301/49/PDF/N0430149.pdf?OpenElement.

Existing proposals fall into three areas: a permanent NPT secretariat and/or point of contact; an executive and/or compliance committee; and meetings of the parties that have decision-making powers on both a regular and emergency basis. All face significant opposition from groups of states parties. Some of them regard existing arrangements as adequate for the tasks involved, and that the core problem is to make the UNSC work effectively in the non-compliance context. Others regard the idea of a compliance committee as unworkable, as it would degenerate into competitive arguments over non-compliance in both the disarmament and non-proliferation areas. Yet others argue that the NPT gives decision-making powers to the Review Conferences alone, and that therefore to extend it to other bodies would need amendments to the Treaty. Finally, there are those who point to the continuing role of the three depositary states in the Treaty, arguing that only they can convene meetings of a compliance committee or an emergency meeting of the parties. Thus although the issue of institutional reform will undoubtedly be raised and discussed at the 2005 Review Conference, it remains uncertain whether any EU consensus could be forged on these issues.

Non-compliance, codes of conduct and withdrawal from the NPT

In June 2004 the IAEA Director-General warned states that the NPT withdrawal provisions needed reinterpretation, and that the processes of the NPT required modification to ensure 'the integrity' of the Treaty.[27] He argued that 'at a minimum, notice of NPT withdrawal should prompt an automatic review by the Security Council', as 'any nation invoking this escape clause is almost certainly signaling its intent to develop nuclear weapons'.[28] Some NPT parties have supported his wish to clarify and augment the arrangements for withdrawal from the Treaty contained in Art. X.1 and generate a Code of Conduct for all NPT parties in such circumstances. Germany has called for structured and clarified withdrawal procedures; structured communications between NPT members; and structured reactions to a withdrawal.[29] In addition, it has sought mandatory written reasons for, and notification of, withdrawal to be sent to all NPT parties; mandatory consultations with NPT parties by a state contemplating withdrawal; the creation of 'a list of criteria relating to the definition of the "extraor-

27. Mohamed al-Baradei, 'Nuclear Non-Proliferation: Global Security in a Rapidly Changing World', keynote address to Carnegie International Non-Proliferation Conference, 21 June 2004; http://www.ceip.org/files/projects/npp/resources/2004conference/speeches/elbaradei.doc.

28. Ibid.

29. NPT/CONF.2005/PC.III/WP.15, 'Strengthening the NPT against withdrawal and non-compliance: Suggestions for the establishment of procedures and mechanisms', working paper submitted by Germany; http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/331/08/PDF/N0433108.pdf?OpenElement.

dinary event" that has triggered withdrawal'; and agreement to refuse to recognise the withdrawal of any state deemed non-compliant with Treaty provisions.[30] Finally, it has called for the establishment of effective communication procedures between the parties in the event of future non-compliance, including establishing 'a formal point of contact system' and procedures for convening 'extraordinary conferences' of the NPT parties.[31]

Germany has also suggested that structured reactions to withdrawal might include the condition that all equipment and technology transferred to a state for peaceful purposes must remain 'restricted to peaceful uses only [and] subject to IAEA-safeguards'; the inclusion of IAEA safeguards conditionality in all future nuclear supply agreements; 'demands for the immediate return to the supplier of all material and technology delivered under Art. IV of the NPT'; and a reaffirmation that Treaty breaches prior to the end of the withdrawal period remain accountable under international legal principles. France has also directed attention to some of these issues in a working paper on strengthening nuclear non-proliferation.[32] This emphasises the need for the UNSC to apply the principles of international law to acts of non-compliance committed while party to the Treaty; the return or dismantlement of facilities, equipment, or technologies acquired prior to NPT withdrawal; and the inclusion of clauses in nuclear transfer agreements forbidding the use after withdrawal of nuclear benefits gained through the Treaty.[33]

There is common ground among EU states on the general need to agree to more rigorous methods of reacting to withdrawal decisions and some guidelines for them, and this should be in the EU Common Position. Views may differ, however, on the specific formulations involved, and it may be necessary to limit its content at this stage to general propositions rather than detailed proposals.

Constraints on the nuclear fuel cycle

The non-declaration to the IAEA of Iran's enrichment programme (and that of Libya prior to 2003) has focused international attention on two 'break-out' scenarios. One is where a state clandestinely acquires dual-use nuclear technology by transfer from a non-state entity. The second is where a state acquires a large enrichment programme legitimately; operates it initially under IAEA safeguards; withdraws from the NPT and its IAEA safeguards obligations while

30. NPT/CONF.2005/PC.III/WP.15, Section 1, pp. 1-2.

31. NPT/CONF.2005/PC.III/WP.15, Section 2, p. 2.

32. NPT/CONF.2005/PC.III/WP.22, p. 4, 'Strengthening the nuclear non-proliferation regime'; http://ods-dds-ny.un.org/doc/UNDOC/GEN/N04/337/21/PDF/N0433721.pdf?OpenElement.

33. Ibid.

in good standing; and when free of the NPT's constraints uses its 'peaceful' facilities to make materials for nuclear devices.[34] These scenarios have led to proposals for action to pre-empt similar situations in future. Some have already been discussed above, but the more drastic suggestion has been to either prevent all states which have not already constructed the relevant 'sensitive' (i.e. enrichment and reprocessing) plants from doing so, or to suspend their commissioning for a period of at least five years.[35] In parallel, proposals have been advanced for the creation of multinational commercial consortiums to guarantee future supplies of reactor fuel for peaceful purposes through IAEA channels. Participating in such activities would also assist a state to convince others of its intention to remain compliant with the NPT. One further proposal has been that a state found to be non-compliant with safeguards over its dual-use facilities should be forced to close them down and dismantle them, but be guaranteed a supply of fuel for its peaceful nuclear activities through the IAEA.[36] Given current negotiations between Iran and the EU three (France, Germany and the United Kingdom) over Iran, the minimum the EU should attempt in this area is to advocate a multiyear moratorium, with a view to negotiating a more permanent 'freeze' during this period.

The way forward for the EU

The NPT currently stands at a turning-point. The Treaty will either continue to be perceived as playing a vital role in international security or it will cease to do so, heralding the prospect of many more countries acquiring nuclear weapons. Of the representatives of the 189 parties to the Treaty which will convene at the Review Conference in New York on 2 May 2005, many will be from the 25 EU member states. Collectively they can be a very effective multilateral voice in determining the future credibility of the NPT and its associated regime. Much depends on the EU parties forging a Common Position on compliance and non-compliance, and on the provisions for withdrawal in advance of the Review Conference. In this context, the basic building blocks for a common position on compliance already exist in consensus documents such as the June 2004 G-8 Action Plan,[37] the Japan–EU Joint Declaration[38] and the US-EU Declaration.[39]

The detection of proliferation in a timely and convincing manner is becoming increasingly difficult in cases where dual-use tech-

34. 'Report of the UN High-level Panel on Threats, Challenges and Change', para. 108.

35. Mohamed al-Baradei, 'Seven Steps to Raise World Security', *Financial Times*, 2 February 2005; http://www.iaea.org/NewsCenter/Statements/2005/ebsp2005n001.html.

36. 'Countering the proliferation of weapons of mass destruction', Written Ministerial Statement by the UK Foreign Secretary, Jack Straw, London, House of Commons, 25 February 2004.

37. 'Action Plan on Nonproliferation, adopted at the June 2004 G-8 Sea Island Summit'; http://www.g8usa.gov/d_060904d.htm.

38. 'Japan-EU Joint Declaration on Disarmament and Non-Proliferation', 22 June 2004; http://jpn.cec.eu.int/home/showpage_en_newsobj766.1.php.

39. 'U.S.-EU Declaration on the Non-proliferation of Weapons of Mass Destruction', 26 June 2004; http://www.state.gov/p/eur/rls/fs/36891.htm.

nologies are involved – and so too is the reverse case of a state which seeks to convince the international community that its 'peaceful' programme is just that, especially if it has been found, or been suspected of being, non-compliant in the past. Moreover, the Libyan case suggests a new scenario: states using transnational procurement networks, then withdrawing from the NPT in a situation where they appear to have no nuclear infrastructure and thus no possibility not to comply. Providing proof that a state has embarked on the path of proliferation before it explodes a nuclear device or declares itself to be a nuclear-weapon state is complex and difficult. Much of the relevant evidence will be technical and its implications contestable, especially if dual-use facilities are involved. This leads to the argument that denying technology is the only way of assuring non-proliferation in this situation, and that a key issue is for states to positively demonstrate they are complying and above suspicion. An EU-type regional nuclear control regime, as envisaged for example in Africa under the Treaty of Pelindaba, would be one mechanism for doing this. Another would be to agree and implement an Additional Protocol. A third would be to further strengthen and expand the work and membership of the NSG. Creating standard mechanisms for addressing proliferation before it occurs could also have a significant deterrent effect.

Another key issue is what the objective(s) of non-compliance procedures should be: to ensure a return to the *status quo ante* without any apparent reward for non-compliance; to achieve the same objective but at the cost of undermining the regime by offering positive benefits for a return to compliance; or to punish the non-compliant in order to deter others by acts such as the forced dismantlement of all nuclear facilities or all dual-use facilities in a non-compliant state. And what should be the objective when a return to the status quo ante appears impossible, with or without rewards?

A number of proposals have been advanced for responding to compliance and non-compliance. For example, a state withdrawing from the NPT should be required to return all the aid the IAEA has provided for development purposes to the Agency, or all its imported technology. In addition, IAEA safeguards agreements could be rewritten so that they become free-standing instruments and thus continue to be operative even if a state withdraws from the NPT, thus limiting the practical advantages of withdrawal.

Negotiating such agreements would also serve as a further means whereby states parties could confirm their non-proliferation credentials, and thus strengthen the trust the international community has in them. For the EU to include this in its Common Position would be a distinctive EU initiative.

A further initiative could involve the establishment of a robust NPT withdrawal mechanism by agreeing that: (a) specific reasons for withdrawal are to be given to the UNSC and NPT parties; (b) any NPT withdrawal notice has to be placed on the agenda of the UNSC and that body has to specify in advance a set of guidelines on how it would respond in such circumstances; (c) NPT withdrawal shall be deemed no longer possible politically and/or legally, given the 2000 Review Conference's Final Document statement on nuclear arms control treaties being 'irreversible'; and (d) only states in good standing with the IAEA safeguards system can withdraw, and that the IAEA has the right to continue to investigate any allegations of a possible breach of the agreement after withdrawal.

These initiatives could be linked to discussions on the creation of a special body to deal with nuclear proliferation issues, either within the UNSC or under NPT auspices. This could link together the compliance and non-compliance activities of the IAEA and the Council at working level. This body might also deprive any potential withdrawing state, or one under investigation for allegations of non-compliance, of any voting rights. Consequently, this could allow for decisions to be made without the requirement to achieve a consensus, as is currently the procedure for NPT Review Conferences.

The main challenge facing EU states in the compliance and non-compliance areas as the NPT Review Conference approaches thus lies in devising a multifaceted approach to both demonstrating compliance and addressing non-compliance. It may also involve difficult trade-offs at the NPT Review Conference with the NAM and other groups between these issues and those of nuclear disarmament and peaceful uses. Whether this should involve similar procedures, such as reporting, in the areas of disarmament, non-proliferation and peaceful use is also likely to be the subject of considerable debate.

