



Nuclear Proliferation in the 21st Century: Will Multilateral Diplomacy Work?

Findings and Recommendations

Martin Rødbrø, Martin Fernando Jakobsen and Line Juul Bay

Introduction



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For 35 years the Non-Proliferation Treaty (NPT) has been the very cornerstone of the international nuclear non-proliferation regime. The treaty has proven to be a strong bulwark against prolific spreading of the materials and technologies necessary to produce the most destructive weapons the world has ever known.

The world has, however, changed dramatically since the inception of the treaty: The very political order which gave rise to huge arsenals of nuclear weapons has vanished with the nuclear weapon states of the treaty only reluctantly embarking on the nuclear disarmament laid down in the treaty. This hesitation is a source of frustration with some non-nuclear weapon states pointing to a bias between the two categories of member states under the treaty.

Accompanying political change, globalisation has made access to technology, know-how and materials easier and less costly. Designs of dual-purpose products are e-mailed across continents; know-how can be bought all around the world; components are manufactured in different countries only to converge for assembly in the country of destination. Thus – as hardly envisaged when the treaty was negotiated in the late 1960s – a huge number of states today have the capacity to control the nuclear fuel cycle, as is their right under the treaty. With control of the nuclear fuel cycle, however, comes the ability to produce fissile material not just for power reactors but also in weapons grade quality for nuclear weapons.

Far more alarmingly, however, is the extent to which the nuclear technology, know-how and materials have moved beyond the reign of the nation states into the hands of illegal networks. Working across borders and thus across national bureaucracies, these networks have been able to supply state actors with sensitive technology and know-how. Similarly, non-state actors have taken an interest in the nuclear weapon technology and related materials.

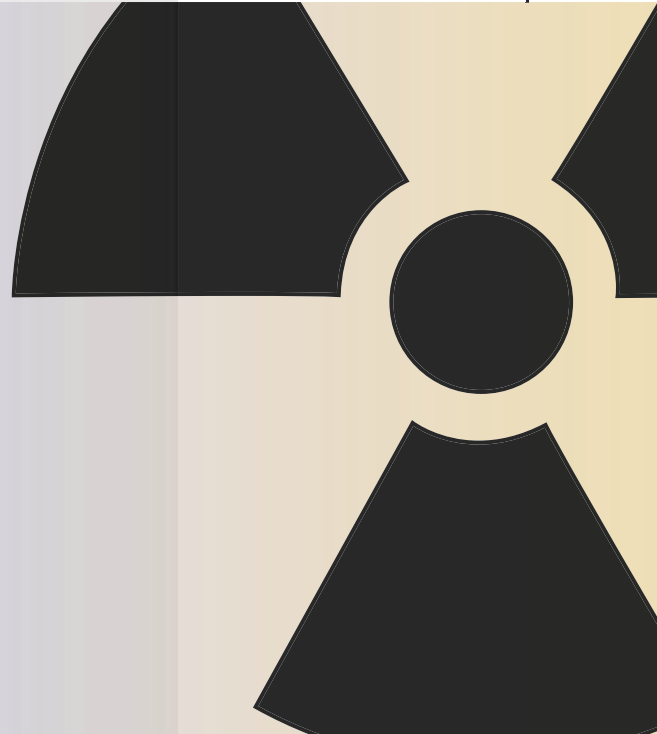
There is little doubt that the present international nuclear non-proliferation regime is under severe strain. Some effort to alleviate the situation has been made by establishing supplementary arrangements but these are no more than just that. Far more international co-operation is needed, but this will require immense political will as was clearly demonstrated by the failure at the 2005 NPT Review Conference.

On 25-26 August 2005 the Danish Institute for International studies (DIIS) hosted a conference on Nuclear Proliferation in the 21st Century with the subtitle 'Will Multilateral Diplomacy Work?' The conference brought together highly esteemed scholars, diplomats, politicians and experts to discuss the threat of nuclear proliferation in the 21st century and whether multilateral diplomacy will work in this context.

This publication sums up the key conclusions and recommendations that emerged from the conference, but also attempts to pay ample attention to the divergent perspectives which were brought forward.

The conference was opened with presentations by Mr. Per Stig Møller, Danish Minister of Foreign Affairs, and Mr. Tariq Rauf, Head of Verification and Security Policy Co-ordination at the International Atomic Energy Agency (IAEA). The conference then proceeded with five panel-discussions focussing on:

- The Nuclear Non-Proliferation Regime
- Devising a Verification Formula for Closed Societies
- Constructing a Robust Export Control Regime
- Nuclear Weapons and the Threats of the 21st Century
- Nuclear Weapons and Today's Non-Nuclear Weapon States



The Danish Membership of the UNSC and Non-Proliferation Priorities



United Nations Security Council

Mr. Per Stig Møller, Danish Foreign Minister, expressed great concern about the current and future challenges from states as well as non-state actors regarding the proliferation of nuclear weapons. Initially Mr. Møller stressed that states are still the most important actor regarding these issues and that the threat of nuclear mass destruction must be countered with a multilateral response. States which are reluctant to follow the international treaties must be compelled or persuaded to co-operate. The goal is to re-establish full suspension of ongoing uranium-enrichment programmes and to induce states to give up their nuclear weapon programmes by applying additional safeguards and financial help. Mr. Møller recognised the NPT as being the cornerstone of the non-proliferation efforts, but pointed out that the treaty must be adapted to target non-state actors as well.

In the wake of recent terrorist attacks and the unravelling of the A.Q. Khan-network Mr. Møller emphasized the importance of an international effort to prevent terrorist groups from acquiring nuclear materials. He highlighted new initiatives, such as the United Nations Security Council (UNSC) Resolution 1540 and the Proliferation Security Initiative (PSI) as being the most important tools to target future nuclear terrorism.

Mr. Møller acknowledged the Security Council's commitment to assume an enhanced role regarding non-state actors and proclaimed that Denmark will take this commitment further through its membership of the UNSC and presidency of the UN Counter Terrorism Committee. Denmark will work to enhance the mandate of the UNSC commission which monitors the implementation of Resolution 1540 and thereby make the committee a cornerstone in the international struggle against nuclear terrorism.

