



HOUSE OF LORDS

Library Note

Debate on 26 March: The Potential for Nuclear Proliferation

This Library Note aims to provide background reading for the debate to be held on Thursday 26 March:

“To call attention to the potential for nuclear proliferation and the Government’s plans to respond to it”

The Note focuses in the first instance on the Foreign and Commonwealth Office’s recently published policy information paper, [*Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons*](#). It moves on to draw attention to the Prime Minister’s 17 March speech on nuclear energy and proliferation. Finally, it briefly alludes to contributions to the nuclear debate from a variety of sources, highlighting the views of former Foreign Secretaries, a former US Secretary of State and the Director General of the International Atomic Energy Agency.

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1. *Lifting the Nuclear Shadow*

In 2010, the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) will be held in New York. The NPT, which entered into force in 1970 and was extended indefinitely in 1995, requires that review conferences be held every five years. The United Nations' 2010 Review Conference [website](#) explains that the NPT is regarded as "the cornerstone of the global nuclear non-proliferation regime". The NPT was intended to prevent the spread of nuclear weapons and weapons technology, to further the goal of nuclear disarmament and general and complete disarmament, and to facilitate cooperation in the peaceful uses of nuclear energy. The NPT Review Conference website states that:

Under the [NPT] Treaty, each nuclear-weapon-State party undertakes not to transfer nuclear weapons to any recipient or assist or encourage any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons. Similarly, each non-nuclear-weapon-State party undertakes not to receive the transfer of nuclear weapons or manufacture or otherwise acquire them.

To further the goal of non-proliferation, the Treaty establishes a safeguards system under the auspices of the International Atomic Energy Agency (IAEA). Safeguards are used to verify compliance with the NPT through inspections conducted by the IAEA. The Treaty promotes cooperation in the field of peaceful nuclear technology and equal access to this technology for all States parties, while safeguards prevent the diversion of fissile material for the development of weapons.

The 2005 NPT Review Conference was not able to agree on a substantive outcome.

At the 2000 NPT Review Conference, States parties agreed on a final document that included specific commitments to work towards the Treaty's overall goals of nuclear non-proliferation and disarmament. The Review Conference also reaffirmed the importance of the resolution on the Middle East, adopted by the 1995 Review and Extension Conference. The 2000 Final Document also addressed measures to improve the review process for the NPT, specifically the consideration of substantive issues related to the Treaty and the outcome of the review conferences during each meeting of the Preparatory Committee.

[\(2010 NPT Review Conference\)](#)

Against this background, on 4 February 2009, the Foreign Secretary, David Miliband, published a policy information paper, [Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons](#). In the introduction to this paper, the Prime Minister, Gordon Brown, stated:

I pledge that in the run-up to the Non Proliferation Treaty in 2010 we will be at the forefront of the international campaign to accelerate disarmament amongst possessor states, to prevent proliferation to new states, and to ultimately achieve a world that is free from nuclear weapons.

(Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons, p 5)

The Foreign and Commonwealth Office (FCO) policy paper sets out the background to the nuclear debate in the following terms:

With the fall of the Berlin Wall in 1989, the threat of conflict between the major powers dwindled and with it, many thought, the rationale for nuclear weapons. There was hope of a new world order which would no longer rely on the threat of mutual annihilation as a basis for maintaining the peace. There has been substantial progress: the total explosive power of nuclear arsenal in the UK has been cut by around 75%, US, France and Russia have made similar reductions and efforts to prevent nuclear weapons spreading have been strengthened and new international rules to constrain them have been negotiated.

But the rationale for nuclear weapons, though it has evolved in the warmed relations between the major powers, has not evaporated. The essential basis for the retention of nuclear weapons remains their continuing value in deterring war as well as new threats to national security which may emerge in the future. (Including states which come under a 'nuclear umbrella', such as NATO allies, well over half of the world's population is covered by a nuclear deterrent. The impression that only a small minority benefit from nuclear weapons is misleading.)

Foremost amongst the new security threats are the risks of nuclear weapons spreading to more states or falling into the hands of terrorists. North Korea tested a nuclear device in 2006 and there are serious concerns that Iran is also developing nuclear weapons in defiance of the international community. Terrorist groups are known to be trying to acquire nuclear materials and knowhow. At the same time, these may become more widely available with the worldwide expansion of nuclear energy in response to climate change.

(Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons, p 5)

The paper notes that it has been argued that nuclear disarmament "would do nothing to help but, on the contrary, would leave states which currently benefit from nuclear deterrence open to coercion or attack if they gave up their nuclear weapons at the same time as others may be acquiring them" (p 7). Conversely, the paper cites five reasons why commentators have argued that, "as the threats to global security have changed, the balance of risks has shifted, making the continuing possession of nuclear weapons more a part of the problem than it is of the solution":

- a. they point to serious concerns that the international co-operation essential to impose tougher controls to prevent nuclear proliferation may be dangerously undermined by the perceived lack of progress towards nuclear disarmament. This frustration risks weakening the readiness of some states to shoulder the increased constraints and costs of tighter controls on their peaceful nuclear activities;
- b. they argue that in a world without a global ban on nuclear weapons, measures to stop them spreading can only go so far. However securely held, for as long as they exist, the weapons themselves and their related materials remain at risk of theft or diversion. Global agreements to place increasing controls on nuclear weapon-related activities and materials, and ultimately a global ban on all nuclear weapons themselves, would make proliferation increasingly difficult;

- c. they contend that the security benefits of nuclear weapons are less than they were and that the preeminent security threat today is not conflict between the major powers but a terrorist attack, against which a nuclear deterrent is ineffective (except in the case of a state sponsoring nuclear terrorism);
- d. they claim that as long as some states continue to attach importance to nuclear weapons in the interests of their national security, there will be a risk of other governments seeking to acquire nuclear weapons for the same reason;
- e. finally it is argued that, despite all efforts to minimise the risks of nuclear weapons being used, whether deliberately or by accident, these risks cannot be eliminated altogether for as long as nuclear weapons exist.

(Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons, p 7)

The paper counters suggestions that the UK should provide a lead by destroying its nuclear weapons, stating that “our serious commitment to global nuclear disarmament should not be confused with unilateral disarmament” (p 7). It continues:

In our recent White Paper ([*The Future of the United Kingdom's Nuclear Deterrent*](#), December 2006), we explained in detail why in the current security environment it was necessary to maintain our nuclear deterrent. Furthermore, if the UK were to dismantle all our nuclear weapons, it is highly unlikely that others would do the same. Nor do we believe it would have any positive effect on current proliferators like Iran.

Most agree that, to succeed, a ban on nuclear weapons has to be global. Some suggest that this should be negotiated immediately and agreed within a tight deadline. However, this would put the focus in the wrong place. Securing agreement to a global ban will involve persuading those who are covered by a nuclear deterrent that it is in their security interests to give it up. For example, some states rely on nuclear weapons to counter-balance the superior conventional forces of others. They are not going to agree to give them up unless the perceived threat to their security is either eliminated or addressed in some other way. We need to create the political, military, legal, institutional, technical and other conditions which will give such states confidence that their security will on balance be greater if they agree to a global ban on nuclear weapons.

(Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons, pp 7–8)

The policy paper concludes by setting out three conditions, to be implemented by six steps, which would facilitate progress on achieving a global ban on nuclear weapons:

Achieving agreement to a global ban on nuclear weapons clearly involves persuading states who currently rely on them to give them up. This requires creating the conditions to give them confidence that their security will on balance be greater in a world without nuclear weapons than with them. The three main sets of such conditions are:

- i) watertight means to prevent nuclear weapons from spreading to more states or to terrorists, at the same time as the use of nuclear energy is expanding;
- ii) minimal arsenals and an international legal framework which puts tight, verified constraints on nuclear weapons;
- iii) solutions to the technical, political, military and institutional challenges of moving from small numbers of nuclear weapons to zero in ways which enhance national and international security.

Although the challenges are considerable, at least six concrete steps to create these conditions are potentially attainable within the next few years. Progress on these would mark a decisive break from the deadlock of the past decade:

1. stopping further proliferation and securing agreement among all the NPT states that the way forward must include tougher measures to prevent proliferation and tighten security and the vigorous implementation of such measures including practical help to states which need it;
2. working with the IAEA to help states which want to develop a civil nuclear energy industry to do so in ways which are safe and secure and which minimise the risks of nuclear weapons spreading;
3. US-Russia negotiations and agreement on substantial further reductions in their total nuclear arsenals, complemented by efforts by other states with nuclear weapons to reduce and keep their own forces to an absolute minimum;
4. bringing the Comprehensive Test Ban Treaty into force, banning all nuclear weapons test explosions and thereby constraining the qualitative development of nuclear weapons;
5. starting negotiations without preconditions and making progress on a Fissile Material Cut-Off Treaty. This is vital to help make reductions in nuclear weapons irreversible and to establish many of the mechanisms that would constitute the core of an eventual regime to oversee a global ban; and
6. exploring the many complex political, military and technical issues which will need to be resolved if the states which possess nuclear weapons are to reduce and ultimately eliminate their arsenals securely, and to prevent nuclear weapons from ever re-emerging.

(Lifting the Nuclear Shadow: Creating the Conditions for Abolishing Nuclear Weapons, pp 51–52)

The Foreign Secretary launched *Lifting the Nuclear Shadow* at the International Institute for Strategic Studies (IISS) on 4 February. He delivered a speech to the IISS in which he set out the background to the policy paper and elaborated on the six key steps necessary for making progress on achieving a world without nuclear weapons. The following is a transcript of the speech he delivered:

I want to start with something that John F Kennedy reflected on in the early 1960s when he started talking about the Non Proliferation Treaty, because as I've got in

to this issue over the last eighteen months or two years, it struck me as particularly important and significant. What President Kennedy said in the early 1960s was that by 1980, 1990 (indistinct) feared that there would be forty or fifty countries in the world with the scientific know how and the wealth to have a nuclear weapon. And he said that was a very, very dangerous prospect. It was a recipe for instability and actually for war.

And his conception of the Non Proliferation Treaty was that it should provide a bulwark against that sort of race, the ultimate arms race. And I think that it's important therefore, in that context to recognise the successes of the Non Proliferation Treaty. I don't know if I'd go as far as to say it's the most successful international Treaty that has been developed. But it has been signally successful in averting the development that President Kennedy feared.

And I'd almost say it's almost been too successful because they came, there was a period I think in the 1990s when people almost came to a view that the nuclear debate was over. In my view what was ended by the end of the Cold War was the debate between multilateral disarmament and unilateral disarmament. What was not resolved is how you make multilateral disarmament work. And I think that's at the heart of the questions that we are talking about today because of course multilateral disarmament is the flip side.

But I think we should, as we have this debate, try and learn the lessons of the Non Proliferation Treaty. The context in which we do so is one of serious (indistinct) actually, but also significant opportunity. The threat is obvious, that more people and more countries are seeking the ultimate weapon and that in the case of North Korea people will know about the critical stage of the six party talks at the moment, and in respect of the Iranian nuclear programme the other present (indistinct) non proliferation regime, the engagement of the Obama administration in the multi (indistinct) E3 plus three and what the IAEA have shown about the progress that Iran has made in respect of its nuclear, uranium enrichment programme, mean that we're at a very critical moment. But we're also at a moment of opportunity and I suppose that every foreign policy speech by any Foreign Minister anywhere in the world at the moment says that the Obama administration creates an opportunity. But in this case it's true.

Let me just quote what President Obama said. He said 'new direction in nuclear weapons policy and show the world that America believes in its existing commitment under the Nuclear Non Proliferation Treaty to work ultimately to eliminate all nuclear arms'. That is a very radical statement for a new President of the United States to say. It's significant that President Sarkozy speaking on behalf of the European Union, but also as the President of France, a nuclear power, should have the opportunity (indistinct) safer world, one in which it's possible to meet all the objectives that are enshrined in the NPT...