In practical terms, the way forward will involve exploring issues that go beyond the areas of EU consensus that have already been identified, such as strengthening the operations of the NSG and

other export control activities, and addressing some of their 'loopholes'; providing assurances of supply of reactor fuel; and making the Additional Protocol a safeguards standard. At the same time, it will be desirable to create new mandatory commitments that enable the compliant members of the NPT community to be clearly distinguished from those who are not, and to clarify responses to non-compliance designed to return states to compliance or deter any move towards non-compliant actions. Such commitments would include a suspension of new enrichment and reprocessing activities for a limited period of, say, five years, linked to assured multinational supply arrangements; recognition of the part that export controls play in implementing NPT commitments; enhancement of the role and capabilities of the IAEA Board of Governors and the UNSC in handling compliance issues, and in particular their ability to address weaponisation; agreeing to suspending all nuclear fuel cycle cooperation immediately in the event of non-compliance; supporting the establishment of an IAEA special committee for the implementation of safeguards; and agreeing to the creation of more robust mechanisms for dealing with, and responding to, cases of withdrawal from the NPT. Only by adopting such measures, either by consensus at the Review Conference or by other means, will the global NPT-based non-proliferation regime be capable of preventing future generations of EU citizens spending their lives in a global 'nuclear-armed crowd'.[40]

40. 'Life in a Nuclear Armed Crowd' is the title of Ch. VI of Albert Wohlstetter et al., *Swords into Ploughshares: The Military Potential of Civilian Nuclear Energy* (Chicago: University of Chicago Press, 1979), one of the classic texts on nuclear non-proliferation.

Nuclear disarmament: how to make progress

Bruno Tertrais

The outlook for the 2005 Review Conference

A bleak picture

The seventh NPT Review Conference will take place at the United Nations in New York on 2-20 May 2005. The context in which it will unfold is very different from that of the previous Review Conference in 2000. At that time, the international community was primarily preoccupied with the consequences of the 1998 South Asia nuclear tests and the announced deployment by the United States of a National Missile Defense system.

These two issues have been relegated to the background. The most important evolution related to the purpose of the Treaty is *dramatically increased concern about state proliferation* following a number of worrying events: revelations about a hidden nuclear programme in the Democratic People's Republic of Korea (DPRK) and the subsequent withdrawal of the DPRK from the NPT; the revelation of the existence of a massive network of nuclear transfers led by prominent Pakistani officials, including in particular of centrifuges for the enrichment of uranium; evidence gathered by the IAEA of significant hidden Iranian nuclear activities; questions about past nuclear activities in other countries such as South Korea and Taiwan; and, finally, difficulties for IAEA inspectors to access Brazilian nuclear sites. At the same time, following the 11 September 2001 attacks, fears of nuclear terrorism have been heightened. US policy continues to affect NPT members' perception of the implementation of the Treaty: the US withdrawal from the ABM Treaty, the Nuclear Posture Review (NPR) unveiled in 2002, and the deployment of the first ballistic missile interceptors in late 2004 have raised concerns (be they legitimate or not) among some NNWS and other NWS. Indeed, many NNWS and observers

argue that the NWS have failed to fulfil their own Treaty obligations, in particular the 'Thirteen Steps' contained in the 2000 Review Conference's Final Document.

Amidst these worrying developments there are some more positive ones, but they amount to no more than the silver lining of an otherwise bleak picture. Washington and Moscow have concluded a new arms control treaty reducing the number of their operationally deployed strategic nuclear warheads. Libya has renounced all weapons of mass destruction. IAEA inspections are getting more efficient as the Additional Protocol (AP) gets more signatures and as inspectors learn more and more about the way countries have cheated in the past. The North Korean and Iranian problems are tackled by multilateral negotiations. Finally, due to 11 September and negative proliferation developments, the international community is devising new schemes to enhance proliferation controls.[1]

Specific issues on the table in New York will include compliance with Art. II, compliance with Art. VI, universality and the concept of a WMD-free zone in the Middle East. Compliance with Art. II will be put forward by the United States among others, raising 'cases of concern' such as North Korea and Iran. Several participants will discuss the possibility of closing the loophole that allows a Party to enjoy the benefits of Art. IV, develop the tools needed for a military option and then withdraw under the conditions of Art. X. At the same time, the NAM and the NAC will insist that NWS are not implementing Art. VI and the 'Thirteen Steps' agreed upon in the concluding document of the 2000 Review Conference.[2] They will ask for more arms reductions and the reduction of the role of nuclear weapons in defence policies (including through stronger NSAs). They will argue also, along with most NWS, in favour of the entry into force of the Comprehensive Test Ban Treaty (CTBT) and the opening of negotiations on a Fissile Material Cut-off Treaty (FMCT). Finally, universality and the Middle East will also figure prominently on the agenda.

In other words, Western countries will ask for more nuclear non-proliferation, developing countries will ask for more nuclear cooperation, and the New Agenda Coalition will ask for more nuclear disarmament.[3]

1. *Inter alia*, the Proliferation Security Initiative (PSI), the adoption of UNSCR 1540, as well as the ideas put forward by IAEA Secretary-General Mohamed al-Baradei and US President George Bush to reinforce the regime.

2. See 2000 Review Conference of the Parties to the NPT, Final Document, NPT/CONF.2000/28 (Parts I and II), para. 15.

3. The NAC includes Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa and Sweden.

The need for a realistic approach

In light of these negative developments and of the disagreements among the Parties, what should be the primary goals pursued by participants at the Review Conference, in particular the EU? These should be, first, to preserve the *integrity* of the Treaty and, second, to preserve the *credibility* of the Treaty.[4] This means arriving at an outcome of the NPT Review Conference with which all parties are comfortable. Some will argue that it does not matter if the Review Conference ends inconclusively – and that it would be better to have no concluding document than one that does not really satisfy the Parties. They point out that some Review Conferences (that of 1990, for instance) ended without the adoption of a concluding document, and that the Treaty not only survived but was renewed indefinitely in 1995. Such an approach is risky. The dangers of proliferation, and the state of the non-proliferation regime, are probably worse in 2005 than they were 15 years ago. Most importantly, it can be argued that the extension of the NPT for an infinite duration precisely gives the Parties a responsibility to promote a new consensus on its interpretation and implementation.

Realism should be our guideline. Let us recognise the reality: universality of the NPT is today a pipe dream. The three countries that have chosen to stay out of the Treaty (India, Israel and Pakistan) now have operational nuclear forces in which they have invested a lot, politically and financially. And the conditions under which they have embarked on nuclear programmes have not disappeared. India still wants to be able to 'balance' the Chinese nuclear force, and sees nuclear weapons as a symbol of technological prowess as well as great power status. For Pakistan, nuclear weapons are still viewed as a life insurance in light of India's massive conventional capabilities – and the importance of the country in the 'war on terror' limits the ability of the West to press for denuclearisation. Israel faces a much improved geostrategic situation than four decades ago, but still lives in a neighbourhood where most countries have not recognised its existence, including some which have or are developing weapons of mass destruction and ballistic missiles. Universality is thus today only a distant goal whose attainment would require drastically altered geopolitical conditions. (This does not mean that states which are not parties to the Treaty should not, for instance, be called upon to comply with relevant provisions of the NPT.)

4. The EU strategy against proliferation of WMD specifically says that 'the NPT must be preserved in its integrity'; op. cit., para. 6.

Likewise, the Israeli and Iranian nuclear programmes, the widely suspected chemical (as well as biological, to a lesser extent) weapons arsenals of several countries of the region, and continued instabilities in the area, make the prospect of a WMD-free zone in the Middle East extremely unrealistic.

Promoting a consensual interpretation of Article VI

The credibility of the NPT and the success of the 2005 Conference will rest partly on the ability of participants to agree on nuclear disarmament issues. A realistic bargain would be for NNWS to recognise that nuclear disarmament is a distant goal, and for the NWS to satisfy the legitimate worries of NNWS.

The construction of a consensual interpretation of Art. VI should avoid two temptations. One consists in claiming that the NPT ultimately rests on a close link between non-proliferation and disarmament. During the 1990s, one frequently heard or read that the latter was a condition of the former.[5] The NAC has since then adopted a more moderate position, but still argues that nuclear non-proliferation and nuclear disarmament are '*mutually reinforcing processes*' or '*two sides of the same coin*'.[6] The NAC's approach is shared by the European Parliament, as witnessed in a resolution adopted in February 2004 which strongly emphasised the disarmament dimension of the NPT.[7] However, this view should be rejected.

The NPT, as argued above, rests on a bargain that includes a series of compensations given to those who agree to give up the possibility of developing nuclear weapons, the promise of disarmament being only one of them. States renouncing nuclear weapons have obtained much more than just the vague prospect of a global abolition of such weapons. Besides, the disarmament clause was added late in the negotiating process, through the Indian and Swedish proposals of 1965.[8]

Also, the Art. VI commitment remains ambiguous and open to different interpretations. For all practical purposes, it puts nuclear disarmament and general and complete disarmament on an equal footing: Art. VI concerns '*each of the Parties*', not just the NWS; the negotiations that are called for refer equally to nuclear disarmament and to a treaty on general and complete disarmament; and the Preamble to the Treaty makes it clear that nuclear abolition would be '*pursuant to a treaty on general and complete disar-*

5. For instance, the report of Tokyo Forum stated that 'The world faces a choice between the assured dangers of proliferation or the challenges of disarmament'; 'Facing Nuclear Dangers: An Action Plan for the Twenty-First Century', Report of the Tokyo Forum for Nuclear Non-Proliferation and Disarmament, Japan Institute of International Affairs and the Hiroshima Institute, Tokyo, 1999, p. 57.

6. Mision Permanente de Mexico, 'Special Time Statement on Nuclear Disarmament by Ambassador Luis Alfonso de Alba on Behalf of the New Agenda Coalition at the Third Session of the Preparatory Committee of the 2005 NPT Review Conference', New York, 30 April 2004; and 'Non-proliferation and disarmament go hand in hand', *International Herald Tribune*, 22 September 2004..

7. See 'European Parliament resolution on nuclear disarmament: Non-proliferation Treaty Review Conference in 2005 – EU preparation of the third NPT Preparatory Committee' (New York, 26 April to 7 May 2004), adopted on 26 February 2004.

8. See Glenn T. Seaborg with Benjamin S. Loeb, *Stemming the Tide* (Lexington, Mass.: Lexington Books, 1987).

mament'. In addition, Art. VI concerns the '*cessation of the arms race*' – viewed by the drafters as a critical step towards averting the risk of nuclear war – as much as nuclear disarmament per se.

Furthermore, the NAC's interpretation of the implementation of Art. VI is exceedingly negative. The nuclear arms race has ended. The CTBT, a key concern of NPT negotiators (mentioned in the Preamble) has been concluded. A dispassionate reading of the US record on its implementation of Art. VI shows that Washington's actions in favour of nuclear disarmament are impressive; the same can be said for those of the British and French over the 1990s. Only a narrow focus on the quantitative and irreversible stockpile reductions can lead to the conclusion that the NWS have failed to implement Art. VI since 1995 or, worse, have violated it. The idea that non-compliance with Art. VI by the NWS should be put on a par with non-compliance with Art. II by some NNWS stretches the imagination.

Finally, the NAC's approach, though shared by many NNWS and NGOs, is questionable, for there is little evidence of a direct link between disarmament and non-proliferation. Starting in 1987 and until the mid-1990s, there were significant bilateral or unilateral nuclear disarmament moves by four NWS (France, Russia, the United Kingdom and the United States). There is no evidence that these moves had the slightest impact on the nuclear programmes of India, Iraq, Iran, Israel, Libya, North Korea or Pakistan.

Another temptation would thus be to claim that we should just go 'back to basics' and completely de-emphasise the disarmament commitment. The idea would be a return to the spirit of the original draft Irish resolutions put to the UN General Assembly in 1958 and 1959, which launched the NPT debate, and in which disarmament was not part of the envisioned bargain. In this view, nuclear abolition would just be a very distant goal that states must strive for, nothing more, and Art. VI issues should not be at the forefront of the NPT debate. In line with this interpretation, the Bush administration has argued that: '*We cannot divert attention from the violations we face by focusing on Article VI issues that do not exist.*'[9]

The logic underlying the original Irish resolutions of 1958 and 1959 is still valid to some extent. The idea that further proliferation might make nuclear disarmament more difficult is consistent with the current policy of most NWS, which argue that proliferation is a reason for them to keep their nuclear weapons. And the idea that the dissemination of nuclear weapons, if unchecked,

9. John R. Bolton, US Undersecretary of State for Arms Control and International Security, 'Statement to the Third Session of the Preparatory Committee for the 2005 NPT Review Conference', New York, 27 April 2004.

might get out of control, thus increasing the risk of accidental or cataclysmic nuclear wars, is not completely outdated.