UNSC Resolution 1540 requires states to enact and enforce effective legal and regulatory measures to prevent the proliferation of nuclear, chemical, and biological weapons, their delivery systems, and related materials. It also requires that all states "shall take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery, including by establishing appropriate controls over related materials."

The PSI Principles identify specific steps for effectively interdicting WMD (Weapons of Mass Destruction) shipments and preventing proliferation facilitators from engaging in this deadly trade at sea, on land, and in the air.

The Nuclear Non-Proliferation Regime – The Way Ahead

Mr. Tariq Rauf, Head of IAEA Verification and Security Policy Coordination, recognised that recent events have placed the NPT under unprecedented stress and have exposed some of the inherent limitations of a political commitment comprising obligations and responsibilities. He proceeded by pointing out the new challenges of the NPT and suggested a number of measures to address these by drawing on past IAEA experience.



Mr. Rauf stressed that the current problems do not lie within the NPT itself, but in the implementation of non-proliferation and disarmament commitments undertaken under the treaty and its review process.

Logo of the International Atomic Energy Agency, IAEA.

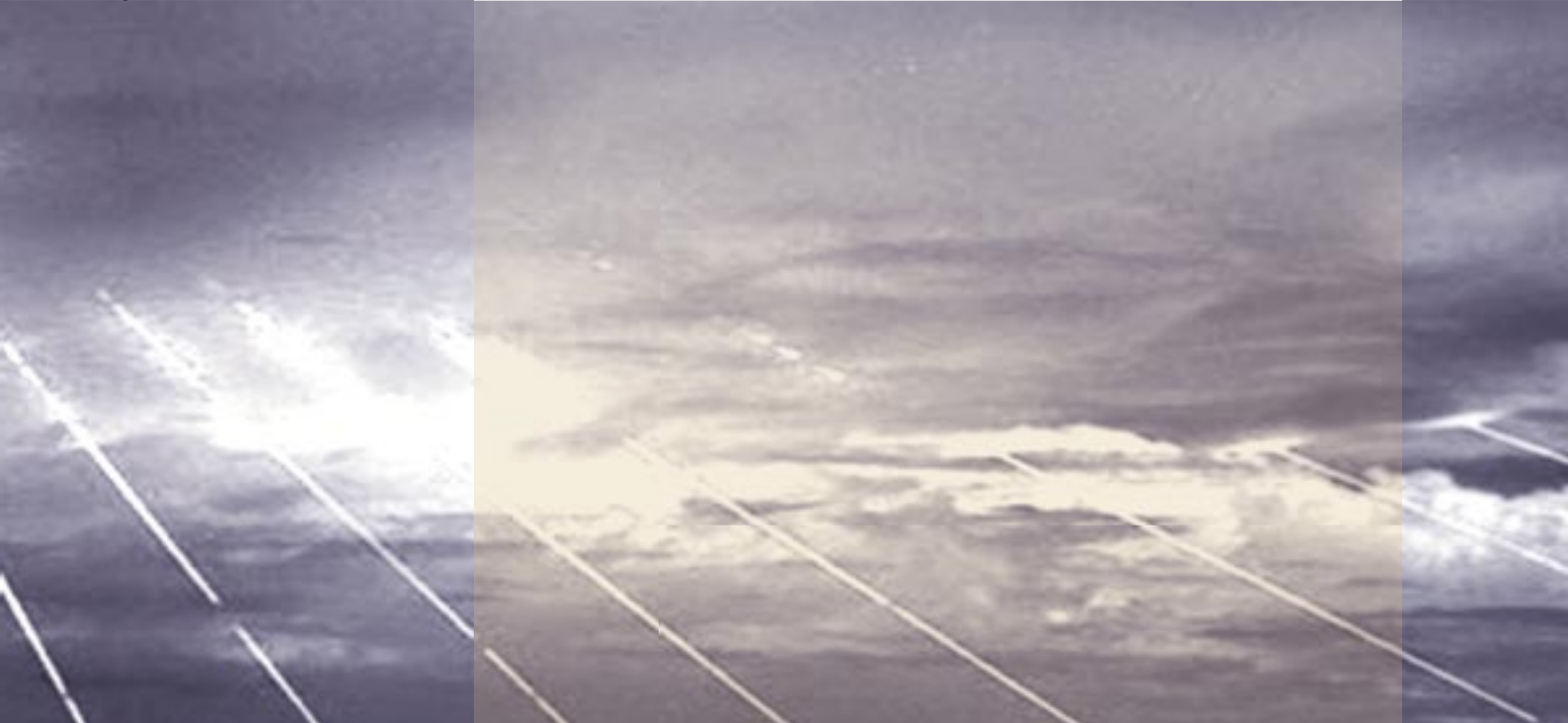
Mr. Rauf highlighted the fact that the nuclear arsenals of the five countries recognised as nuclear weapon states under the NPT are increasingly becoming a focal point for either resentment or cynicism among the nuclear “have-nots”, or a model for emulation for states that wish to pursue clandestine WMD (Weapons of Mass Destruction) programmes, to achieve security and enhanced status. He also pointed out that in today’s security environment, the only actors who would actually use nuclear weapons are extremist groups against which nuclear deterrence is totally ineffective.

Mr. Rauf finished by presenting a number of measures to strengthen the integrity and authority of the NPT and its associated IAEA nuclear safeguards system:

- It is important to re-affirm the goals established in 1970 and send a clear-cut message that the commitment to these goals has not changed. Therefore a concrete roadmap for verifiable, irreversible nuclear disarmament, including a timetable, should be put in place, and any notification of withdrawal from the NPT should prompt an automatic review by the UNSC. Current

nuclear weapon states outside the NPT should commit formally to broad non-proliferation, disarmament and security reform.