What we sketch out in the, in the document is, is what we believe are the six key steps that are necessary (indistinct) the goal of a world without nuclear weapons, but to begin to create the conditions for that goal to be seriously engaged. And I'll just run through them briefly and then we'll have a chance for wider discussions.

The first is to prevent proliferation. That speaks directly to the nuclear issue of the moment. I think it is very welcome indeed that the United States should be seeking to enter the multilateral debate about the Iranian nuclear programme and also discussing its own bilateral engagement with the Iranian Government. I think that we have said for a long time that this is a vital issue, not just for the Middle

East, which has more than enough problems without a nuclear arms race, but also for the global integrity of the Non Proliferation Treaty and so I think it's right that we put at the heart and at the start of our approach the need to counter proliferation.

Second issue which is important because there are important links here, the growth of civilian nuclear power seems to me to be essential to meet not just the energy needs, but the climate change requirements that countries (indistinct) but that expansion of civilian nuclear power needs to be done according to what I would call the gold standard of safety and security. And I think that the way in which countries like the UAE have pursued their own civilian nuclear power programme with the utmost transparency, the utmost determination to meet the higher standards of safety and security and the utmost determination to work with international bodies is a very, very important signal of the way things should proceed in the future.

A third area is the need and the benefit of the United States and Russia re-engaging to achieve dramatic cuts in their own nuclear stockpiles. You will have seen the commitments of President Obama in this area, not least with the people he's appointing to key posts. (Indistinct) in the public debate that figures like eighty per cent are being, eighty per cent reduction are being bandied around. It's in the public debate that a thousand warheads seems like a round number. These are very, very dramatic changes that I think are very, very welcome and I very much hope that they will be taken forward.

The fourth area is something that we've talked about for a long time in this country and I think have become a bit blasé about and that is the Comprehensive Test Ban Treaty. I believe that (indistinct) been stuck on the Comprehensive Test Ban Treaty for quite a lot of time, has, has really sapped the hope from many people who are committed to this agenda. I think that the reinvigoration of the Comprehensive Test Ban Treaty through the commitment of the Obama administration in this respect is very, very significant and suffice to say that when our Chinese visitors were in London over the weekend, Premier Wen and Foreign Minister Yang, there's a lot of interest around the world in the fact that the United States wants to re-engage on the CTBT issue.

The fifth issue is progress on the Fissile Material Cut Off Treaty which as many of you will know it's currently, discussion of that is blocked by Pakistan and Iran. I think the fact that it's blocked shouldn't lead us to drop it off our agenda because if we can't make progress in that area we're going to not be able to meet our challenge of creating the right conditions for longer term (indistinct).

And then there is a sixth set of issues which are about the practicalities of moving to zero, of disarmament, of verification. (Indistinct) we really do need a lot of expertise. It's fine for politicians to set goals, but we need very detailed work (indistinct) in to practice and I think that the UK can claim to be at the leading edge of this debate in trying to promote a very serious debate around the world on some of those most difficult verification issues.

(David Miliband, [Lifting the nuclear shadow—Speech at the IISS](#), 4 February 2009)

2. Prime Minister's speech on nuclear energy and proliferation

The Prime Minister, Gordon Brown, delivered a speech on 17 March 2009 at the International Nuclear Fuel Cycle Conference in London. In a wide-ranging speech, some of the Prime Minister's key points included:

- He warned against “the risk of a new and dangerous nuclear era of new states and perhaps even non-state nuclear weapon holders.”
- He stressed that the Non-Proliferation Treaty Review Conference in 2010 could not afford to fail, as had happened in 2005.
- The Prime Minister stated that in the coming months Britain would set out a “Road to 2010 Plan” which would include proposals on civil nuclear power, on disarmament and non-proliferation, on fissile material security and a role in the development of the International Atomic Energy Authority (IAEA).
- He argued that the challenge of climate change would not be met “without the far wider use of civil nuclear power”. As such, “a comprehensive multilateral strategy to allow nations safe and secure access to civil nuclear power is essential.”
- Gordon Brown called for “a fair and even-handed bargain” based on two central tenets: “that we enshrine the right for all nations to acquire civil nuclear power safely, securely and subject to proper multilateral verification processes with tougher sanctions brought to bear on those who break the rules; and that nuclear weapon states must set out much more clearly the responsibilities that we too must discharge.”
- He stated that while Iran has the same right to a peaceful civil nuclear programme as any other country, its current programme is “unacceptable”. As such, “Iran therefore faces a clear choice: to continue in this way and face further and tougher sanctions; or change to a UN-overseen civil nuclear energy programme that will bring the greatest benefits to its citizens.”
- Gordon Brown argued that it was necessary to “reshape the international architecture that deals with proliferation in a global society” – with the International Atomic Energy Agency performing an “enlarged and reformed role”.
- If progress was to be made, the Prime Minister argued, “two major breakthroughs” would be required: “effective and universal mechanisms to prevent proliferation from non-nuclear weapon states; and active steps by nuclear weapon states towards disarmament.”
- Gordon Brown asserted that if it were “possible to reduce the number of UK warheads further, consistent with our national deterrence and with the progress of multilateral discussions, Britain will be ready to do so.”

In full, the Prime Minister stated:

Let me first of all welcome all of you to London, friends from every continent, from America, to Russia, from Latin America to the Middle East, Africa to the Far East, of course members from and representatives of the International Atomic Energy Agency itself.

The size and diversity of this gathering is a truly global expression of the strength of our shared ambition to secure for our world peaceful nuclear power and to reduce and remove from it the dangers of nuclear weapons.

And if I may give a special mention this morning to Baroness Williams who has advised me on many of these issues and will be known to you for the great work that she has done round the world.

In just two weeks time the eyes of the world will turn to London as the leaders of the G20 meet to rebuild our global economy. At stake will be a global new deal for our economic future, with decisions that I hope will remake the rules, not just for a global economy but for a global society. The actions that we take in these coming weeks and months will define not only the economies of our world for the future but the values of the world and the inheritance we will bequeath our children and our grandchildren.