However, this second view should equally be discarded, for it fails to take into account three important elements. First, Art. VI was essential in ensuring the NAM's support of the NPT. Second, the practice that most states parties have adopted since the Treaty's signature, in particular on the occasion of the Review Conferences, has been to emphasise the importance of Art. VI. Finally, it can be argued that the extension of the NPT in 1995 for an unlimited duration has affected the internal dynamics of the Treaty: the 'Principles and Objectives' adopted on that occasion, which heavily emphasise nuclear disarmament, were part of the 1995 deal.[10]

We should therefore look for the middle ground. So how could we construct a consensual interpretation of Art. VI and its implementation?

The NAM and the NAC should drop their insistence on strict adherence to the 'Thirteen Steps' included in the 2000 Final Document. A product of intense arms-twisting accepted only grudgingly by several NWS, the 2000 text is a real 'Christmas tree' which in retrospect appears exceedingly idealistic (in addition to being almost unacceptable to the Bush administration). Furthermore, it can be argued that what is often presented as being, for the first time, a clear-cut commitment by NWS to nuclear disarmament was in fact only a recommendation that Parties should adopt such an approach: the 'Thirteen Steps' were more prescriptive than descriptive.[11]

In fact, parties to the Review Conference should instead return to the 'Principles and Objectives' document of 1995. It can be argued that the 1995 document is more important than the 2000 one, for two reasons: first, because it was a quid pro quo for the indefinite extension of the Treaty; second, because it contained a firm commitment to implement disarmament measures, which the 2000 document does not, as seen above.[12] In addition, the NAM and the NAC should concede that under a broad interpretation of Art. VI, NWS have made significant efforts to reduce nuclear armaments. (Threat reduction efforts, for instance, are often significantly underappreciated.)

For their part, NWS should take into account the often sincere and therefore legitimate worries of NNWS, and promote progress in the main fields of the disarmament agenda.

10. See 1995 Review and Extension Conference of the Parties to the NPT, Final Document, Annex, Decision 2, 'Principles and objectives for nuclear non-proliferation and disarmament', NPT/CONF. 1995/32.

11. The Parties agreed to a list of items ('The Conference agrees on the following practical steps') which included more measures that would need to be taken (such as 'the early entry into force and full implementation of START II', for instance) than it included explicit commitments. The famous Step 6 ('An unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI.') can be read either as a commitment or as the expression of the wish for a commitment. See NPT/CONF.2000/28. By comparison, the 2000 document was much clearer. It read: 'The Conference . . . adopts the following principles and objectives: . . .)'. See NPT/CONF.1995/ 32.

12. One can also note that in may respects, the 2000 document appears more outdated than that of 1995: the Thirteen Steps, for instance, contain references to START-II, START-III and the ABM Treaty.

Advancing the disarmament agenda

Quantitative disarmament

The outlook for quantitative disarmament is rather bleak. The Strategic Offensive Reductions Treaty signed by Moscow and Washington in 2002 is arguably a step back: it amounts to a return to arms control rather than to progress on disarmament. (In fact, it is mostly a 'de-alerting' treaty.) The current US administration has no political or strategic incentive for further reducing its arsenal.[13] In addition, limited dismantlement capabilities on both sides create bottlenecks that preclude rapid destruction of nuclear warheads: more disarmament would merely lead to stockpiling. France and the United Kingdom consider that they have reached 'minimum deterrence' postures (the former has also dismantled its testing and fissile material production facilities), and China probably considers that it has yet to reach a level of strategic weaponry that it is comfortable with.

None the less, a number of steps can be envisaged which would reassure NNWS without excessive cost to NWS. Several of the following suggestions could not, if implemented, be effectively verified. However, they would serve as confidence-building measures and reinforce the set of norms that have been developing in the arms control arena over the last five decades.

- *A commitment by the five NWS to cap the size of their nuclear arsenals* at current levels, with an exit clause in the event that they see a 'radical change' in their security environment. (This would allow China or Russia, for instance, to take into account what they claim to fear, that is, the future deployment of missile defences by the United States to a point where the credibility of their deterrent would be threatened.)
- *A commitment by the five NWS to explore the possibility of a global ban on certain kinds of nuclear weapons* such as atomic demolition munitions (ADMs) or nuclear artillery, which to the knowledge of this author no nuclear-capable country is known to possess or develop currently. This appears to be a realistic way to take into account the desire by many Parties to see the arms control process being applied to the category of 'tactical' nuclear weapons, which raises intractable questions. One is that of definition.[14] Another is the fact that many nuclear systems have multiple functions (in particular some air-launched

13. The worries expressed by many countries and NGOs about the development of 'new nuclear weapons' by the United States appear excessive. The 2002 Nuclear Posture Review identified the multiplication of hard and/or deeply buried targets as a potential problem for the credibility of the US deterrent; it thus called for the development of technological solutions (nuclear and non-nuclear) to ensure that no class of significant targets remains out of reach of the US arsenal. However, it can be argued that this issue has been unduly placed at the forefront of the disarmament debate. First, there is no evidence that the 2002 NPR is a departure from the traditional role of US nuclear weapons, which is deterrence. Second, while the prohibition of research and development on new warheads with a yield of less than five kilotons has been lifted, the United States has currently no ongoing programme for the development of such warheads. (The Bush administration's new programmes are a feasibility study on the development of a new penetrator for existing warheads, and a research agenda on 'advanced concepts'.) Finally, the argument according the development of such systems could lead to a 'new arms race' is unconvincing: the dynamic of 'arms racing' refers to the offence/defence relationship and is not relevant to non-strategic weapons.

14. The exception is the US-Russian context, where tactical or non-strategic weapons systems could be defined as those systems not covered by the strategic arms reductions process, or, alternatively, those covered by the 1991-92 initiatives.

or sea-launched weapons). An initiative that refers to specific categories of weapons would be more helpful – bearing in mind that verification would remain a thorny issue in any case.

- *A ban on the deployment of nuclear weapons on foreign soil.* NATO nuclear sharing procedures would, however, be maintained as long as they were considered important by Atlantic Alliance members. (Art. I was meant to exclude a Multilateral Force, but not arrangements that already existed between the United States and other NATO countries.[15]) This means, for instance, that in peacetime Washington would be allowed to deploy US nuclear weapons only in the United Kingdom, which would be a sea change in NATO strategy. But the context in which these weapons were deployed has dramatically changed, and the cost-benefit analysis of maintaining them or withdrawing them has changed. Such a decision would create a norm against the future possibility that a nuclear-capable state transfers weapons to a NNWS under the guise of applying the same mechanism as NATO (the case of Pakistan and Saudi Arabia, for instance, comes to mind). It could also be part of a deal with Moscow – which has long complained about US deployments – that would include a tangible reduction and consolidation of nuclear weapons storage sites located in the western part of Russia.
- *The creation of a committee on nuclear disarmament*, to exchange views on the conditions which would permit the abolition of nuclear weapons and to discuss the technical challenges of verification of such abolition.[16]

Beyond promoting such ideas, the European Union should also, in line with its strong support for the irreversibility of disarmament measures, encourage the United States and Russia to apply START verification procedures to the Moscow Treaty. It could also, where possible, review its commitments to the 'Global Partnership' initiative so as to help Russia dismantle the weapons it has planned to eliminate more quickly.

15. According to the opinion voiced by an NPT negotiator quoted in Nigel Chamberlain, 'The MDA and the NPT: A Questionable Relationship', unpublished paper prepared for the Oxford Research Group, December 2004.

16. Likewise, a special committee on a WMD-free zone in the Middle East could be established. As in the case of nuclear disarmament, the goal of such a committee would be to help define the conditions under which such a zone could be established.

The entry into force of the Comprehensive Test Ban Treaty

The United States holds the key to the entry into force of the CTBT. It can be argued that a virtuous circle and a cascade of ratifications might follow from ratification by the US Senate: China, then India, then Pakistan, Israel, etc.

Still, the Treaty as it stands helps in transforming the current moratorium into a real norm of behaviour. Out of 174 states that have signed the CTBT, 120 have ratified it, including 33 Annex Two countries (in accordance with Art. XIV of the Treaty, it will enter into force once 44 states listed in Annex 2 to the Treaty have ratified it). Thus the norm is emerging. But there have been only four ratifications since the 2000 Conference. 54 countries, including 11 Annex Two countries, have not yet ratified. Those who have not ratified include three countries that could be called the 'easy cases' (Colombia, Indonesia, Vietnam) and eight other which constitute a category of 'hard cases' (China, DPRK, Egypt, India, Iran, Israel, Pakistan and the United States).

Support for the current moratorium and the importance of signatories to finance the CTBTO and its monitoring system should be clearly stated.[17]

In line with the Common Position adopted by the EU in 1999 on the early entry into force of the CTBT (as well as the Action Plan adopted in 2003 to implement the Common Position), the European Union should also use conditionality in its dealings with the three easy cases, and on hard cases such as Egypt and Iran. It should also, of course, continue to promote the CTBT in its contacts with the US Senate.

Finally, the question of a 'provisional application' of the Treaty should be considered. This legal mechanism included in the 1969 Vienna Convention on Law of Treaties is rarely used, but there have been precedents in this regard as far as arms control is concerned. It therefore deserves consideration, especially since a long delay in the entry into force of the CTBT could free the signatories from their obligations.[18]

17. At the time of this writing (January 2005), the US Congress had reduced the $29.8 million requested by the Administration to shorten the time needed to conduct nuclear testing to $7 million (David Ruppe, 'Congress Cancels Funding for New Weapons Research', *Global Security Newswire*, 22 November 2004). The Bush administration insists that it currently has no plans to resume nuclear testing.

18. Under the 1969 Vienna convention, signatories of a treaty should ' refrain from acts that would defeat the object and purpose' of the treaty. However, this obligation falls in case the entry into force is unduly delayed. A cogent and detailed case for the provisional application of the CTBT has been made by Rebecca Johnson in 'Beyond Article XIV: Strategies To Save the CTBT', *Disarmament Diplomacy* 73, November 2003.

The question of the Fissile Material Cut-off Treaty

There is good news and bad news concerning the FMCT. China does not insist as much as it did in the past on the linkage between an FMCT and negotiations on the Prevention of an Arms Race in Outer Space (PAROS). The United States has shown a willingness to discuss the issue. However, the Administration – along, it should be said, with some in the US arms control community – believes that an FMCT cannot be verified effectively.[19] Costs and intrusiveness of inspections are said to be the main reasons, as well as the potentially dual nature of nuclear material production facilities.[20]

A first step would be to agree on a general moratorium, as in the case of nuclear testing where a moratorium preceded the conclusion of the CTBT. As a second step, negotiations on an FMCT could begin even without preliminary agreement on the question of verification.

If European Union members believe that an FMCT *could* be verified, then they would need to demonstrate it. The EU should commission a study that would make use of its considerable nuclear expertise, at the national level and at the level of EURATOM, to make a convincing case on verification.

Nuclear doctrines and the question of security assurances

Another key issue is the role of nuclear weapons in defence policies and, more specifically, the question of security assurances – an item to which the EU Strategy Against Proliferation of Weapons of Mass Destruction refers specifically.[21] NNWS would like to see the role of nuclear weapons diminished, and the negative security assurances (NSAs) given by the NWS in 1968 and 1995 (commitments to refrain from using nuclear weapons against NNWS) reinforced, ideally in the form of a treaty. While not part of the NPT, security assurances were part of the bargain made with the NAM to ensure their acceptance of the Treaty.