- The IAEA's verification authority must be strengthened by making the additional protocol to the comprehensive safeguards agreements an integral part of the agency's safeguards system in connection with the NPT. Intentions cannot be verified, for



Multiple Independently Reentry Vehicle during re-entry of the Earth's atmosphere

which reason the verification process must be comprehensive enough to reveal the nature and full extent of nuclear programmes. Moreover, efforts should be made to enhance information sharing, on nuclear exports including the dual-use technologies, enhancement of the agency's independent analytical capabilities and to ensure that the agency has an adequate and uniform legal authority to conduct credible verification.

- Increased effort should be made to expand and stimulate public dialogue at all levels of civil society to promote and strengthen verified nuclear non-proliferation and nuclear disarmament, in order to achieve a world free of nuclear weapons.

The Nuclear Non-Proliferation Regime

Panel I

The first panel was chaired by Mr. Joseph Cirincione, Director for Non-proliferation at the Carnegie Endowment for International Peace. The panel furthermore included presentations by Mr. James Walsh, Executive Director for managing the Atom Project at Harvard University and by Mr. Frank Barnaby, Nuclear Issues Consultant and Member of the Council of Advisers at the Oxford Research Group.

Keeping Libya and Iran in mind, has the nuclear non-proliferation regime failed? In the case of North Korea, is the lesson to be learned from this that acquiring a nuclear deterrent will actually neutralise compliance mechanisms? What is the future; collective diplomacy or unilateral coercive action?

The Failure of American Non-Proliferation Policy

Mr. Cirincione stressed that the biggest challenge to multilateral diplomacy is the policy of individual states and particularly the current policy of the United States. Mr. Cirincione believed that a multilateral approach to the non-proliferation regime has to work but that the policy implemented by neo-conservatives influencing US policy since 2000 has impeded the movement towards multilateral diplomacy.

The US non-proliferation policy has been characterised by mistrust, indifference or hostility to traditional multilateral mechanisms, preferring unilateral American action or campaigns with selected coalitions. Many in the neo-conservative group believe that the entire process of negotiating and implementing non-proliferation treaties is both unnecessary and harmful to US national security interests.

Since this policy has not achieved any great success Mr. Cirincione believed to see a change in the US policy towards a more pragmatic approach where the US is starting to soften its rhetoric when for instance starting negotiations with North Korea. This new approach is in line with recommendations set up by a Carnegie Endowment Report presenting a strategy to secure and eliminate nuclear materials and stop the illegal transfer of nuclear technology.



Launch of American Peace-maker nuclear missile

The strategy would prevent new nuclear weapon states by increasing penalties for withdrawal from the NPT, enforcing compliance with strengthened treaties, and radically reforming the nuclear fuel cycle to prevent states from acquiring dual-use technologies for uranium enrichment or plutonium reprocessing. The threat from existing arsenals would be reduced by reducing global stockpiles, curtailing research on new nuclear weapons, and taking weapons off hair-trigger alert status. Finally, greater efforts would be devoted to resolving the regional conflicts that fuel proliferation and to bringing the three nuclear weapon states outside the NPT (India, Pakistan and Israel) into conformity with an expanded set of global nuclear non-proliferation norms.

The Non-Proliferation Regime: Success, Failures and Lessons for the Future

When discussing the non-proliferation regime, Mr. Walsh stated that it is important to focus on the successes of the regime and not always on the failures. Looking back to the beginning of the NPT it has proven to be a success in the way that the rate of nuclear proliferation has declined; 75 % of states that started the process of acquiring nuclear weapons have reversed course and the diplomatic efforts in North Korea show that acquisition does not necessarily mean non-compliance. States place themselves in a difficult situation by pursuing non-compliance. As Mr. Walsh pointed out, nobody wants to be North Korea, not even North Korea itself.

The success of the NPT is down to treaties, export control, internal politics and the way regimes have changed their internal structures. These lessons provide some useful guidance for the future in the way that attention needs to be on politics and pride instead of overemphasis on technology and threats. NPT must provide an overemphasis on coercion, thereby creating a situation in which states have a stake in non-proliferation. Emphasis should be on the importance of transparency, deadlines and political commitment, the NPT needs non-proliferation advocates, and it needs to be a system that can evolve over time adapting to the changing context.