Amidst the pressures of this global economic crisis there will be those who argue that other challenges are a distraction, that the global economy is the only concern where there is an urgency to act or the opportunity to seize an historic moment. But I think that is to profoundly misunderstand the world we are in today and the one that we together can build for tomorrow. For I believe that history will take a broader view and in due course history will tell how in the making of a new global society, and in an unprecedented set of times, we had to confront four great and interconnected challenges of our global society: the challenge yes of global financial instability; but the challenge also of climate change and energy needs; the challenge of global poverty; and of course—my subject today—global security.

Momentous challenges but challenges best addressed together. And in this world of change the task of leadership is to name the challenges, shape them and then seek to rise to them.

The nuclear question is absolutely central therefore to them. It is more than about security, vital as that is, it is more than about nuclear power and meeting the challenges of energy shortages and climate change, important as they are, it is about the values of this global society we are trying to build and it is about the very idea of progress itself, about the foundations upon which we build our common security and a sustainable future for our planet. In short it is about what kind of world we are and what kind of world we want to be.

Taxing as these issues are, I am an optimist with faith in the future. For I believe we are witnessing, as nations come together to address the financial crisis, the power of common purpose, nations agreeing not just high aspirations but practical down to earth shared actions, governments acting quickly and collectively to take radical and perhaps even previously unthinkable measures because we know now that we must succeed together or separately we will fail.

As we learn from this experience of turning common purpose into common action in our shared global society, so I believe we can together seize this time of profound change to form for a generation, our generation, a new internationalism that is both hard-headed and progressive. It is a multilateralism built out of a commitment to the power of international cooperation and rejecting confrontation, it is founded on a belief in collaboration, not isolation, and it is driven forward by a conviction that what we achieve together will be far greater than what any of us can achieve on our own. It is this new spirit of progressive multilateralism that

gives us hope that we can find within ourselves and together the moral courage and leadership I believe that the world now seeks.

Sir Michael Quinlan, who sadly died last month and for whose work we will always be grateful, argued 30 years ago that nuclear weapons cannot be disinvented. Our task now, he said, is to devise a system for living in peace and freedom where ensuring that nuclear weapons are never used either to destroy or blackmail. That pragmatism was right for the dark days of the Cold War, but I believe we can and should now aim high, that the only way to guarantee our children and our grandchildren will be free from the threat of nuclear war is to create a world in which countries can have confidence, refuse to take up nuclear weapons in the knowledge that they will never be required.

Now I know from President Obama and the new United States administration that America shares with us the ultimate ambition of a world free from nuclear weapons. And let me be clear this will be a difficult path that will be crossed in steps, not with one leap. With each step we must aim to build confidence, confidence that action to prevent proliferation is working and that states with weapons are making strides to live up to their commitments.

I believe that this is the time to act together to take the next steps in building that confidence for we are, as I think everybody here knows, at a decisive moment. We are facing the risk of a new and dangerous nuclear era of new states and perhaps even non-state nuclear weapon holders.

Once there were five nuclear powers, now there are nearly twice as many. There is a risk that there could be many more. Proliferation is our immediate concern and for that reason alone it is time to act.

And there is yet another risk—that of nuclear weapons falling into the hands of unstable or ideological-driven regimes or terrorists, groups like al Qaeda. We must all commit to prevent this from ever happening.

Now in 2005 the Non-Proliferation Treaty Review Conference failed. We cannot afford to fail next year. So as we approach the 2010 Review Conference I want us to renew and refresh for our times the grand global bargain, the covenant of hope between nations at the heart of the Non-Proliferation Treaty. It is a bargain under which we reaffirm the rights and responsibilities for those countries which forego nuclear weapons. But it is also a bargain under which there are tough responsibilities to be discharged by nuclear weapon states, for as successor states we cannot expect to successfully exercise moral and political leadership in preventing the proliferation of nuclear weapons if we ourselves do not demonstrate leadership on the question of disarmament of our weapons.

Under this bargain there is a right for all states to develop civil nuclear power, but there is a responsibility for these states to reject the deployment of nuclear weapons and their development. There is a responsibility too on nuclear weapon states to reduce their nuclear weapons. So in the coming months Britain will, working with other countries, set out a Road to 2010 Plan with detailed proposals on civil nuclear power, on disarmament and non-proliferation, on fissile material security and a role in the development of the International Atomic Energy Authority. We will be seeking the widest possible international engagement and consultation around this plan. We will also host a Recognised Nuclear Weapon State Conference on nuclear disarmament issues and on confidence building measures, including the verification of disarmament.

For in the same way as we have tried to lead in challenging old orthodoxies by eliminating conventional weapons which caused harm to civilians, such as cluster munitions, I want to pledge that Britain will be at the forefront of the international campaign to prevent nuclear proliferation and to accelerate multilateral nuclear disarmament.

Article 6 of the Non-Proliferation Treaty specifically states that countries that do possess nuclear weapons agree to divest themselves over time. No single nuclear weapon state can be expected to disarm unilaterally, but I know that people have been trying to abolish nuclear weapons almost since their invention in the 1940s. Even in the Cold War when they were central to countries' defence planning, there were efforts to reduce their spread and indeed to initiate disarmament and then the introduction of the Non-Proliferation Treaty.

In the 1980s Presidents Gorbachev and Reagan, leaders of the countries with by far the largest arsenal of nuclear weapons, discussed the abolition of their most powerful weapon. Every President of both parties in the United States since the 1960s has reaffirmed the Non-Proliferation Treaty. If no single nuclear weapon state can be expected to disarm unilaterally, neither should it, but step by step we have to transform the discussion of nuclear disarmament from one of platitudes to one of hard commitment. We have also to help create a new international system to ensure non-nuclear states acquire the new sources of energy that they want to have.

Because whether we like it or not, we will not meet the challenges of climate change without the far wider use of civil nuclear power, but we must invest in all sources of low carbon energy, energy efficiency, renewables, carbon capture and storage and nuclear power. Given the scale of global emission reductions that are required, and the likely cost, no cost-effective low carbon technology must be off limits. The complete life cycle emissions from nuclear power, from uranium mining to waste management, are only between 2 and 6% of those from gas for every unit of electricity generated. And the International Energy Agency estimates we must build 32 nuclear reactors globally every year if we are to halve emissions by 2050.