However, the reinforcement of NSAs appears politically difficult. Such a reinforcement would run counter to the post-Cold War trend observed among nuclear-capable states. Some countries, such as Russia, tend to see nuclear weapons as an instrument to compensate for perceived or real conventional deficiencies. Most importantly, a majority of nuclear-capable states consider that possession of nuclear weapons helps deter the use of biological and chemical weapons as well as, perhaps, attacks carried out

19. Wade Boese, 'Bush Shifts Fissile Material Ban Policy', *Arms Control Today*, September 2004.

20. 'Don't trust, don't verify', *The Economist,* 4 September 2004; and Ambassador Jackie Sanders, 'Remarks during a United Nations First Committee Plenary Session of Debate', New York, 16 October 2004.

21. 'Positive and negative security assurances can play an important role: they can serve both as an incentive to forego the acquisition of WMD and as a deterrent. The EU will promote further consideration of security assurances', op. cit., para. 23.

using other non-conventional means. (Alleged 'new roles' for nuclear weapons such as an emphasis on deterrence of grave chemical or biological threats among NWS are not new, and do not necessarily signify a lowering of the nuclear threshold.)

Furthermore, it is not at all certain that the reinforcement of NSAs would have a significant role in the prevention of nuclear proliferation. NSAs are essentially confidence-building measures.[22] It remains to be seen whether their reinforcement would diminish the temptation by some countries to embark on nuclear programmes. It is dubious that turning a political commitment of non-use into a legally binding one would make a difference for any nuclear aspirant. In addition, NSAs do not address some of the root causes of proliferation such as regional standing, the quest for independence or the perception (right or wrong) that nuclear weapons can give great power status.

More generally, the call for a reduction in the role of nuclear weapons in defence policies misses an important point. The role of nuclear guarantees (which are positive security assurances in a broad sense) in preventing proliferation should be acknowledged. The generic assurances of assistance in the event of a nuclear attack given in 1968 and 1995 are political commitments which are probably not enough to reassure states that feel insecure.[23] On the other hand, the role of the US security guarantee in preventing further nuclear proliferation in Europe and Asia during the Cold War has probably been essential.

In fact, a reinforcement of NSAs might even be counter-productive. Giving up the role of nuclear weapons to deter non-nuclear threats might lead to less security for NWS and the countries they protect. A general 'no-first-use' posture, for instance, could increase the risk of use of chemical and biological weapons, since countries using such weapons would no longer fear nuclear retaliation (assuming, of course, that they believed the assurances given).[24] And countries currently protected by a nuclear umbrella could perceive such a commitment by their protector as an erosion of the security guarantee that they enjoy, with the risk of a renewed interest in national nuclear weapons programmes.

Thus *reducing the role of nuclear weapons in defence doctrines could lead to less overall security, not more*. It would run counter to the spirit of the 2000 document, which stated that steps leading to nuclear disarmament should be '*based on the principle of undiminished security for all*'.[25] To take this preoccupation into account and ensure the

22. NSAs in a broader sense can have a political value to manage proliferation crises. For instance, US officials sought to take into account North Korean stated worries by stating on several occasions in 2002 that the United States had 'no intention to invade' or 'no intention to attack' the DPRK. This model could be applicable to other cases. For instance, the commitment could be made as part of a hypothetical future 'grand bargain' with Iran.

23. The 1968 commitment was judged insufficient by India, for instance, which said it felt threatened by the emerging Chinese nuclear arsenal. But it was valued by other states. See George Bunn and Roland Timerbaev, 'Security Assurances for Non-Nuclear-Weapon States', *The Nonproliferation Review*, Fall 1993.

24. One should mention that it is difficult to ask for a diminution of the role of nuclear weapons and expressing horror at the prospect of an increase of missile defences in the world. Missile defences could indeed lead to some forms of local or regional 'arms racing', but they also remain one of the surest ways for states to rely less on the threat of nuclear retaliation.

25. NPT/CONF.2000/28 (Parts I and II), para. 9, p. 15.

acceptance of a legally binding instrument by all NWS, a hypothetical treaty on NSAs would only be feasible if it were complemented by reservations or interpretative declarations (such as those made by France, the United Kingdom or the United States when endorsing Nuclear Weapon-Free Zones): the right to 'belligerent reprisals' in the event of a chemical or biological attack, or the explicit mention of Art. 51 of the UN Charter. It remains to be seen whether NNWS would see any merit in a legally binding arrangement that includes such caveats.

Other steps can be suggested:

- Ask the NWS to solemnly *declare that their nuclear weapons are for deterrent purposes only*. Such a commitment (which should not pose any problem, since it is consistent with the declared doctrines of the five NWS) would be a new form of security assurance. Additionally, the NWS could be called upon to declare that their nuclear weapons could only be used, if ever, in extreme circumstances of self-defence. However, it should be noted that consensus on such a formulation, which draws on the language used by the advisory opinion given by the International Court of Justice in 1996, would be more difficult to obtain than the more limited option suggested above.
- Work towards the *full implementation of the BWC and CWC*. A drastically reduced biological and chemical risk would help to reduce the role of nuclear deterrence in defence policies, and thus reduce, to some extent, the 'attractiveness' of nuclear weapons.
- Discuss the possibility of a *generic positive security assurance of collective action given by the UN Security Council* that goes beyond the assurances given by the NWS in 1968 on the occasion of the signing of the NPT, and in 1995 on the occasion of the Treaty's renewal for an indefinite duration.[26]

Transparency and reporting

The call for more transparency and reporting was embedded in the 2000 Review Conference document, and at least one NWS (the

26. There have been numerous proposals to that effect over the years. A recent one was included in the UN Secretary-General's High-Level Panel on Threats, Challenges and Change Report, *A More Secure World: Our Shared Responsibility* (New York: UNO, 2004), para. 122.

United Kingdom) has been keen to demonstrate its commitment to transparency.

However, the post-Cold War context makes progress on these fronts somewhat difficult. As stockpiles decrease and unilateral disarmament measures are taken, NWS may want to preserve as much flexibility in their nuclear policies and thus be even less inclined than in the past to be transparent in their postures. It should be noted, however, that one European NWS (the United Kingdom) has taken steps in that direction since 1997.

Still, some progress might be possible, because there is a mutual interest in it. NNWS are interested in knowing more about the nuclear postures of NWS, but the latter are also interested in knowing more about the nuclear activities of NNWS. Measures of transparency that could be considered acceptable by the NWS include:

- *A detailed report by the United States and Russia on the implementation of the so-called Presidential Nuclear Initiatives* (PNIs) of 1991 and 1992, which included, in particular, the elimination of entire categories of nuclear weapons.
- *Information by NWS on the location of permanent deployments of nuclear weapons on European territory* (as defined, for instance, by the Conventional Armed Forces in Europe Treaty's geographical scope of application).

Such measures would be a realistic way to take into account the preoccupations expressed in particular by Central and Northern European countries about Russian tactical nuclear weapons.

Other ideas that could be discussed to promote transparency and reporting include:

- The US idea of a *comprehensive database of research reactors and fissile materials* around the world.[27]
- A *declaration by Parties to the NPT on their ballistic missile holdings* that exceed the Missile Technology Control Regime criteria (the ability to carry a 500 kg warhead to 300 km, which more or less define the threshold of nuclear-capable missiles).

27. This was suggested by US Energy Secretary Spencer Abraham in May 2004. As one NGO representative has argued, 'rather than continue to insist in public settings on the merits of reporting in the NPT context . . . the champions of reporting would do better if they demonstrated how reporting could benefit the goals of export controls and verified civilian nuclear programmes . . .).' Rhianna Tyson, 'Contextualizing past, present and future challenges to the NPT regime', *Disarmament Forum*, 4/2004, UNIDIR, p. 63.

Conclusions

The dynamics of proliferation are, once again, at an important juncture. We are back to the future: the year 2005 in some ways resembles the year 1965. As in 1965 after the Chinese test and the birth of the French nuclear force, there is a growing fear of a new wave of nuclear proliferation, but also a great demand for nuclear energy. Forty years ago, the international community tackled the problem through a combination of international legal agreements (the NPT, the IAEA) and multilateral arrangements (positive security guarantees in the UNSC, nuclear sharing in NATO). The same kind of combination might be needed today to avoid a world of many nuclear-capable countries in the next decade. Taking that path road implies forging a new consensus on the interpretation of NPT – one that takes simultaneously into account the lessons of the past, the issues of the present and the challenges of the future.

For the European Union, the 2005 Review Conference will be a test of unity and purpose. Several key issues are consensual within the Union: they could form the basis of a lowest common denominator. Others, however, are much more divisive – which helps to explain why the EU's agenda as presented in the 2003 and 2004 PrepComs was rather modest.[28] The differences among EU members between NATO allies and neutral or non-aligned countries, or between NWS (France, the United Kingdom) and NAC members (Ireland, Sweden), weigh heavily on the perception of nuclear weapons issues.

In light of existing convergences and divergences, the following could form the basis for a discussion by the European Union of its contribution to the disarmament debate in the Review Conference:

- a reaffirmation of the importance of the 1995 'Principles & Objectives' document;
- a speedy entry into force of the CTBT and, prior to that, appropriate measures to ensure that the current moratorium is maintained and verified;
- the beginning, at an early date, of negotiations on an FMCT as well as, pending the elaboration of such an instrument, a global moratorium on fissile material production;
- the application of START-1 verification procedures to the Moscow Treaty;

28. See Clara Portela, 'The EU and the NPT: Testing the New European Nonproliferation Strategy', *Disarmament Diplomacy* 78, July-August 2004.

- the creation of a committee on nuclear disarmament, with a view to discussing the conditions under which nuclear abolition could become a realistic prospect, with special emphasis on verification issues;
- the creation of a committee on WMD in the Middle East, with a view to discussion of the conditions under which a WMD-free zone could be established;
- an examination of the possibility of developing new arms control and disarmament norms, including a ban on the permanent deployment of nuclear weapons on the territory of NNWS, a ban on certain categories of weapons such as ADMs and nuclear artillery, and a commitment by the NWS to cap the size of their arsenals at current levels;
- an examination of the conditions under which reinforced NSAs and PSAs could play a significant role in non-proliferation in a context of undiminished security for all parties;
- a solemn reaffirmation by the NWS that their nuclear weapons are for deterrence only;
- the importance of a full and verified implementation of the CWC and the BWC as an important step towards reducing the role of nuclear weapons in defence doctrines;
- the need for further transparency by all parties on their nuclear activities, including on weapons not covered by the US-Russian strategic arms reduction process.

However, the most important goal for Europe is to avoid ideological divisions (within the Union but also within the Euro-Atlantic community) that could be exploited by nuclear aspirants.

Peaceful uses of nuclear energy and the stability of the non-proliferation regime

Harald Müller

3

The problem: the dual nature of nuclear technology

Nuclear technology can be used for peaceful or military purposes. Uranium must be mined, purified, converted, gasified and enriched to serve as nuclear fuel for a commercial light-water reactor or – with some further enrichment – as fissile material for a nuclear weapon. Plutonium must be produced in a reactor, extracted from the reactor, cooled and reprocessed to serve as material for mixed-oxide (MOX) fuel for power generation, or – preferably in a somewhat different isotopic composition – in a nuclear weapon. Whoever masters the civilian technology of the full fuel cycle and disposes of the necessary facilities has, in principle, the potential to become a nuclear weapon state.