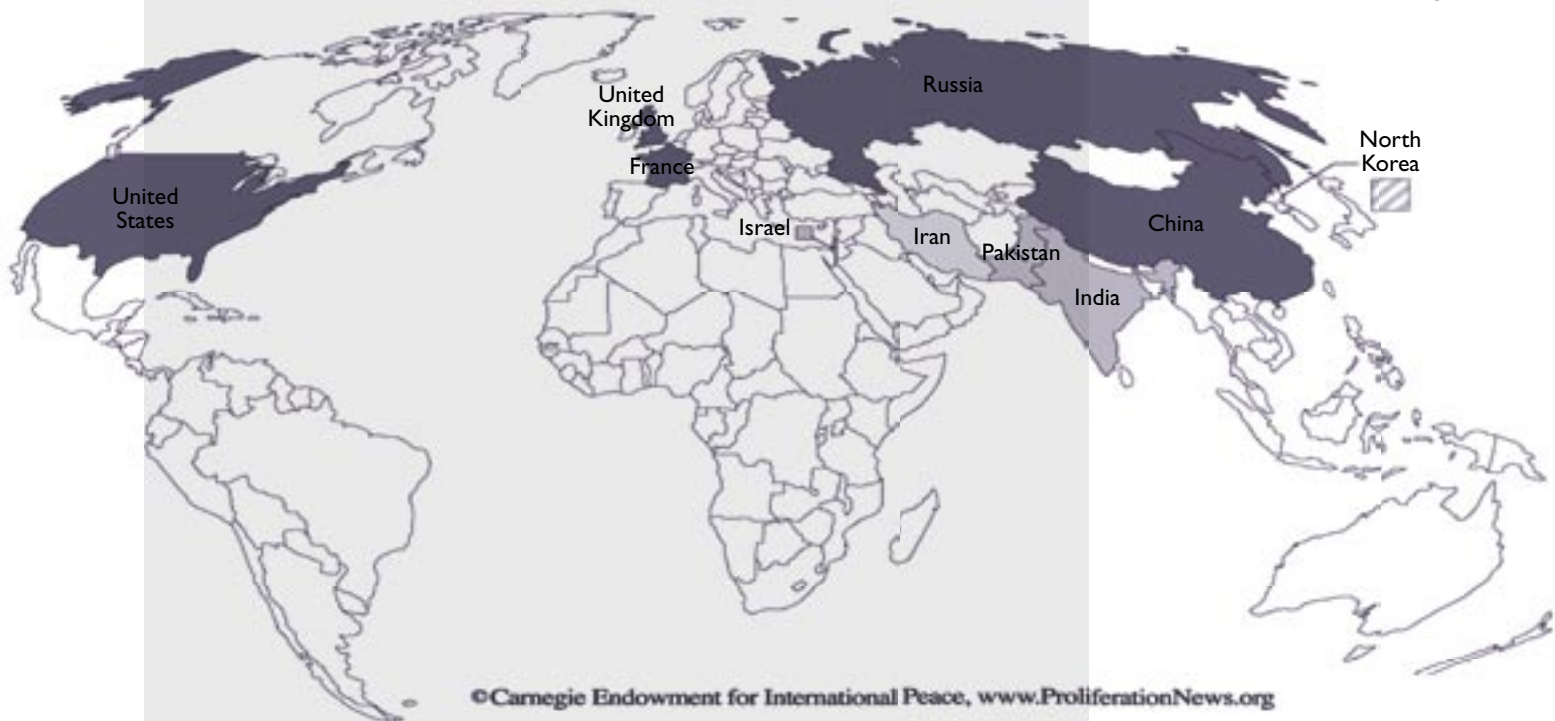
Safeguards and Plutonium Reprocessing

Mr. Barnaby stressed the importance of not being able to distinguish between the technology used for peaceful commercial use and the technology needed to create nuclear weapons. Commercial reprocessing plants deal with large amounts of plutonium – up to 10 tons a year – where a competent nuclear weapons designer only needs 3-4 kilograms to construct a nuclear weapon. The safeguards agencies claim that a commercial plutonium-reprocessing plant can be safeguarded with effectiveness of up to about 99 per cent. This means that, at least 1 per cent of the plutonium throughput will be unaccounted for.

The non-proliferation regime has probably prevented some states from acquiring nuclear weapons but the regime can still be improved. Mr. Barnaby saw the most important measure to prevent the further spread

of nuclear weapons to be to strengthen the IAEA safeguards to make it more difficult to acquire fissile materials to make nuclear weapons.

At the moment the IAEA can not effectively safeguard a typical commercial reprocessing plant, so more effective safeguards are needed to strengthen the work of the IAEA and the non-proliferation regime.



Discussion

The discussion revolved around two main issues.

- The opening up of US policy towards a more multilateral approach, and
- How to prevent new states from acquiring nuclear weapons.

The United States is approaching a multilateral solution because it is committed to United Nations Security Council (UNSC) Resolution 1540. The nuclear weapons states who are members of the NPT must reduce their nuclear capability, otherwise potentially new nuclear weapons states will never be convinced of the seriousness in the treaty.

Mr. Cirincione believed that the NPT countries already know how successfully to approach the aspiring nuclear weapon states but the states making the decisions lack the political leadership and the will to do what is required.

NUCLEAR WEAPON STATUS 2005

- NPT Nuclear Weapon States
- Non-NPT Nuclear Weapon States
- ▨ Suspected Nuclear Weapon States
- Suspected Clandestine Programmes

Devising a Verification Formula for Closed Societies



The panel was chaired by Mr. Pierre Goldschmidt, former IAEA Deputy Director General and Head of the Department of Safeguards. The panel furthermore included presentations by Mr. Rolf Ekéus, Chairman of the Stockholm International Peace Research Institute (SIPRI) and by Mr. Ali-Asghar Soltanieh, Deputy Director General at the Political and International Affairs Department of the Iranian Ministry of Foreign Affairs.



IAEA verification team

Combating the nuclear proliferation syndrome

Initially Mr. Goldschmidt stated that while the application of the term “closed society” can be discussed, there is little doubt that the more restrictions imposed on a given society, the more difficult the application of effective safeguards will be. That being said, a covert nuclear programme is also possible in a so-called open society, so in the end what matters in relation to any society – closed or open – is the level of transparency regarding a nuclear programme and the degree of co-operation with the IAEA.

However, the Agency is in need of more co-operation with other states regarding a particular state’s nuclear programme, additional information derived from export control mechanisms and more resources including an adjusted mandate devoted to the interpretation of other indicators such as specific dual-use technology, development of high explosives and the like.

Overall, a number of states need to recall that the NPT is based on the principle that all parties respect and comply with their commitments. Until, however, the present NPT-nuclear weapon states lead the world by example, it is hard to believe that states possibly seeking to develop a nuclear deterrence option for real or perceived security reasons could be convinced that better options do exist.

Iranian Nuclear Policy and Multilateral Approach

Mr. Soltanieh stated that all NPT members but the USA strive for and pursue multilateral diplomacy. Diplomacy will only be able to deal with the issue of nuclear non-proliferation effectively provided that the political will exists and that political and nuclear scientists advise the political decision makers in an impartial manner and refrain from politically motivated and technically unjustified declarations.

He stressed that it is the inalienable right of NPT states to have full access to nuclear science and technology for peaceful purposes in a non-discriminatory way and presented the history of Iran's commitment to obtain national control with the nuclear fuel cycle as a struggle to obtain the benefits from nuclear science in the fields of energy, medicine, agriculture, and industry. Finally he put forward two divergent scenarios for the International Community to decide the future fate for multilateral diplomacy.