So however we look at it we will not secure the supply of sustainable energy on which the future of our planet depends without a role for civil nuclear power. We simply cannot avoid the real and pressing challenge that presents, from the safety and security of fissile material to the handling of waste, a comprehensive multilateral strategy to allow nations safe and secure access to civil nuclear power is essential.

So this morning I want to outline the principles that must guide our progress in the months ahead, and the practical steps I believe we should consider to strengthen the global non-proliferation architecture by renewing and refreshing the global nuclear bargain for our times.

And let me be clear, we are not asking non-nuclear weapon states to refrain from proliferation while nuclear weapon states amass new weapons; we are asking them not to proliferate while nuclear weapon states take the steps to reduce their own arsenals in line with the Non-Proliferation Treaty's requirements.

I believe it is a fair and even-handed bargain that contains two central elements: that we enshrine the right for all nations to acquire civil nuclear power safely, securely and subject to proper multilateral verification, processes with tougher

sanctions brought to bear on those who break the rules; and that nuclear weapon states must set out much more clearly the responsibilities that we too must discharge.

So what does that mean in practice? In the first place we must give every nation the right of access, what President Eisenhower once memorably called passions for peace. But in doing so we must as an international community be completely confident that we are able to ensure there are appropriate mechanisms for multilateral control of the entire fuel cycle, ensuring the security of fissile material, preventing unwanted proliferation with clear, tough and immediate sanctions for those who break the rules.

Iran is a test case for this new philosophy of the right to civil nuclear power with sanction rule-breakers. And let me be unequivocal. Iran has the same absolute right to a peaceful nuclear programme—civil nuclear programme—as any other country. Indeed the UK and the international community stand ready to help Iran achieve it, as the opening of the nuclear plant at Bushehr already shows.

But let me be equally clear that Iran's current nuclear programme is unacceptable. Iran has concealed its nuclear activities, refused to cooperate with the IAEA, flouted UN Security Council resolutions and its refusal to play by the rules leads us to view its nuclear programme as a critical proliferation threat.

Iran therefore faces a clear choice: to continue in this way and face further and tougher sanctions; or change to a UN-overseen civil nuclear energy programme that will bring the greatest benefits to its citizens. I hope that Iran will make the right choice and take advantage of the international community's willingness to negotiate, including President Obama's offer of engagement, rather than face further sanctions and regional instability.

So I urge Iran, once again, to work with us rather than against us upon this. The opportunity to do so remains on the table and the choice is Iran's to make.

For our own part in Britain we will bring forward detailed plans for the responsible future management of our stocks of fissile material, and as part of the road to the 2010 consultation we will examine how best to deal with those stocks which have accumulated. I am committed that the UK will also lead on bringing forward proposals internationally for multilateral control of the fuel cycle. We will seek an innovative partnership between industry, academia and government for further research and development to tackle the technical challenges that you know are involved in developing a proliferation-proof nuclear fuel cycle.

There are a number of proposals, as you know, that are already being considered. The UK's proposal for a nuclear fuel assurance, or uranium enrichment bond, is an important contribution to resolving this important matter. However, most of the options proposed are aimed at the front half of the fuel cycle—enrichment and fuel provision. I believe we should now go further in considering all the options, including those that can address the challenges of handling spent fuel in a more secure way. As countries already operating civil nuclear programmes know, establishing a civil nuclear programme carries both significant cost and technological challenges.

So I would encourage countries embarking on civil nuclear programmes for the first time to consider all options. This should include detailed examination of whether a collaborative approach, perhaps at a regional level, could provide a

new opportunity to make access to civil nuclear power a reality. With the oversight of an international body, countries could join together to share in the development of a civil programme, and this approach could be particularly beneficial in regions such as the Middle East where already the Gulf Cooperation Council has proposed a joint nuclear technology programme for peaceful applications conforming to international regulations.

I very much hope that this conference will generate further contributions which will inform our proposals as part of the Road to 2010 Plan we would like to publish this summer.

Just as we must reshape the international financial architecture, to meet the challenges of a global economy, so too we must reshape the international architecture that deals with proliferation in a global society. I accept that this will require new funds from within the international community for a significantly changed global work programme. The changes will be significant: a central role in the security of fissile material; a clear and proactive mandate to inspect with enhanced powers of inspection to cover not just civil programmes but also eventually military programmes; more support and training for an inspectorate that will cover both the extension of civil nuclear power and the monitoring of any abuses of the Non-Proliferation Treaty; and binding guarantees about the safeguards in place.

But if the International Atomic Energy Agency is to play this enlarged and reformed role, its safeguards regime would also need to be further strengthened. This means everyone should implement the highest level of safeguards possible, such as the additional protocol giving the IAEA the power to ensure that there is no indication of activity designed to turn peaceful nuclear energy programmes into nuclear weapons.

Beyond this, we also need to look at the development of next generation safeguards which introduce even greater levels of assurance. Any material failure to cooperate with inspections, and any material breach or withdrawal from the Non-Proliferation Treaty, should automatically lead to reference to the United Nations Security Council, and indeed it should be assumed that sanctions will be imposed in response to anything other than the most minor of breaches.

At the moment the international community has to prove an offence against the treaty, but in future the right to develop nuclear energy should be matched by knowledge obligations towards openness and transparency. And having signed the treaty it should be the country's responsibility to prove it is adhering to the treaty and to dispel and disprove any accusations of its being undermined.

It is vital that we also ensure that terrorists cannot get their hands on nuclear material. This requires revised, stronger, universally implemented international standards for the protection of fissile material. We will bring forward proposals for such standards as part of the plan—the Road to 2010.

Every nuclear state and prospective civil nuclear state must give security the highest attention. It is an essential component of the investment in nuclear programmes. Since 2003 in the UK we have spent more than £70 million on improving security at our Sellafield site alone, and we are committed to spending a further £220 million on the construction of a state of the art storage facility.