This Janus-headed character of nuclear technology has from the outset compelled experts and strategists to devise schemes that would prevent the emergence of *national* nuclear fuel cycle industries. 'Multinational Nuclear Arrangements' (MNA),[1] the concept of shared nuclear activities, notably those most useful for military purposes, such as enrichment and reprocessing, among several nations who are supposed to oversee each other, has thus attracted interest from the beginning. Maybe the most far-reaching and ingenious plan was the Baruch-Lilienthal proposal to the United Nations Atomic Energy Commission in 1946, which would have internationalised all nuclear activities from mining to final disposal. It was introduced at a time when only one state, the United States, possessed nuclear weapons. The US proposal promised to dismantle the few bombs that existed at the time, once the international control system was in place. Its realisation could have spared the world the insane nuclear arms race during the Cold War and the headaches of nuclear proliferation we are facing today. But it was rejected because the Soviet Union did not trust the US disarmament promise, and insisted on prompt dismantlement even before the control system was erected. Mean-

1. For a concise overview, see Tariq Rauf and Fiona Simpson, 'The Nuclear Fuel Cycle: Is It time for a Multilateral Approach?' *Arms Control Today*, December 2004, pp. 17-21; and Marius Stein, Gotthard Stein, Bernd Richter and Caroline Jorant, 'Multi- or Internationalization of the Nuclear Fuel Cycle: Revisiting the Issues', *Journal of Nuclear Materials Management* 32 (4), Summer 2004, pp. 53-61b.

while, the Soviet nuclear weapon programme progressed apace. On this contradiction on the appropriate order, and more generally on the political atmosphere in the incipient East-West conflict, the Baruch plan failed.

Later attempts to revive parts of it were abundant. The IAEA statute foresaw the Agency being the trustee of fissile material donated to it by member states, notably the nuclear weapon states that would provide uranium and plutonium from disarmed weapons for the common good of nuclear energy generation through the IAEA. The 1970s and early 1980s witnessed studies on fuel cycle centres, international plutonium storage, and less proliferation-prone fuel cycles.[2] In the 1980s, the IAEA Committee on Assurances of Supply looked into the possibilities of international market guarantees in return for the formal renunciation of national enrichment and reprocessing capabilities, without agreement;[3] a huge UN Conference (nicknamed UNCPICPUNE[4]) on the same subject failed. In the late 1990s again, lucid studies were launched in this context at IAEA headquarters.[5] It is significant to note that there is no shortage of concepts; practically every aspect of every technology in every stage of the fuel cycle has been looked at, and solutions for problems have been drafted. The success of MNA solutions does not hinge on technological, economic, legal or institutional issues, but only on political will.[6]

Enhanced concern led to a revival of these ideas at the political level. More than everything else, the situation in Iran motivated such a new start. Iran had been building an enrichment line (mining – purification – conversion – gasification – enrichment – fuel fabrication), ostensibly for civilian purposes since the mid-1980s. This explanation rang hollow in the ears of many observers, as Iran's civilian nuclear power programme is far from the size that would justify a full enrichment facility on economic grounds (one reactor near completion and another one at best in the early stages of construction); moreover, Russia, the supplier of the reactor(s), is willing to offer fuel supply for the reactor's lifetime and to take the spent fuel back to Russia. The alarming prospect of having an enrichment plant, capable of producing weapons-grade uranium with only a few modifications, in the world's most volatile region, prompted policy-makers into frantic activities to find a way out.

One of them was the concept of MNA in order to offer Iran both a reliable assurance of supply, and a face-saving way out of the conundrum; this was the idea of IAEA Director-General

2. International Atomic Energy Agency, 'Regional Fuel Cycle Centres', Report of the IAEA Study Project, Volumes I and II, Vienna, 1977; International Atomic Energy Agency, 'INFCE Summary Volume', (INFCE/PC/2/9), Vienna, 1980; Expert Group on International Plutonium Storage. 'Report to the Director General' (IAEA-IPS/EG/140(Rev. 2), IAEA, Vienna, 1982.

3. International Atomic Energy Agency, 'Documents and Papers issued for CAS' (CAS/INF/4), Vienna, 1985; see also IAEA Board of Governors, 'IAEA System for an Emergency and Back-up Mechanism', GOV/INF/458, Vienna, 1984.

4. United Nations Conference for the Promotion of International Cooperation in the Peaceful Uses of Nuclear Energy.

5. International Atomic Energy Agency, 'Developing multinational radioactive waste depositories: Infrastructural framework and scenarios of cooperation', IAEA-TECDOC-1413, Vienna, 2004.

6. International Atomic Energy Agency, 'Multilateral approaches to the nuclear fuel cycle'. Report of an Expert Group of the International Atomic Energy Agency, Vienna, 2005, Ch. 3.

Mohamed al-Baradei when he called for a renewed effort to make the MNA the standard option for obtaining fuel cycle services and installed a group of experts to look anew into this issue in some detail.[7] More bluntly, as usual, US President George W. Bush suggested – in the typical policy-by-fiat style of his Administration – a categorical prohibition of the transfer of fuel cycle facilities to countries not already possessing them, combined with assurances of supply by present suppliers.[8] This re-emergence of the idea of MNA as an instrument of non-proliferation policy challenges the European Union, one of the major actors in the area of non-proliferation, and its member states, to position themselves on the issue.

EU difficulties in agreeing on peaceful nuclear uses

The European Union has identified nuclear non-proliferation as a key area for its Common Foreign and Security Policy (CFSP)[9] and has devised a sophisticated and complex Joint Strategy and associated Action Plan.[10] It is in the forefront of attempts to solve the problem of Iran's nuclear programme diplomatically, and has to establish its position on the MNA issue. However, agreeing on peaceful nuclear uses is not easy for the diverse Union, as past NPT Review Conferences have amply demonstrated. Two fault-lines run across the Union, dividing member states and placing them on opposite sites of ongoing controversies.

The first fault-line separates promoters and opponents of nuclear energy. The strongest voices on the pro-side are Finland, France, Spain and the United Kingdom. Notably France and the United Kingdom operate civilian fuel cycles and offer services to others as part of their external economic policy. The supporters of nuclear energy want measures to promote, and assist in, its uses and further expansion, and a friendly image of the technology projected to the public. Its opponents, on the contrary, with Austria as the most outspoken voice and Germany as a 'convert' from compassionate supporter to moderate opponent, want measures to block the further expansion of nuclear energy, the promotion of alternative energies and public statements that are as critical as possible on nuclear matters. The division becomes relevant when the Union as such is asked to support assurances of supply (with the necessary export licensing guarantees – see below), and when

7. Mohamed al-Baradei, 'Towards a Safer World', *The Economist*, 16 October 2003.

8. The White House, 'President Bush's Nonproliferation Initiative', Washington, DC, February 2004.

9. Harald Müller and Lars van Dassen, 'From Cacophony to Joint Action: Successes and Shortcomings of European Nuclear Non-Proliferation Policy', in Martin Holland (ed.), *Common Foreign and Security Policy. The Record and Reforms* (London/Washington: Pinter, 1997), pp. 52-72; Clara Portela, 'The Role of the EU in the Non-Proliferation of Nuclear Weapons: The Way to Thessaloniki and Beyond', PRIF Report 65 (Frankfurt: PRIF, 2003).

10. 'EU Presidency Conclusions', Thessaloniki, 19-20 June 2003, Annex II; http://www.acronym.org.uk/docs/0306/doc13.htm; 'Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction, EU Presidency Conclusions', Thessaloniki, 19-20 June 2003, pts. 99/100; httpp://www.acronym.org.uk/docs/0306/doc13.htm; 'Action Plan for the Implementatioon of the Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction, EU Presidency Conclusions', Thessaloniki, 19-20 June 2003, pts. 99/100; http://www.acronym.org.uk/docs/0306/doc13.htm.

these assurances include reprocessing services and MOX fuel delivery which the anti-nuclear forces usually loathe most. It could also become relevant if non-EU fuel is recycled or stored within multinational repositories and centres within the EU, close enough to the opponents' borders for them to see an environmental risk to their own territories.

The second fault-line, running between the EU's nuclear weapon states and non-nuclear weapon states, concerns the distribution of rights and duties in the non-proliferation regime and reflects the division between these two categories of countries within the regime at large. The Nuclear Non-Proliferation Treaty (NPT) consists of a precarious balance of interests, the original 'bargain', between the haves and have-nots. While the promise of the nuclear weapon states not to help others to acquire nuclear weapons (Art. I) was no big sacrifice, non-nuclear weapon states renounced the most powerful weapon of our time (Art. II) and agreed to verification of all their nuclear activities (Art. III). They did so in exchange for the promise of civilian nuclear cooperation (Art. IV) and an undertaking by the nuclear weapon states to move towards nuclear disarmament (Art. VI), the 'grand bargain' of the NPT.

In the ensuing practice, however, the nuclear weapon states were happy to impose additional constraints and obligations on the have-nots. The most significant example is the Additional Protocol to the verification regime adopted in 1997; it afforded the IAEA broader information and access rights in order to enable the Agency to detect clandestine, undeclared nuclear weapons activities. At the same time, many observers maintain that the nuclear weapon states have implemented their disarmament obligations only very inadequately.[11] This controversy is raging within the wider non-proliferation regime as well as being divisive within the EU, and it is also relevant to the MNA issue.

Enjoying the peaceful uses of nuclear energy: the meaning of Art. IV[12]

There have been attempts to reinterpret Art. IV of the NPT; the article, it is said, means only that non-nuclear weapon states can use nuclear energy; it does not mean that they have the right to research, develop and construct those facilities that could also yield

11. Lawrence Scheinman, 'Disarmament: Have the Five Nuclear Powers Done Enough', *Arms Control Today*, January/February 2005; Harald Müller, 'Farewell to arms – what is blocking nuclear disarmament', IAEA Bulletin, April 2005.

12. I am drawing here – and in the following chapters – on the debates of the IAEA Expert Group on Multilateral Nuclear Approaches, and their report quoted above, but go beyond the consensus reflected there; my remarks and suggestions there cannot thus be attributed to the Expert Group; see 'Multilateral Approaches to the Nuclear Fuel Cycle: Expert Group Report submitted to the Director General of the International Atomic Energy Agency', INFCIRC/640, Vienna, 2005.

weapons-usable materials.[13] Such an interpretation contradicts the wording and negotiation history of the Treaty. In fact, to pursue civilian commercial activities is within the realm of the sovereignty of all states; in that sense, the first paragraph of Art. IV states only the obvious: that this right is 'inalienable', which confirms that it cannot be constrained even by this Treaty. The significant meaning is in the second paragraph, where the right and duty of full cooperation in peaceful uses is emphasised, as long as states parties are in good standing with Arts. I and II, the basic non-proliferation commitments. In its final declaration, the 2000 NPT Review Conference added that good standing with regard to Art. III – the safeguards and export control stipulations – was also a requirement to enjoy privileges under Art. IV.[14] The negotiation history of the NPT and its safeguards agreement INFCIRC/153 made it amply clear that Art. IV meant to enable non-nuclear weapon states, if they so wish, to develop all stages of the fuel cycle,[15] and many of them made that clear when they signed the Treaty.[16] Whether or not this is a good idea is a different matter: what is decisive here is that this is within their rights, and changing this state of affairs is the equivalent of amending the NPT or, alternatively, writing a new treaty that supersedes the old one, as the Comprehensive Test Ban Treaty has superseded Art. V of the NPT, which allows for 'peaceful nuclear explosions', while the CTBT prohibits all nuclear explosions whatever their purpose may be.

The present legal status, hence, does not oblige countries to participate in MNA, and the political environment makes it unlikely that such a norm can be established any time soon. Establishing MNA on the basis of voluntary participation is thus the more probable way to proceed. In a voluntary arrangement covering assurances of supply, recipient countries would, for the duration of the respective supply contract, renounce the construction and operation of sensitive fuel cycle activities, including pilot plants for the time the MNA was operating, and also for a 'period of grace' after national withdrawal from the MNA (say, for 20 years), and accept safeguards of the highest current standards, including comprehensive safeguards and the additional protocol. The demarcation line between permitted R&D activities and renounced development and construction activities is a very important technical and legal issue that requires further examination.

13. George Perkovich et al., *Universal Compliance. A Strategy for Nuclear Security* (Washington, DC: Carnegie Endowment for International Peace, 2004).

14. '2000 NPT Review Conference Final Document', *Arms Control Today*, June 2000.