Mr. Soltanieh pointed out that to a great extent the International Community has been misled by biased and inaccurate information regarding the Iranian nuclear program. The Iranian nuclear activities started in the 1960s when German, French, and American companies competed to get contracts. After the victory of the Islamic Revolution, Iran decided to sustain its membership and compliance with NPT and the IAEA Statute, and Iran has spared no effort in co-operating with the Agency. Iran decided in October 2003, voluntarily and temporarily to suspend its enrichment activities to facilitate the Agency's technical verification activities and has co-operated fully during almost two years of inspections to resolve the diplomatic crisis.

Mr. Soltanieh highlighted that enrichment is not prohibited by the NPT, and that there is no reason for Iran to continue its frustrating but voluntary suspension of uranium conversion and enrichment, as the IAEA has confirmed that it has not found any evidence in Iran that nuclear materials and activities are diverted to prohibited purposes.

The Iraq Formula

Mr. Rolf Ekéus pointed out that the inspections regime worked in Iraq from 1991-1998 despite all obstacles presented by the Iraqi government as it was based on a system of sanctions with a double impact requiring consistency, resolve and unity by the UNSC. Firstly, a hard approach by pressuring the country concerned, and secondly a soft approach by the promise of terminating the sanctions in case of disarmament. Mr. Ekéus pointed out that a potential use of force must exist to influence the calculation of the state in question. Operating a successful verification programme requires a sophisticated understanding of the security concerns of the given country.



Storage pond in thermal oxide reprocessing plant, Sellafield, United Kingdom

Discussion

Three main questions were addressed: Can verification work in other closed societies than Iraq i.e. North Korea? Can IAEA be given temporarily extended authority to conduct inspections? If Iran were to give up their nuclear weapons programme, would that apply pressure on Israel to do the same?



From the left:

Satellite image of heavy water reactor at Arak under construction (Iran 2005)

Inspectors assessing the ruins of a facility used to produce highly enriched uranium (HEU) (Iraq 1991-1998)

Regarding the application of the Iraqi verification experiences in other closed societies, the panel stressed the necessity of a competent inspection team, surveillance capabilities, shared intelligence backed by international pressure and dialogue as the combination for success. Regarding the current situation in the Middle East, the Panel underlined the importance of adding the Arabian – Persian security balance to the equation.

Mr. Soltanieh responded to the last two questions. He pointed out that criteria can be interpreted differently by different states and that IAEA can never guarantee that there is nothing shady going on in Iran or anywhere else for that matter. He also underlined Iran's commitment to pursue full transparency and urged all NPT states to do the same and adopt the additional protocol.

Addressing the last question Mr. Soltanieh made it clear that Iran has not linked its nuclear programme to development of a nuclear weapons capability and that Iran is obliged to give full technical specifications of all its programmes to the IAEA as well as to give objective political, religious, legal and technical guarantees that it does not pursue nuclear weapons. Iran will not, however, give up its peaceful and legal nuclear programme since too much economic effort and national pride has been invested and that Iran has already achieved too much to go back.

Constructing a Robust Export Control Regime

Panel III

The panel was chaired by Mr. Bent Lindhardt Andersen, Head of Division at the Danish Ministry of Economic and Business Affairs. The panel furthermore included presentations by Mr. Nick Thomsen, Detective Sergeant from the Danish Security Intelligence Service and by Mr. Ian Anthony, Project Leader for Non-proliferation and Export Control at the Stockholm International Peace Research Institute (SIPRI).



Rethinking the nuclear export control regime

Mr. Andersen stressed that the creation of an effective nuclear export control regime is not an easy task since it needs to be based on practical experience and therefore needs to change with the changing historical context. In the aftermath of the cold war a new structure of the international system, an increasing number of civilian products with dual use and a limited industry awareness have emerged which require a rethinking of the nuclear export control regime.

The aim of the regime is to create a common set of rules and guidelines for the delivery of nuclear related material to ensure that it is only exported for peaceful purposes but this aim is being challenged by the changing context.

The new challenges to the regime are that the technology is widely available, transfers are intangible and more products and technologies have dual-use potential. This requires a rethinking where focus is on reaching out to industry, making compliance visits, creating internal compliance programmes and creating dialogue through seminars thereby making export control a part of the everyday life of the relevant companies.

At the heart of the nuclear non-proliferation effort is the need to control sensitive know-how and technologies – these controls appear not to have been sufficiently effective. The uses of front companies, dual technology and access to illicit markets in nuclear know-how and technology have provided state actors with nuclear capabilities. How can sensitive know-how and technology be effectively controlled without hampering the free movement of goods and services?



Container of radioactive material being loaded onto a ship.

The Construction of a Robust Export Control Regime – the Role of the Danish Security Intelligence Service

Mr. Thomsen highlighted that international co-operation and industry awareness is a necessary tool in order for the Danish Security Intelligence Service to fulfil its task of creating a robust export control regime. On a global scale only a few countries participate in the regime which makes it difficult to maintain a high level of export control in which the focus needs to be on state as well as non-state actors.

Mr. Thomsen emphasized that it will be naïve to think that an effective export control regime could completely prevent the acquisition of military and dual-use products. At the same time, though, he stressed that a robust export control regime will enable not only to monitor critical countries and non-state actors in their procurement efforts but could also make it possible to have enough time to influence political actors before they acquire these products and use them to make nuclear weapons.

In order for all of this to succeed Mr. Thomsen stressed the importance of increasing the level of knowledge with regard to non-proliferation within public authorities, the business community and the educational institutions that work with these and related subjects on a daily basis.

Constructing a Robust Export Control Regime

To end this panel Mr. Anthony stressed his view there is not currently a robust export control regime. The challenges to the regime are multiple with a distinction between state and non-state actors. Regarding states the challenge is to prevent states from developing nuclear weapons where the challenges regarding non-states actors are to prevent them from acquiring nuclear weapons and prevent them from acquiring other dangerous materials and technologies.

In order for these challenges to be met it is important to create the export control regime as a preventive tool that co-operates with industry by creating legal obligations, it is important to implement the UN Security Resolution 1540 and not the least to strengthen the IAEA safeguards system.