But we understand that to be effective, security must meet the highest standards around the world. So in addition to the £270 million we have spent on global threat reduction projects since 2002, and a further £36 million that we will spend each year for the foreseeable future, we are doubling our contribution now to the IAEA's nuclear security fund and we will work with our partners to identify ways to strengthening the role of the nuclear suppliers group whose work is I believe of vital importance.

It is important to note that in an horrific event of an attack, after the fact detection is now an established science, it would allow us to attribute the origins of the material used in almost any nuclear device. We are therefore in a position to identify those responsible and thus define liability for providing assistance to terrorists. The supplier must accept responsibility, just as the perpetrator, and thanks to the advance of science there can be no escape from justice.

Now to achieve our objectives we need two major breakthroughs: effective and universal mechanisms to prevent proliferation from non-nuclear weapon states; and active steps by nuclear weapon states towards disarmament. And now is the time for serious commitment to both.

So the other core ambition of the Road to 2010 proposals we will publish this summer is a credible road map towards disarmament by all the nuclear weapon states, through measures that will command the confidence of all the non-nuclear weapon states.

Now of course we have seen already huge cuts in weaponry, an estimated total of 40,000 warheads have been destroyed since the end of the Cold War. But what we need is more than this, we need a forward plan for multilateral disarmament, a joint commitment that is shared and accepted by nuclear and non-nuclear weapon states alike. We must begin by reducing the number of nuclear weapons still out there in the world, and between them the US and Russia retains around 95%. The START Treaty, the mainstay of their bilateral arms control effort, will expire later this year and I welcome their commitment to find and work for a legally binding successor which I hope will pave the way for greater reductions to come.

For our part, as soon as it becomes useful for our arsenal to be included in a broader negotiation, Britain stands ready to participate and to act. The nuclear choices being made today will determine whether we face a future arms race or a future of arms control. Averting the former and promoting transparency in the latter are both vital to our common future.

So the recognised nuclear weapon states must now show unity and leadership and set tirelessly to work on a programme of confidence building measures.

I will gladly share for the benefit of all the pioneering work that we have done in the United Kingdom on the science of verifying warhead destruction. Our atomic weapons establishment, working with partners from Norway, have been developing techniques that can provide reassurance that nuclear weapons have been destroyed, without giving away sensitive information about warhead design.

Now Britain has cut the number of its nuclear warheads by 50% since 1997 and we are committed to retaining the minimum force necessary to maintain effective deterrence. For future submarines our latest assessment is that we can meet this requirement with 12—not 16—missile tubes as are on current submarines. In

Britain our operationally available warheads now number fewer than 160 and the government keeps this number under constant review. If it is possible to reduce the number of UK warheads further, consistent with our national deterrence and with the progress of multilateral discussions, Britain will be ready to do so.

In the meantime we must drive forward the multilateral agenda, the first steps of which are to commence urgent negotiations without preconditions on a fissile material cut-off treaty, and for all states to sign and ratify the Comprehensive Test Ban Treaty. States have national interests but capping the production of weapons usable fissile material and outlawing the testing of nuclear weapons are two powerful and achievable goals that I believe are consistent with the long term needs and interests of every state.

So as we stand together against those who would seek to threaten our security, and in some cases even our existence, I offer today a practical plan to deliver on pledges that have been made. Today I believe is a time for leadership and confidence and common purpose, not for weakness, withdrawal or retreat.

So let us go forward, fully recognising the importance of the tasks before us, for the sake of future generations across the world let us ensure that the chapter of history we write together, our generation, here and today, tells the story of a common journey towards a world that is free from the fear of its own destruction. And let this be a journey of hope in which hard-headed cooperation by friends who were once foes define our modern age, and let it be underpinned by this new covenant of hope that brings us a truly global society, not of enemies fearful of each other, but of partners with a confidence to work together for peace.

(Gordon Brown, [Speech on nuclear energy and proliferation](#), 17 March 2009)

3. Contributions to the nuclear debate

The following section offers some perspectives on the current debate about nuclear weapons. It does not aim to be comprehensive; rather it seeks to highlight the views of a small selection of informed observers.

Former Foreign Secretaries, Lord Hurd, Lord Owen and Sir Malcolm Rifkind MP, and former Defence Secretary and former NATO Secretary-General, Lord Robertson, wrote in the *Times* in June 2008 arguing that the way in which the presence of nuclear weapons during the Cold War “had the perverse effect of making the world a relatively stable place” no longer applied today. Rather, they asserted, “the world is at the brink of a new and dangerous phase—one that combines widespread proliferation with extremism and geopolitical tension.” The article considered how progress can be made in reducing—ultimately eradicating—the world’s nuclear weapons:

Some of the terrorist organisations of today would have little hesitation in using weapons of mass destruction to further their own nihilistic agendas. Al-Qaeda and groups linked to it may be trying to obtain nuclear material to cause carnage on an unimaginable scale. Rogue or unstable states may assist, either willingly or unwillingly; the more nuclear material in circulation, the greater the risk that it falls into the wrong hands. And while governments, no matter how distasteful, are usually capable of being deterred, groups such as al-Qaeda, are not. Cold War calculations have been replaced by asymmetrical warfare and suicide missions.

There is a powerful case for a dramatic reduction in the stockpile of nuclear weapons. A new historic initiative is needed but it will only succeed by working collectively and through multilateral institutions. Over the past year an influential project has developed in the United States, led by Henry Kissinger, George Shultz, William Perry and Sam Nunn, all leading policymakers. They have published two articles in The Wall Street Journal describing a vision of a world free of nuclear weapons and articulating some of the steps that, cumulatively taken, could help to achieve that end. Senator John McCain has endorsed that analysis recently. Barack Obama is likely to be as sympathetic.

A comparable debate is now needed in this country and across Europe. Britain and France, both nuclear powers, are well placed to join in renewed multilateral efforts to reduce the number of nuclear weapons in existence. The American initiative does not call for unilateral disarmament; neither do we. Instead, progress can be made only by working alongside other nations towards a shared goal, using commonly agreed procedures and strategies.