15. George Bunn, *Arms Control By Committee. Managing Negotiations with the Russians* (Stanford, Calif.: Stanford University Press 1992), chs. 4, 5; Mohammed Shaker, *The Nuclear Non-Proliferation Treaty: Origins and Implementation 1959-1979* (London: Oceana, 1980).

16. Erwin Häckel, *Die Bundesrepublik Deutschland und der Atomwaffensperrvertrag* (Bonn: Europa Union Verlag, 1989).

On a *voluntary* basis, countries will enter MNA primarily on the basis of perceived technical, economic and political incentives and disincentives offered by these arrangements. To convince the have-nots that they should renounce national fuel cycle ambitions in favour of MNAs would require the restoration of a political environment of mutual trust. To create such an environment, the full compliance of all articles, including Art. VI mandating disarmament, of the Nuclear Non-proliferation Treaty by non-nuclear weapon states and nuclear weapon states alike would be necessary. The current climate, in contrast, is characterised by concern about the compliance of some non-nuclear weapon states with their obligations under Articles II and III, and the complaints of many non-nuclear weapon states that the nuclear weapon states have not lived up to their undertakings under Article VI; the lack of implementation of the 'Programme of Action' of 1995 and the 'Thirteen Steps' of 2000 rank high among these complaints. Better implementation of the NPT in all its aspects may thus facilitate the setting-up of voluntary MNA structures.

If – going beyond purely voluntary arrangements – a new *binding international norm* were to be created stipulating that sensitive fuel cycle activities are to be conducted in the context of MNA exclusively and no longer as a national endeavour, this would mean a fundamental re-writing of Art. IV of the NPT. States observing such a norm would give up a right not afforded to them just by the Treaty, but inherent in their status as sovereign states as such. Such an additional intrusion into national sovereignty would trigger a fundamental reconsideration of the bargain implied in the NPT.

Such a fundamental change could, of course, be negotiated by sovereign states if the political will to do so existed. But, at any rate, it would be conceivable only as a *universal* principle applying to all states, and with reciprocal actions by the nuclear weapon states in the implementation of Art. VI; non-nuclear weapon states would request that, before they themselves enter further undertakings for the sake of non-proliferation, the 'haves' first deliver on their original promises. Obviously, a fissile material cut-off treaty with an appropriate verification system would be a precondition for such universal application. As it would terminate the right of nuclear weapon states and non-NPT parties to run reprocessing

and enrichment facilities for military purposes, and would verify this termination, it would bring them to the same level – with regard to such activities – as non-nuclear weapon states; their accumulated stocks would still remain under national control until they were also covered by binding rules in the course of nuclear disarmament. Engaging in the permitted fuel cycle activities for peaceful purposes exclusively in multilateral arrangements as a binding, universal rule might then be agreed; all existing facilities would then be civilian, including those in the nuclear weapon states, and in non-NPT states as well. Under the new rule, they would have to be integrated in such multilateral arrangements. A solution would then have to be found for the production of fuel for those ships and submarines running on highly enriched uranium. In the long run, converting naval reactors to use lower-enriched uranium fuel (as the French Navy already does) might be the best solution, paralleling the move towards lower enrichment in civilian research reactors.

However, even after an FMCT has been completed, many non-nuclear weapon states might accept this rule only in the context of *additional* measures to implement Art. VI. After all, the nuclear weapon states agreed to an FMCT in 1995 and 2000, that is, within the context of the 'old bargain', and not as a reciprocal action concerning new undertakings by the non-nuclear weapon states. Such measures are contained in the 'Program of Action' adopted by the NPT Extension Conference in 1995 and the 'Thirteen Steps' adopted by the NPT Review Conference in 2000.[17] The reasoning by the non-nuclear weapon states will be that it is utterly unfair to have additional new constraints on their rights beyond those negotiated in the NPT when the nuclear weapon states have not even implemented those commitments they undertook in the Treaty.[18]

It must be emphasised that such a new rule can only be established with the voluntary assent of all states, and not through imposition by a few. This makes it unlikely that President Bush's suggestion to create a de facto norm by the unified policy of a supplier cartel will be successful. Since most of the suppliers are non-nuclear weapon states, they might not be enthusiastic about taking action that aggrieves their own side of the bargain without some concessions by the other side.

17. NPT/CONF.1995/32 (Part I) Annex, Decision 2; '2000 NPT Review Conference Final Document', *Arms Control Today*, June 2000.

18. William Walker, 'Weapons of Mass Destruction and International Order', *Adelphi Paper* 370, pp. 27, 67-72.

Assurances of supply

There are different reasons why countries might be reluctant to renounce nuclear fuel cycle activities. The first one may be the desire to profit from the spillover effects of national technological development, and to reap the ensuing commercial advantages. This motivation might slowly recede, as nuclear energy is becoming an 'old' technology and no longer 'cutting-edge' as it was until around the 1970s. To benefit from trade opportunities might also be possible in a multilateral environment if a formula for sharing such benefits fairly is part of the MNA agreement between the participating parties.

A second reason is energy security, understood as autarchy. This motivation looks more and more obsolete in a globalising world in which national economies are necessarily dependent on each other, and on the world market altogether. Energy markets are already highly internationalised; the oil market is the prime example. Why it should enhance national security significantly to isolate a segment of electricity production – nuclear – from interdependence is hard to see. Such a stance appears much more like a residue of old-fashioned, mercantilist ideology than like a sound principle of twenty-first century economic policy. Nevertheless, experiences with suppliers' upping the ante in terms of supply conditions for *valid* contracts have been made repeatedly by recipients, in particular, with the United States as supplier. Such experiences of insecurity of supply are an underlying motivation that feeds autarchy concepts. It is thus essential to develop schemes for assurances of supply which are apt to convince even sceptics of their reliability among the recipients. If this is done, those still opposed to joining MNAs would be open to the suspicion that their motivation is much more a desire to keep the military option open than anything commercial.

Assurances should hold against three contingencies. For generic market disruptions – a temporary imbalance of supply and demand – no great arrangements would be necessary, as the market, diverse as it is, could be relied on to cope with it. The demand trajectory and the planning of new capacity are transparent and well known, not the least because of the long lead times for the construction of facilities of all kinds in the nuclear energy sector. If additional security is desired, some holding of reserve stocks of

fissile materials should do. It is also conceivable that companies agree among themselves on a scheme to jump in when one of them cannot supply by default, as insurance companies together provide 'secondary insurance' to clients in the event that the prime insurer defaults on its obligations.

The second contingency, the inability of a single supplier to fulfil contractual agreements due to *force majeure*, should also not cause alarm. There is overcapacity in the market for enrichment services, uranium and MOX fuel production, and expanding on-site storage capacity for spent fuel is still a possibility. The market should easily be capable of picking up the voided contract and supplying the aggrieved recipient.

This leaves the third contingency, the denial of contracted supply, or the refusal to contract new supply, by a supplier, or suppliers, on political grounds. For this contingency, a multilateral arrangement may represent an effective alternative to national solutions, depending on conditions of the assurances of supply of fuel and/or services that are credible and seen by the potential clients as dependable, reliable and economical. These conditions will probably include:

- a sufficient diversity of suppliers participating in the MNA in terms of regional composition and policies pursued;
- the willingness of a sizeable numbers of those suppliers to afford *generic* consent to the MNA (that is: renounce case-by-case review for every single supply operation) for the transfer of the respective goods and services on the condition that the basic conditions, as agreed in advance – good standing with regard to non-proliferation commitments, physical security, export controls and safety – are met by the recipient;
- in the case of fuel supply, the availability to such suppliers of significant amounts of fissile material free of 'flags' and thus of prior consent rights of other parties, notably natural uranium producers (which might otherwise demand supply conditions beyond those agreed in the MNA);
- a sufficient reserve capacity of the fuel and services covered by the respective MNA to meet the additional demand in a supply emergency, equivalent to the mandatory national oil reserves held by OECD members under the auspices of the International Energy Program of the International Energy Agency;
- a procedure to determine prices for replacement fuel and services in case of an emergency that is deemed fair by potential

recipients and that grants prices not to be significant higher than those that would have been charged by the original supplier;
- a credible, timely and reliable decision-making mechanism for the release of replacement supply;
- a neutral and fair process for determining whether the aggrieved recipient that lost its original supplier is in good standing with its non-proliferation commitments – which points to a pivotal role for the IAEA.

Only states with good non-proliferation credentials and up-to-date safeguards, physical security and safety measures in place would be eligible to become recipients for the supply assurance arrangement.[19]

The IAEA, through its Board of Governors, could act as the decision-making body of a virtual fuel bank that could draw on stored fuel – or fuel fabrication capacity – pledged by existing suppliers to such a fuel bank. In emergencies, the IAEA would decide if the claimant – the potential recipient – was entitled to emergency of supply. It would then implement the 'drawing rights' with the appropriate supplier.

Alternatively, the management task (that is, the brokerage activity) could be out-sourced to a formally independent body, which would ask the Agency for the claimant's record. The executive board might be composed of representatives of participating suppliers, recipients, and persons appointed by the IAEA Board of Governors. The IAEA itself would report if the claimant state was in good standing with its non-proliferation, security and safety commitments. The formal decision to supply would then be made by the independent body. The advantage of this arrangement would be not to have the IAEA *directly* in the line of fire if an established supplier had decided not to deliver fuel to a certain recipient, but the emergency mechanism would factually neutralise this sanction. The disadvantage would be the need for a new – although fairly small – standing bureaucracy.

The role of the Agency would thus be twofold: to determine whether the conditions for triggering the arrangement mechanism had been met; and to broker the supply between supplier and recipient. It could lead to misunderstandings to label this role 'guarantor', as the High Level Panel on Threats, Challenges and Change has done,[20] as the IAEA would not physically hold the

19. Pierre Goldschmidt, 'The Proliferation Challenge of the Nuclear Fuel Cycle in Non-Nuclear Weapon States'; http://www.iaea.org/NewsCenter/Statements/DDGs/2004/goldschmidt26042004.html.

20. 'A More Secure World: Our Shared Responsibility', Report of the Secretary General's High-Level Panel on Threats, Challenges and Change, United Nations, New York, 2004, § 130.

items to be supplied, and the term 'guarantor' usually designates somebody who is personally liable if the promised act is not actually performed.[21]

Some suppliers may not be willing to waive case-by case licensing because they wish to reserve the right to deny supply for reasons other than non-proliferation, physical security, safety and export controls; such suppliers may participate in an MNA, but if all suppliers showed this reticence, the system would be unlikely to create sufficient confidence among potential clients to renounce the option to construct their own sensitive fuel-cycle facilities.

Multinational arrangements for the production of nuclear goods and services

Apart from assurance of supply, multinational nuclear arrangements can also be mandated to provide goods and services by themselves. Countries, or private entities from several countries, can join forces to set up an uranium enrichment or fuel fabrication plant. They can form a consortium to store and reprocess spent fuel and produce MOX fuel. Or they can jointly invest in a long-term or final repository for spent fuel or radioactive waste. These consortiums can have the primary goal of serving the needs of participating countries and companies, and/or offering services to other parties.

In all these cases, there would be economic benefits due to the economics of scale gained through investing in bigger facilities which serve a larger market. There would also be non-proliferation benefits. The number of sites whose activities are sensitive from a proliferation perspective would be fewer than if every nation with a significant civilian nuclear power programme provided for its own needs nationally; this would also reduce the points of access to nuclear materials for non-state actors. Also, the gains in transparency due to joint management or operation would add to confidence-building among the participants and would give the wider international community additional assurances that the facility in question was very unlikely to be used for military purposes. The risk of a transfer of technology to a country that intends to utilise its participation in such a joint venture for the later replication of the respective facility with a view to putting it to military uses can be mitigated by precautions against breakout and a robust enforcement mechanism (see below).