More specifically Mr. Anthony identified six main ways to strengthen the regime; harmonise views within the Nuclear Supplies Group about states of concern, co-operate to monitor end-use and end-users, bring new partners into a common system, strengthen guidelines for assessing exports, further develop technology assessment methodologies and tools and finally make industry a partner rather than a target of controls.

Discussion

One of the topics at the discussion was concerning terrorist groups importing or acquiring nuclear materials. It was asked whether or not it was possible to identify any nuclear terrorist groups who could be interested in importing such materials. The answer from the panel was that no group like that could be identified since nuclear material



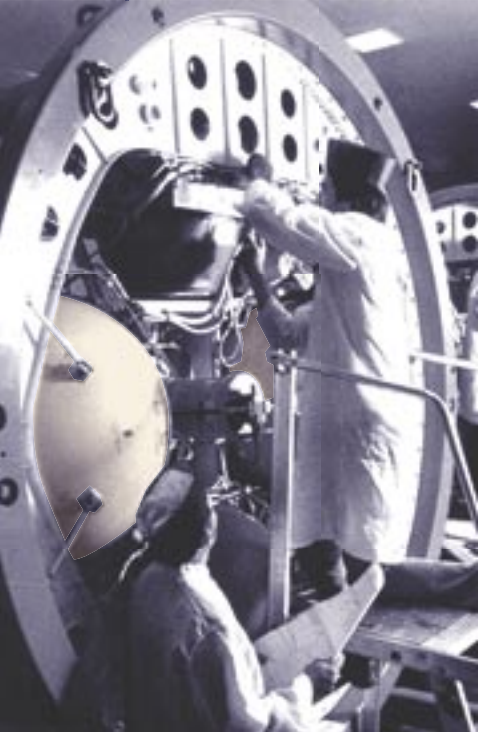
is not something bought through commercial trade. Terrorist groups would instead work through different channels and if no control was kept they would most likely acquire it through domestic sources or via foreign connections.

A major concern was the use of containers and how to monitor and secure container ports. This problem is an example of the need to co-operate with industry since container ports can only be secured through co-operation with the shipping industry.

Finally there was a concern regarding updating of the export control list and what to take of the list without compromising security. The answer from the panel to this was that all subjects on the list as well as some outside it are controlled regularly and assessments are made based on this but it is always difficult to establish clear rules for when subjects can be taken off or put on the list.

Joint US-Spanish PSI exercise

Nuclear Weapons and the Threats of the 21st Century



The panel was chaired by Mr. Charles D. Ferguson, Science and Technology Fellow at the Council on Foreign Relations. The panel furthermore included presentations by Mr. Joseph Pilat, Technical Staff Member at the Non-proliferation and International Security Division at the Los Alamos National Laboratory and by Mr. Peter Zimmerman, Professor of Science and Security at King's College in London.

What are the implications of the security threats of the 21st century to the nuclear non-proliferation regime, particularly the rise of global terrorist organisations which harbour intentions of nuclear terrorism?
How can the Non-Proliferation Treaty deal with the issue of nuclear terrorism?
How can the Non-Proliferation Treaty address the issue of managing the nuclear fuel cycle and still preserve the nation state's right to use the nuclear technology?

Multilateral Initiatives and Multi-Layered Defences to Combat the Nuclear Threats of the 21st Century

Mr. Ferguson stressed that it will require a sustained multilateral effort to prevent proliferation and the US will work hard for this. Multilateral initiatives and a multilayered non-proliferation strategy offer effective mechanisms for managing the uncertainties concerning nuclear proliferation.

One of these initiatives that has achieved increasing success is the PSI project which despite of being only 2 years old has give rise to at least eleven successful interdictions of dangerous weapons of mass destruction related transfers. Mr. Ferguson believed that PSI or similar mechanisms would be limited in stopping terrorists or criminals from smuggling nuclear material but that being said, the PSI, especially through its intelligence assessment component, does have an important role in helping to stop state transfers of nuclear materials to terrorists groups.

Mr. Ferguson strongly believed in strengthening the multilateral co-operation through existing mechanisms and the possible introduction of new. A way of doing this is to make the successes more publicly known thereby attracting more support from industry, politicians and the public at large.

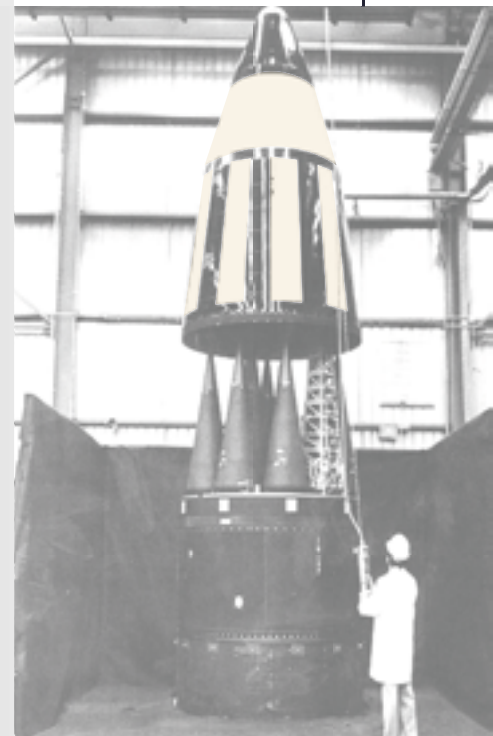
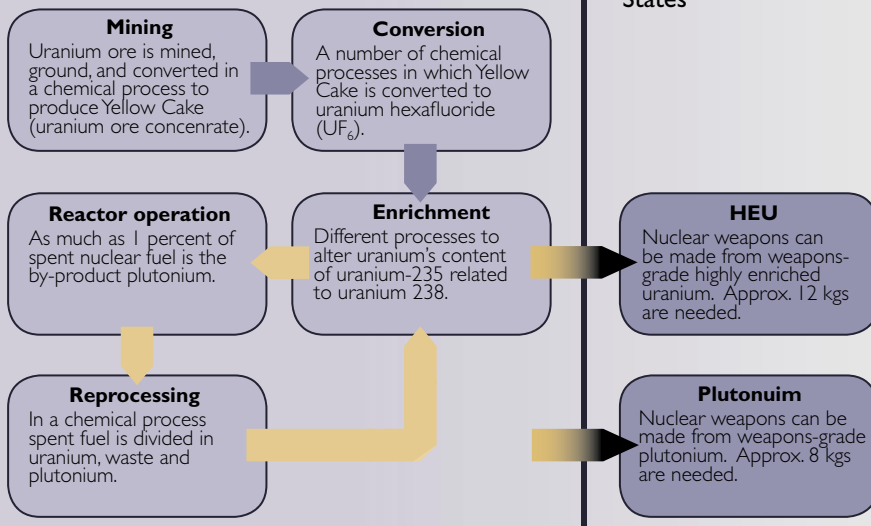
Dealing with Nuclear Proliferation and Terrorism Threats: Does the NPT Matter?