The world's stockpiles of nuclear weapons are overwhelmingly controlled by two nations: the United States and Russia. While Washington is in possession of about 5,000 deployed warheads, Russia is reported to have well over 6,000, making its stockpile the largest in the world. It is difficult to understand why either the American or Russian governments feel that they need such enormous numbers of nuclear weapons.

Hard-headed Americans, such as Dr Kissinger and Mr Shultz, have argued that dramatic reductions in the number of nuclear weapons in these arsenals could be made without risking America's security. It is indisputable that if serious progress is to be made it must begin with these two countries.

The US and Russia should ensure that the Strategic Arms Reduction Treaty of 1991 continues to provide the basis for co-operation in reducing the number of nuclear weapons. The treaty's provisions need to be extended. Agreement should be reached on the issue of missile defence. The US proposal to make Poland and the Czech Republic part of their missile defence shield has upset the Kremlin. It has been a divisive issue, but it need not be. Any missile threat to Europe or the United States would also be a threat to Russia. Furthermore, Russia and the West share a strong common interest in preventing proliferation.

Elsewhere, there are numerous stockpiles that lie unaccounted for. In the former Soviet Union alone, some claim that there is enough uranium and plutonium to make a further 40,000 weapons. There have been reports of nuclear smuggling in the Caucasus and some parts of Eastern Europe. Security Council Resolution 1540, which obliges nations to improve the security of stockpiles, allows for the formation of teams of specialists to be deployed in those countries that do not possess the necessary infrastructure or experience in dealing with stockpiles. These specialists should be deployed to assist both in the monitoring and accounting for of nuclear material and in the setting up of domestic controls to prevent security breaches. Transparency in these matters is vital and Britain can, and should, play a role in providing experts who can fulfil this important role.

The Non-Proliferation Treaty, for 40 years the foundation of counter-proliferation efforts, is in need of an overhaul. The provisions on monitoring compliance need to be strengthened. The monitoring provisions of the International Atomic Energy Agency's Additional Protocol, which require a state to provide access to any location where nuclear material may be present, should be accepted by all the

nations that have signed up to the NPT. These requirements, if implemented, would have the effect of strengthening the ability of the IAEA to provide assurances about both declared nuclear material and undeclared activities. At a time when a number of countries, including Iran and Syria, may be developing a nuclear weapons programme under the guise of civilian purposes, the ability to be clear about all aspects of any programme is crucial.

Bringing the Comprehensive Test Ban Treaty into effect would, similarly, represent strong progress in the battle to reduce the nuclear threat. The treaty would ban the testing of nuclear weapons, ensuring that the development of new generations of weapons ceases. However, it will only come into force once the remaining nine states who have not yet ratified it do so. Britain, working through Nato and the EU, must continue to encourage those remaining states that have not yet agreed to the Treaty—India, Pakistan, Egypt, China, Indonesia, North Korea, Israel, Iran and the United States—to ratify it.

A modern non-proliferation regime will require mechanisms to provide those nations wishing to develop a civilian nuclear capability with the assistance and co-operation of those states that possess advanced expertise and that are able to provide nuclear fuel, spent-fuel management assistance, enriched uranium and technical assistance. But, in return, proper verification procedures must be in place and access for the IAEA must not be impeded.

Achieving real progress in reducing the nuclear weapons threat will impose obligations on all nuclear powers not just the US and Russia. The UK has reduced its nuclear weapons capability significantly over the past 20 years. It disposed of its freefall and tactical nuclear weapons and has achieved a big reduction of the number of warheads used by the Trident system to the minimum believed to be compatible with the retention of a nuclear deterrent. If we are able to enter into a period of significant multilateral disarmament Britain, along with France and other existing nuclear powers, will need to consider what further contribution it might be able to make to help to achieve the common objective.

Substantial progress towards a dramatic reduction in the world's nuclear weapons is possible. The ultimate aspiration should be to have a world free of nuclear weapons. It will take time, but with political will and improvements in monitoring, the goal is achievable. We must act before it is too late, and we can begin by supporting the campaign in America for a non-nuclear weapons world.

(Lord Hurd, Malcolm Rifkind MP, Lord Owen and Lord Robertson, [Start worrying and learn to ditch the bomb](#), *Times*, 30 June 2008)

Former US Secretary of State, Henry Kissinger, writing in the *International Herald Tribune* earlier this year, argued that “proliferation of nuclear weapons has become an overarching strategic problem for the contemporary period.” Drawing on work undertaken by former Senator Sam Nunn, former Secretary of Defense, William Perry, former Secretary of State, George Shultz, and himself, the article set out some of the steps that could be taken to reduce nuclear weapons:

Over 200 years ago, the philosopher Immanuel Kant defined the ultimate choice before mankind: World history would ultimately culminate in universal peace either by moral insight or by catastrophe of a magnitude that left humanity no other choice. Our period is approaching having that choice imposed on it.

The basic dilemma of the nuclear age has been with us since Hiroshima: how to bring the destructiveness of modern weapons into some moral or political relationship with the objectives that are being pursued.

Any use of nuclear weapons is certain to involve a level of casualties and devastation out of proportion to foreseeable foreign policy objectives. Efforts to develop a more nuanced application have never succeeded, from the doctrine of a geographically limited nuclear war of the 1950s and 1960s to the mutual assured destruction theory of general nuclear war of the 1970s.

In office I recoiled before the options produced by the prevalent nuclear strategies, which raised the issue of the moral right to inflict a disaster of such magnitude on society and the world. But I was also persuaded that if the US government adopted restraints, it would be turning over the world's security to the most ruthless and perhaps genocidal force.

In the two-power world of the Cold War, the adversaries managed to avoid this dilemma. But today, the sharpening of ideological dividing lines and the persistence of unresolved regional conflicts have magnified the incentives to acquire nuclear weapons, especially by rogue states or non-state actors.