21. See the IAEA Expert Group's definition of the term 'guarantor', op. cit., § 73.

For multilaterally based companies, there presently exist two models, both located in Europe.[22] In the enrichment company EURODIF, France, the host country of the enrichment plant, is the only technology holder. The non-French partners, through their investment, have acquired drawing rights on the output of the factory (that is, on enrichment services), without sharing in the technology, in the operation or in the management of the plant. This is a good model for integrating 'new' countries which do not presently have sensitive fuel-cycle activities, but have an interest in supply, into multilateral arrangements without a serious risk of proliferation. It supposes, of course, that these countries and their private enterprises are exclusively interested in the product, and not also in the process and its underlying technology, and that the driving motivation is security of supply and not broader technological or developmental motivations.

The other company, URENCO, is a tripartite British/Dutch/German company with joint management and a division of labour, in which Britain is responsible for plant design, the Dutch partner for centrifuge production, and the Germans for centrifuge R&D. Each participating country has a fully operational commercial enrichment plant on its territory. URENCO, by accepting the sharing of technology, is rather a model for countries that are already technology-holders to get together for confidence-building and mutual supervision. Extending it to countries that have no previous know-how in the respective technology would be a way to spread technological knowledge around and might thus be less preferable from a non-proliferation perspective.

What has been discussed here primarily concerning enrichment applies in principle to other parts of the fuel cycle. For reprocessing, France (AREVA), Britain (BNFL) and Russia offer services to customers from other countries, including interim storage of spent fuel at the reprocessing plant side, but on the condition that plutonium (or MOX fuel) and radioactive waste return to the country of origin. The model whereby separated plutonium goes back to the owner of the spent fuel appears not to be a good idea under non-proliferation perspectives, and it would be preferable, if Pu is recycled at all, to return it in the form of the somewhat less accessible MOX rather than as pure Pu. However, Pu can be extracted from MOX by a relatively simple chemical process; to agree on a 'just in time' supply principle, that is, ship MOX to the recipient immediately before the reactor is being fuelled or refu-

22. Lawrence Scheinman, 'The Nuclear Fuel Cycle: A Challenge for Nonproliferation', *Disarmament Diplomacy* 76, March/April 2004.

elled would mitigate the concomitant risk. Anyway, it would be conceivable to open these reprocessing companies to foreign investment, making them multinational arrangements modelled on EURODIF.

Finally, Russia is in the process of considering an offer to take in foreign spent fuel for longer-term interim storage, but still on the understanding that it will eventually return the waste to its country of origin. Russia appears to envisage this arrangement as a national endeavour such as its present reprocessing services. It is not inconceivable, though, that Russia might be interested in opening this project up to foreign investment in order to get external capital into the country, making it a truly multinational arrangement.

It should be noted that all multinational arrangements for the back end of the fuel cycle require enhanced transport movements. Risks of theft and environmental damage would thus rise somewhat, and public protests can be expected.

Risks of breakout and enforcement mechanisms

For all multilateral arrangements involving even the tiniest aspect of technology transfer, and for those implying the export of enriched uranium or separated plutonium that could be useful for military purposes, responses to various forms of 'breakout' from existing obligations by one of the partners have to be prepared. Breakout could mean leaving the MNA while staying in the NPT, but using the lessons learned from working within the MNA to set up parallel, national facilities. Breakout could mean staying within the MNA, but leaving the NPT. The country concerned would then continue to enjoy the fruits of civilian nuclear cooperation without bearing the non-proliferation commitment. Finally, breakout could mean leaving the MNA and the NPT simultaneously.

It must be emphasised that the frequently heard view that it would be legal to prepare a nuclear weapons programme under the NPT up to the very last step and then withdraw under Art. X, 2 would be within the boundaries of the legally permitted is wrong.[23] Abusing membership in the Treaty with the firm intention of building a bomb later is acting in bad faith and aggrieves the other parties, who have then the right to retaliate in a proportional manner.[24]

23. For instance, High-Level Panel, § 108.

24. UN Secretary-General's Advisory Council on Disarmament Matters, 'Multilateral disarmament and non-proliferation regimes and the role of the United Nations: An evaluation', *DDA Occasional Paper* 8, United Nations, New York, 2004, pp. 12/13.

The contract establishing an MNA could make unilateral withdrawal difficult and costly. It could be stipulated, for example, that building a replica of the facility in question would be illegal for twenty years. Parties could also have to commit themselves to staying within the NPT for an extended period after withdrawal from the MNA. If any of these conditions were breached, the contract should give the other partners the right to retaliate on a broader economic scale, imposing sanctions beyond the field of nuclear energy alone. If the suspicion existed that the withdrawing state was intent on developing nuclear weapons, the other consortium partners would be entitled to inform the Security Council and the Secretary General that a threat to peace and international security might be developing.

Withdrawal from the NPT while a country remains in the MNA should be excluded by the MNA contract (this would, however, prevent the participation of non-NPT countries, a possibility which the Director General of the IAEA apparently wanted to keep open.)[25] Withdrawal from both the NPT and the MNA simultaneously could be excluded by the contract, as explained in the last paragraph. In addition, MNA participants should be obliged to continue to accept safeguards – after withdrawal from the NPT – on facilities built in an MNA context, and on technology, equipment and material acquired in the context of an MNA. One might even conceive of safeguards continuation for all facilities where fuel from the MNA had been consumed (a far-reaching 'contamination principle'). Presently, safeguards under the NPT are terminated once a country withdraws, a rather awkward situation.

In the end, the degree of confidence in the proposition that multinational nuclear arrangements strengthen the non-proliferation regime hinges on the credibility of enforcement mechanisms and the way in which states implement them. Compliance policy leading to enforcement decisions and actions must take place on four levels: the MNA partners, the IAEA, the NPT community and, ultimately, the Security Council. Unfortunately, so far, the record is not good. The NPT community has shied away from tackling compliance issue head on, and the Security Council has, so far, not played a decisive role in the case of North Korea or Iran. Only the IAEA has done its job as far as compliance and enforcement is concerned. As long as this record does not improve, one might be sceptical as to whether MNA can lead to a real breakthrough in enhancing non-proliferation. Notably in the NPT con-

25. Al-Baradei, op. cit.

26. 'Strengthening the NPT against withdrawal and non-compliance. Suggestions for the establishment of procedures and mechanisms', working paper submitted by Germany, NPT/CONF.2005/PC III/WP 15, 29 April 2004.

text, new procedures would have to be set up. The creation of an extraordinary conference of NPT states parties to deal with serious cases of non-compliance has been suggested.[26] This could be an adequate way to fill this procedural lacuna.

Export controls

As discussed previously, multinational arrangements concerning assurances of supply would necessitate a fundamental rethinking of existing export control policies. Such a new look is appropriate for three additional reasons. First, the revelations about Dr Abdel Kader Khan's nuclear smuggling network have made it clear that the membership of the present supplier groups – the Zangger Committee watching over the implementation of Art. III, 2 of the NPT and the Nuclear Suppliers Group (NSG) – is too limited to deal with some emerging problems. Khan worked through a facility in Malaysia and a trade company in the United Arab Emirates; neither country has been a member of any of the export control groups. Other developing countries with an established machine tool or chemical industry or that serve as hubs for international trade could easily become unwitting participants in trafficking of nuclear arms.

Secondly, the NSG in particular continues to evoke resentment in the Non-Aligned Movement (NAM), with consequent disunity within the NPT community. Of course, the suspicion among non-aligned countries that this group is designed to prevent them from reaping the fruits of civilian nuclear power is a complete misunderstanding of the real-world functioning of export control: it is in suppliers' commercial interests to export rather than to deny. But the myth is powerful and well nurtured by, for example, Iranian propaganda within the NAM.

Thirdly, UN Security Council Resolution 1540 of April 2004[27] has imposed a binding obligation on all UN members to install effective export controls to prevent the transfer of anything usable for weapons of mass destruction. While this resolution aimed at preventing terrorists from acquiring these weapons, in practice its stipulations help to prevent the possibility of state-to-state transfers as well. Suddenly, countries which up to now saw export controls only as a trigger for complaints about 'Northern paternalism' now have to engage in the very activity they previously criticised.

27. UNSCR 1540, United Nations, New York, 26 April 2004; see Walker, op. cit., pp. 74-6.

The NAM countries want to proceed to global negotiations on export control conditions. Supplier states are reluctant to engage in such negotiations. They fear that countries which have neither experience nor any stakes in this matter could abuse such talks for sheer politicking, or for extracting more general development aid concessions which are completely unrelated to the non-proliferation objective which the negotiations, eventually, should serve.

The NSG would be well advised to revive its outreach activities that were quite active after 1995 (they were part of the 'Principles and Objectives' adopted by the NPT Review and Extension Conference)[28] but which have been much less visible in recent years. They could offer seminars to help others with implementing their new duties under UNSCR 1540, and to explain NSG members' approach and practice in the course of these training exercises. It would also be advisable to be very open about reasons for denial. To keep this subject under the table is not conducive to strengthening recipients' confidence in the good faith of supplier countries. Reasons for export controls and ensuing license decisions, frankly given, can be attacked and defended. This is much better than facing uninformed resentment. However, it would also be necessary to pursue this matter at higher levels than that of desk officer at ministries of the economy or atomic energy commissions alone. Experience teaches that NAM disarmament negotiators and United Nations diplomats who are not necessarily experts on the economic and technological aspects of the matter continue to preach the NAM gospel long after their expert peers in other ministries have become convinced that it is void. To ask for a realignment of the foreign and economic policy of important NAM partners might be a worthwhile content contender for higher-level diplomacy, and should be on the agenda of the EU's CFSP for some time to come.

It is also essential to enlarge the membership of the NSG. Countries with technical capabilities and an important role in international trade must be included. This is not only inevitable in non-proliferation terms, but a necessary act of solidarity to help them escape the role of unwitting assistant to proliferation, even to non-state actors. In addition, broad assistance programmes to help states to create efficient export control systems should be offered. Again, the EU can play a leading role; there is much experience in this sector from the time of the end of the East-West conflict, when prospective new members and the fission products of

28. NPT/CONF.1995/32 (Part I), Annex, Decision 2. Principles and Objectives for Nuclear Non-Proliferation and Disarmament.

the former Soviet Union became familiar with the exigencies of controlling a trading market economy. Investment in such assistance entails relatively moderate costs: legal and institutional advice, the seconding of experts and practitioners, some modest technology transfer, software.

The EU should approach this subject at the Review Conference as robustly as possible. Export controls must be defended, and the duty of every NPT member to have effective export controls clearly stated on the basis of the 2000 Revcon Final Declaration[29] and UNSCR 1540. Transparency must be observed. If all this comes together with a well thought-out offer of assistance, and is prepared by bilateral consultations with prospective new NSG members, the usual acerbic controversies on the NSG might be avoided and Iran – if it continues to harass export controls – may fail to instigate such controversies.

Dealing with the Iran crisis

Do the above considerations help in any way to cope with the Iran crisis which, after all, triggered renewed interest in multilateral nuclear arrangements in the first place? It might be possible to work out a package of measures that would satisfy the Iranians and their Western partners – provided Iran is not irrevocably determined to pursue the military option no matter what. The package could consist of the following elements:

- Confirmation of the in principle inalienable right, under Art. IV of the NPT, to develop all aspects of the fuel cycle. All NPT parties, including Iran, have this right.
- A voluntary, but binding suspension of all fuel cycle activities by Iran, in recognition that exerting the right under Art. IV may contribute to instability and increase the risks in the volatile region in which the country is located, and that the clandestine activities of the past have created concern regionally and worldwide that makes it wise for Iran to abstain from such activities for some time to come. This should be heralded as a unilateral, gracious contribution by Iran to regional stability and peace.
- Guarantees of fuel supply for Iran's civilian nuclear programme, conditional only on its good standing with regard to its non-proliferation commitments, safety and physical security. Iran may be permitted to revive its drawing rights from its EURODIF

29. *Arms Control Today*, June 2000, op. cit.

investment that is presently only indirect and permits Iran to benefit from the profits of the company, but not its product.
- Civilian nuclear technological aid, notably in the safety sector, and broader economic concessions.
- The option to revive Iranian fuel cycle activities as the core of a multilateral arrangement in the context of a Middle East Nuclear Weapon-Free Zone, with the consent and possible participation of all regional parties. This would prevent the development of fuel cycle activities which would be perceived by other regional powers (notably Israel) as a threat.