Mr. Pilat believed that the non-proliferation regime is the cornerstone of the efforts to combat nuclear proliferation and a key element of the struggle against nuclear terrorism. However, the treaty and the international nuclear non-proliferation regime were created in a

THE NUCLEAR FUEL CYCLE

Civilian application

Allowed for NPT Non-Nuclear Weapon States (NPT Article IV)



Multiple Independently Reentry Vehicle (MIRV) assembled in missile warhead.

different time to deal with different threats and it is therefore essential to maintain and strengthen the current cooperation.

Mr. Pilat identified seven challenges to the regime in the form of states acquiring weapons; North Korea's withdrawal from the treaty; limited consensus on compliance enforcement; growing access of states and non-state actors to sensitive material and technology; the issue of the NPT's relevance to activities by non-state actors; the tension created by re-emerging commercial interest in the civilian nuclear fuel cycle and finally the increasing debate over article VI.

In order to meet these challenges more needs to be done. The NPT needs to be strengthened by promoting the universality of the Additional Protocol, by tightening export controls and by addressing non-compliance more vigorously.

Nuclear Terrorism: The Miscalculated Problem

Mr. Zimmerman explained the miscalculated problem in nuclear terrorism and the need to work in multilateral ways. For terrorists it is often a question of making a political statement as much as providing mass casualties. People are focused on smuggling in containers but many more ways of delivery exist. These could include break bulk carriers, crude carriers and aircraft. Instead of focussing on the assumption that terrorists will consign their irreplaceable, very expensive device to unaccompanied travel, one should instead

focus on alternative ways of delivery, when their cargo is detonated not in but rather near the target, for instance in an underwater detonation in a port.

In beating nuclear terror it is important to understand that the defense need not be perfect. The terrorist must beat every stage of the defense,

*Mushroom cloud
from Bravo nuclear
test, March, 1954*



from controls on material to police and NEST detection whereas the defense need only get lucky once. Beating nuclear terror therefore has several definitions like intercepting the device, making interception seem so probable that terrorists abandon the project because of low payoff or by increasing control on materials and thereby the chances of getting caught.

Discussion

A common ground for the discussion was that the non-proliferation regime is working but needs to be strengthened in order to meet the challenges of today. When this is said it was underlined that it is never possible to verify completely and uncertainties will always exist but a strong multilateral co-operation using the intelligence assessment component can help to strengthen the regime and thereby prevent the spread of nuclear materials.

Mr. Zimmerman pointed out that it is important to think in alternative ways regarding how terrorists work. Again a greater multilateral co-operation will enhance this knowledge and thereby also the chances of intercepting the nuclear terrorist device before it reaches its planned target.

Nuclear Weapons and Today's Non-Nuclear Weapon States

Panel V

Launch of Iranian Shihab III missile

This final panel was chaired by Mr. David Broucher, former UK Ambassador to the Conference on Disarmament. This panel furthermore included presentations by Ms. Paula A. DeSutter, Assistant Secretary at the Bureau for Verification and Compliance at the United States Department of States and by Mr. Alaa Issa, Counsellor to the Permanent Mission of the Arab Republic of Egypt to the United Nations.



Mr. Broucher stressed that the non-proliferation regime is under threat because leaving the NPT is too easy. The majority of NPT states remain fully compliant but the regime is threatened by the states which conduct nuclear hedging within the regime. The question is therefore how much hedging is acceptable.

Mr. Broucher gave the answer that no hedging is acceptable since the non-proliferation regime will only work under conditions of complete transparency in which purely civilian programmes are implemented under comprehensive safeguards underlining the importance of trust. It should not be possible to acquire nuclear weapons under the treaty and one of the challenges is to make sure that the treaty does not offer any hiding places for states which try to do that.

In the final analysis a sovereign state cannot be prevented from renouncing a treaty, but the process ought to be more difficult and contain some mechanism to prevent this which might even involve the Security Council. A solution here could be to follow the suggestion by Mr. Goldschmidt of temporarily broader access rights for the IAEA and enhanced indicators for non-compliance.

Nuclear Proliferation in the 21st Century: Will Multilateral Diplomacy Work?

Ms DeSutter stated that the United States is committed to a strong and effective nuclear non-proliferation regime without which the

Negotiations, interdiction or intervention? What is the way ahead for the nuclear non-proliferation regime in the face of blatant non-compliance by some state actors? What actions should be taken against states which conduct nuclear hedging and what level of hedging is acceptable?

world will be at a far greater risk of catastrophic attacks against civilised nations from terrorists and rogue states. But despite this, the regime must be reformed to meet today's challenges.

At least four countries are or have been using the NPT as a cover for the development of nuclear weapons. The problem is that there is no



*NUC demonstration
against nuclear weapons,
New York, May 2005*

such thing as perfect compliance. Therefore the system relies on aspiring reasonable doubt in order for appropriate responses to be taken in due time.

Ms DeSutter stressed that President Bush has proposed an action plan to prevent further nuclear proliferation. This plan includes the need to criminalise proliferation-related activities as implemented under Security Council Resolution 1540. The reforms further include:

- Universalising adherence to the Additional Protocol and making it a condition of nuclear supply, which will strengthen the means to verify NPT;
- Restricting further the export of sensitive technologies, particularly the spread of enrichment and reprocessing technology, which will close a key loophole in the NPT;
- Strengthening the PSI to intercept and prevent illicit shipments of weapons of mass destruction, their delivery systems, and related materials;
- Expanding the 'Global Partnership' to eliminate and secure sensitive materials, including weapons of mass destruction, which broadens US and Russian efforts aimed at co-operative threat reduction.

What is the way ahead in the face of blatant non-compliance by some state actors?

Mr. Issa believed the non-proliferation regime will last because of the mutual benefits between the member states and that in order to address nuclear hedging, it is important first to define non-compliance and nuclear hedging.

The 1990s saw a significant expansion and dynamism in the development of international norms and laws but saw only a limited dynamism in the institutions to enforce them. This presents the regime with three challenges; the abandonment of multilateral verification where the absence of this leaves enforcement unchecked; counter proliferation in the form of a single country's perspective instead of the perspective of the regime and finally the problem of having no clear guidelines for exclusionary arrangements like the PSI but only having policy papers.

Mr. Issa believed that the way ahead for the regime seems to lie in three particular developments that all have roots in the challenges. These are the consolidation of exclusionary arrangements, how to handle the legitimacy of the regime and the impact of enforcement without verification and finally that the strengthening of the non-proliferation regime will continue at a slower pace than anticipated due to significant divergent interests on key issues like the fuel cycle, safeguards and withdrawal.

Discussion

The main discussion between the panel and the conference participants evolved around strengthening the non-proliferation regime and making it harder to leave. There was an acknowledgement from the panel speakers as well as from the conference participants in the importance of respecting the right of state parties to pursue the peaceful use of nuclear energy while at the same time maintaining control and preventing states from developing nuclear weapons.

Disagreement was found regarding the approach to non-compliance states where several participants criticised the US approach for being unilateral thereby disregarding the regime. The answer from the American participants was that they understand that non-proliferation can best be met with multilateralism but at the same time that they are determined to stop rogue states from gaining nuclear weapons under cover of supposedly peaceful nuclear technology.

Agreement within the panel could be found on the fact that the survival of the regime requires transparency, clear guidelines and verification tools and that more can be done in order to make it more difficult to leave the non-proliferation regime.



*Dr. Mohamed ElBaradei,
Director General of IAEA,
recipient of the Nobel Peace
Prize in 2005*

Policy Recommendations

Increased Awareness about Nuclear Proliferation

Nuclear proliferation covers many diverse aspects, most of which are complex technological, judicial or political issues and all of which contribute to the inaccessibility of the subject. National governments and international organisations need to put increased emphasis on nuclear proliferation in order to inform and educate both decisions makers and the public at large.

Increased International Co-operation on Nuclear Non-proliferation

The present international co-operation on nuclear proliferation is marred by diverse national agendas as well as by international organisations sporting less than efficient decision making procedures.

Responsible national leaders and international organisations need to unite on a verifiable roadmap including a timetable to implement the overall aims of the NPT: Development understood as utilisation of peaceful nuclear energy and security understood as nuclear disarmament.

Confirm NPT as Cornerstone of the Nuclear Non-proliferation Regime

A re-negotiation of the NPT may remedy some of the obvious flaws of the treaty but it is on the other hand highly unlikely that re-negotiation would lead to a generally improved treaty.

Rather, more strict interpretation of the existing treaty needs to address challenges such as rights to the full nuclear fuel cycle, NPT-withdrawal, and non-compliance.

Provide the Nuclear Watchdog with More Bite

Despite good intentions too few states have adopted the full safeguard regime and too often the IAEA is hampered in its verification duties by the limitations of the present regime.

Universal adoption of the Additional Protocol must be a priority as well as in cases of states in non-compliance, the IAEA must be given temporarily increased inspection rights.

Future Threats Emanating from Nuclear Proliferation

The interest of non-state actors in nuclear capabilities is highly worrying as is the emergence of illicit supply networks. However, considering the costs involved, only state actors can operate in this market in the short to medium term.

Emphasis must be put on the demand side and initially on state actors. If state actors illicitly acquiring a nuclear capability are deterred from this and state controlled fissile materials are brought under control, non-state actor nuclear sources will dry up.

DIIS wishes to thank the speakers for their excellent and thought-provoking contributions and participation in the panel discussions.



Bent Lindhardt Andersen, Head of Division, Ministry of Economic and Business Affairs

Ian Anthony, Project Leader, Non-Proliferation and Export Control Project, Stockholm International Peace Research Institute

Frank Barnaby, Nuclear Issues Consultant and Member of the Council of Advisers, Oxford Research Group

David Broucher, Former UK Ambassador to the Conference on Disarmament

Joseph Cirincione, Director for Non-Proliferation at the Carnegie Endowment for International Peace

Paula A. DeSutter, Assistant Secretary, Bureau for Verification and Compliance, United States Department of State

Rolf Ekéus, Chairman, the Stockholm International Peace Research Institute

Charles D. Ferguson, Science and Technology Fellow, Council on Foreign Relations

Pierre Goldschmidt, Former IAEA Deputy Director General and Head of the Department of Safeguards

Alaa Issa, Counsellor; Permanent Mission of the Arab Republic of Egypt to the United Nations

Per Stig Møller, Danish Foreign Minister

Joseph Pilat, Technical Staff Member, Non-Proliferation and International Security Division, Los Alamos National Laboratory

Tariq Rauf, Head of Verification and Security Policy Co-ordination, International Atomic Energy Agency

Martin Rødbro, Researcher, Danish Institute for International Studies

Ali-Asghar Soltanieh, Deputy Director General, the Political and International Affairs Department of the Iranian Ministry of Foreign Affairs

Nick Thomsen, Detective Sergeant, Danish Security Intelligence Service

James Walsh, Executive Director, Managing the Atom Project, Harvard University

Peter Zimmerman, Professor of Science and Security, King's College London