This package would afford Iran tangible benefits and a face-saving way out of its current impasse, and reassure the regional and international community that Iran would not strive for national fuel cycle facilities. It could be complemented by other incentives (related to broader economic issues such as WTO membership) and some security guarantees which would inevitably require US participation and without which the package would remain incomplete.

Conclusions

The forthcoming NPT Review Conference will probably be tough going. Nuclear disarmament and various compliance crises will be in the forefront. In a curious way, both topics touch on the question of peaceful uses: the crises, because they underlie the request for new constraints upon the Art. IV rights of non-nuclear weapon states; disarmament, because the disillusionment of many non-nuclear weapon states leads to their reluctance to accept any more obligations beyond the original wording of the treaty until and unless the nuclear weapon states implement their side of the bargain.

For the European Union, this is no easy situation, as it is divided on both issues. It would be helpful if Europe's two nuclear weapon states realised the seriousness of the situation, and the increasing determination of many non-nuclear weapon states, including some of their fellow EU partners, not to accept any new undertakings unless a more level playing field is established. Otherwise, not only the NPT, but the Union itself may suffer from disunity and divisiveness.

Nevertheless, the Union presently includes the two most successful examples of multilateral nuclear arrangements, and Union countries would be in a position to contribute considerably to assurances of supply of fuel and services across the fuel cycle. The Union should quickly check whether, given the nominal ownership of all fissile material in Union territory, assurance of supply arrangements would have to prompt a change in the EURATOM Treaty and the arrangements governing the movement of nuclear fuel within Union territory.

Individually, Union member states have to make up their mind whether they would be willing to waive prior consent rights and case-to-case decision-making in favour of multilateral arrangements, and to transfer ultimate decision-making authority on emergency transfers of fuel and services to the International Atomic Energy Agency or a subsidiary body charged with the management of an emergency supply assurance mechanism. Community law and regulation would have to be adapted so that nominal ownership rights of fissile materials by the Community would not interfere with assurances of supply. Some member states would also have to decide whether they would be willing to open their fuel cycle companies to foreign investment.

On export controls, the time has come for the European Union to take a major initiative on greater transparency, and the co-optation of new members to the Nuclear Suppliers Group. In the light of UNSCR 1540, the old non-aligned request for global export control guidelines has gained, surprisingly, a compelling new argument. Global rules, commonly agreed upon, would not prevent smaller groups of suppliers from working together informally, but this would be within the framework of a global overlay that would have precedence in terms of general rule-making. The EU's American allies are not fond of this idea; yet it might be the way to go if the objectives of UNSCR 1540 are ever to be implemented. The Review Conference might be the place to install at least an informal dialogue on global rules to substantiate 1540, and on a global system of assistance to help well-intentioned developing countries not to spoil the non-proliferation regimes by playing an unwitting role in dangerous transfers.

Conclusions

The NPT remains the cornerstone of the fight against nuclear proliferation and strengthens per se global security. Making the forthcoming NPT Review Conference a success is therefore crucial.

However, the chances of attaining this objective are rather slim: the unresolved question of Iran, the unclear status of North Korea, a lack of enthusiasm on the part of the five official NWS (P5) for further steps towards disarmament, limited progress in the conclusion and implementation of the IAEA's Additional Protocol – to name only a few – are all obstacles to a successful conference.

In this situation the EU, as the main protagonist of a multilateral, treaty-based approach to the fight against proliferation, has a particular responsibility to avoid the Review Conference becoming a failure.

At the time of writing, the Union is about to finalise a Common Position for the conference. The latter is an indispensable first step: not to achieve consensus on it would be a severe setback and an extremely negative political sign, in particular since the Union reached Common Positions in 2000 and 1995. As a second step, the Common Position must be faithfully implemented and serve as the basis for the Union's attempt to forge consensus among all NPT parties.

Without repeating all the authors' suggestions for possible EU initiatives, some points deserve to be highlighted:

- *Integrity*. The credibility and authority of the NPT hinge on full compliance with all its obligations. The Union must therefore defend the Treaty in its entirety and insist on the fundamental link between non-proliferation, disarmament and peaceful uses.
- *Universality.* Bringing India, Pakistan and Israel as NNWS into the Treaty would greatly strengthen the credibility of the NPT. Although there is today no realistic chance of making this happen, the EU should not give up the objective of making the NPT

universal. Otherwise, certain non-nuclear states parties could become even more reluctant to comply with their Treaty obligations. At the same time, without recognising their nuclear status the three de facto NWS should be involved in the fight against proliferation.

- *Verification.* To ensure compliance necessitates the improvement of existing verification mechanisms. In this sense the EU has to make every effort to make the Additional Protocol, which significantly expands the IAEA's ability to investigate undeclared or clandestine nuclear activities, recognised as the verification standard for the implementation of Article III and as a prerequisite for granting technological assistance.
- *Enforcement.* Compliance can only be ensured if the Treaty provisions can be enforced. In this context, the EU should develop proposals for strengthening the role of the UN Security Council, for example via the establishment of a special committee on WMD and a Code of Conduct for dealing with serious violations of the NPT.
- *Withdrawal.* The EU should put forward rigorous proposals for strengthening the barrier against withdrawal from the NPT. Transforming the IAEA safeguard agreements into free-standing instruments which remain operative after withdrawal from the Treaty would be one (ambitious) option, the establishment of an ad hoc committee or an extra-ordinary NPT conference another, more modest, one.
- *Disarmament.* Given the link that many NNWS establish between disarmament and non-proliferation, the nuclear powers have a special responsibility for the future sustainability of the NPT regime as a whole. Although prospects for progress in this area are rather bleak, and in spite of the traditional divergences between member states on disarmament, the EU cannot avoid addressing the issue. The Union should continue to push for the entry into force of the CTBT and the negotiations for a verifiable FMCT. In the area of de-alerting, the removal of all nuclear weapons from hair-trigger alert could also be suggested. Furthermore, the Union should continue to promote transparency, in particular on sub-strategic weapons. The two European nuclear powers could also try to work towards a P5 declaration on nuclear weapons as instruments that are purely for deterrence. In general, France and the United Kingdom

should not align 'automatically' with the other NWS, in particular since they have a better record on disarmament.

- *Peaceful uses of nuclear energy.* The right to the peaceful uses of nuclear energy is an integral part of the NPT and includes fuel cycle activities (reprocessing, enrichment). States parties interested in these activities would thus go beyond their Treaty obligations if they renounced them. To achieve this objective, the EU must develop particularly imaginative ideas for interesting trade-offs. In this context, security of supply of nuclear fuel will be crucial. The EU should take a close look at the results of the High Level expert group established by the IAEA and take them as a source of inspiration for new initiatives in this field.
- *Export controls.* Effective export controls are a precondition for both non-proliferation and technology transfer. Present arrangements have proved insufficient to fight the illicit spread of nuclear technology. The EU should therefore (a) consider the idea of granting the IAEA more authority and greater investigative powers, (b) suggest extending the Nuclear Supplier Group's membership and improve its outreach activities, and (c) assist third countries to strengthen their export controls.

In spite of all intra-European divergences, there should be enough room for member states to reach consensus on initiatives that go beyond the smallest common denominator. However, equally important will be maintaining this consensus during the Conference and ensuring that the Common Position is faithfully implemented. Member states should thus put aside tactics driven by external groupings (P5 or NAC), give priority to EU solidarity over other coalitions and stick to the Common Position agreed within the EU.

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Abbreviations

ABM	Anti-Ballistic Missile
ADM	Atomic Demolition Munitions
AP	Additional Protocol
BWC	Biological and Toxin Weapons Convention
CFSP	Common Foreign and Security Policy
CTBT	Comprehensive Test Ban Treaty
CTBTO	CTBT Organisation
CWC	Chemical Weapons Convention
DPRK	Democratic People's Republic of Korea
EU	European Union
EURATOM	European Atomic Energy Community
EURODIF	European Gaseous Diffusion Consortium
FMCT	Fissile Material Cut-off Treaty
IAEA	International Atomic Energy Agency
MLF	(nuclear) Multilateral Force
MNA	Multinational Nuclear Arrangements
MOX	Mixed Oxide (nuclear fuel)
NAC	New Agenda Coalition
NAM	Non-Aligned Movement
NATO	North Atlantic Treaty Organisation
NGO	Non-Governmental Organisation
NNWS	Non-Nuclear Weapons State(s)
NPG	Nuclear Planning Group
NPR	Nuclear Posture Review
NPT	Treaty on the Non-Proliferation of Nuclear Weapons, or Non-Proliferation Treaty
NSA	Negative Security Assurance
NSG	Nuclear Suppliers Group
NWS	Nuclear Weapons State(s)
OECD	Organisation for Economic Cooperation and Development
P5	The five permanent members of the UNSC
PAROS	Prevention of an Arms Race in Outer Space
PNI	Presidential Nuclear Initiative
PrepCom	Preparatory Committee
PSA	Positive Security Assurance
PTBT	Partial Test Ban Treaty
R&D	Research and Development
START	Strategic Arms Reduction Treaty
UN	United Nations
UNSC	United Nations Security Council
UNSCR	United Nations Security Council Resolution
US	United States
WMD	Weapons of Mass Destruction
WTO	World Trade Organisation

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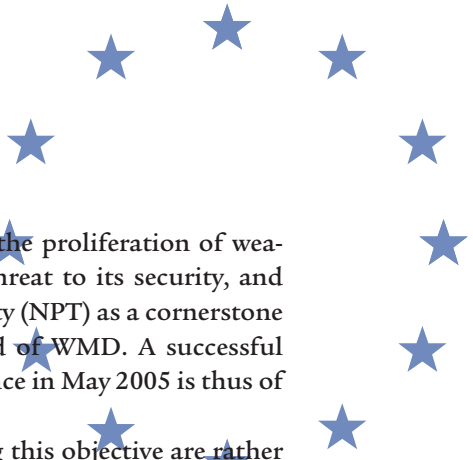

The European Union has identified the proliferation of weapons of mass destruction as a key threat to its security, and considers the Non-Proliferation Treaty (NPT) as a cornerstone of its strategy of fighting the spread of WMD. A successful outcome of the NPT Review Conference in May 2005 is thus of essential interest to the Union.

However, the chances of achieving this objective are rather slim: the unresolved question of Iran, the unclear status of North Korea, a lack of enthusiasm on the part of the Nuclear Weapons States for further steps towards disarmament, limited progress in the conclusion and implementation of the IAEA's Additional Protocol – to name only a few – are all obstacles to a successful conference. In this situation the EU, as the main protagonist of a multilateral, treaty-based approach to the fight against proliferation, has a particular responsibility to avoid the Review Conference becoming a failure.

To achieve the EU's objective, member states have to overcome their traditional divergences on nuclear issues and put forward innovative proposals. This *Chaillot Paper* demonstrates that there is enough common ground to do so: four distinguished experts assess the main challenges currently facing the NPT regime and develop ideas for the EU's contribution to a successful conference.

Member states should strive to protect the integrity and credibility of the NPT and continue to promote its universality. The EU should support and work towards the implementation of the Additional Protocol as the verification standard; it should also continue to work for the promotion of the early entry into force of the CTBT. Building on the effective national export control policies of its member states, the EU can also declare itself ready to assist third countries to strengthen their export controls. More broadly, regional security concerns must be addressed as well. In this context, CFSP in general can play an important role in supporting the NPT.

Last but not least, member states should, within the EU, put aside tactics driven by external groupings and give priority to EU solidarity.

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