Proliferation of nuclear weapons has become an overarching strategic problem for the contemporary period. Any further spread of nuclear weapons multiplies the possibilities of nuclear confrontation; it magnifies the danger of diversion, deliberate or unauthorized.

How will publics react if they suffer or even observe casualties in the tens of thousands in a nuclear attack? Will they not ask two questions: What could we have done to prevent this? What shall we do now so that it can never happen again?

Considerations as these induced former Senator Sam Nunn, former Secretary of Defense William Perry, former Secretary of State George Shultz and me—two Democrats and two Republicans—to publish recommendations for systematically reducing and eventually eliminating the danger from nuclear weapons.

We continue to affirm the importance of adequate deterrent forces, and we do not want our recommendations to diminish essentials for the defense of free peoples while a process of adaptation to new realities is going on. At the same time, we reaffirm the objective of a world without nuclear weapons that has been proclaimed by every American president since Dwight D. Eisenhower.

Such a world will prove increasingly remote unless the emerging nuclear weapons program in Iran and the existing one in North Korea are overcome. Both involve the near-certainty of further proliferation and of further incorporation of nuclear weapons into the strategies of nuclear weapons states.

I have long advocated negotiations with Iran on a broad front, including the geopolitical aspect. Too many treat this as a kind of psychological enterprise. In fact, it will be tested by concrete answers to four specific questions: a) How close is Iran to a nuclear weapons capability? b) At what pace is it moving? c) What balance of rewards and penalties will move Iran to abandon it? d) What do we do if, despite our best efforts, diplomacy fails?

A critical issue in nonproliferation strategy will be the ability of the international community to place the fuel cycle for the material produced by the peaceful uses of nuclear energy under international control. Is the International Atomic Energy Agency (IAEA) capable of designing a system which places the enrichment and reprocessing under international control and in locations that do not threaten nuclear proliferation?

Arresting and then reversing the proliferation of nuclear weapons places a special responsibility on the established nuclear powers. They share no more urgent common interest than preventing the emergence of more nuclear-armed states.

Established nuclear powers should strive to make a nuclear capability less enticing by devoting their diplomacy to diffuse unresolved conflicts that today make a nuclear arsenal so attractive.

A new nuclear agenda requires coordinated efforts on several levels: first, the declaratory policy of the United States; second, the US-Russian relationship; third, joint efforts with allies as well as other non-nuclear states relying on American deterrence; fourth, securing nuclear weapons and materials on a global basis; and, finally, reducing the role of nuclear weapons in the doctrines and operational planning of nuclear weapons states.

The Obama administration has already signalled that a global nuclear agenda will be a high priority in preparation for the Review Conference on the Nuclear Proliferation Treaty scheduled for the spring of 2010. A number of measures can be taken unilaterally or bilaterally with Russia to reduce the pre-emptive risk of certain alert measures and the deployment of tactical nuclear weapons.

Russian relations: Russia and the United States between them control around 90 percent of the world's nuclear weapons. They have it in their control to reduce the reliance on nuclear weapons in their bilateral relationship. They have already done so for 15 years on such issues as the Cooperative Threat Reduction Program.

The immediate need is to start negotiations to extend the START I agreement, the sole document for the verification and monitoring of established ceilings on strategic weapons, which expires at the end of 2009.

That should be the occasion to explore significant reductions from the 1,700 to 2,000 permitted under the Moscow Treaty of 2002. A general review of the strategic relationship should examine ways to enhance security at nuclear facilities in Russia and the United States.

A key issue has been missile defense—especially with respect to defenses deployed against threats from proliferating countries. The dialogue on this subject should be resumed at the point at which it was left by President George W. Bush and then-President Vladimir Putin in April 2008.

The Russian proposal for a joint missile defense toward the Middle East, including radar sites in southern Russia, has always seemed to me a creative political and strategic answer to a common problem.

Allies: The effort to develop a new nuclear agenda must involve our allies from its inception. Key European allies are negotiating with Iran on the nuclear issue. America deploys tactical nuclear weapons in several NATO countries, and

NATO's declaratory policy mirrors that of the United States. Britain and France—key NATO allies—have their own nuclear deterrent.

A common adaptation to the emerging realities is needed, especially with respect to tactical nuclear weapons. Parallel discussions are needed with Japan, South Korea and Australia. Parallel consultations are imperative with China, India and Pakistan. It must be understood that the incentives for nuclear weapons on the subcontinent are more regional than those of the established nuclear powers and their threshold for using them considerably lower.

The complexity of these issues explains why my colleagues and I have chosen an incremental, step-by-step approach. Affirming the desirability of the goal of a world free of nuclear weapons, we have concentrated on the steps that are achievable and verifiable.

Sam Nunn has described the effort akin to climbing a mountain shrouded in clouds. We cannot describe its top or be certain that there may not be unforeseen and perhaps insurmountable obstacles on the way. But we are prepared to undertake the journey in the belief that the summit will never come into view unless we begin the ascent and deal with the proliferation issues immediately before us, including the Iranian and North Korean nuclear programs.

The program sketched here is not a program for unilateral disarmament. So long as other countries build and improve their nuclear arsenals, deterrence of their use needs to be part of Western strategy. The efficiency of our weapons arsenals must be preserved. Both President Obama and Senator John McCain, while endorsing this approach, also made it clear, in Obama's words, that the United States cannot implement it alone.

The danger posed by nuclear weapons is unprecedented. They should not be integrated into strategy as simply another more efficient explosive. We thus return to our original challenge: Our age has stolen the fire from the gods; can we confine it to peaceful purposes before it consumes us?

(Henry Kissinger, [Containing the fire of the gods](#), *International Herald Tribune*, 6 February 2009)

Dr Mohamed ElBaradei, Director General of the International Atomic Energy Agency (IAEA), writing recently in *Süddeutsche Zeitung*, set out five steps to be taken which would enable nuclear weapons to be abolished:

- resume disarmament negotiations between the United States and the Russian Federation;
- establish a mechanism for multinational control of the production of fissile material;
- significantly improve the physical security of nuclear materials throughout the world;
- substantially strengthen the IAEA's legal authority, technological capability, and resources;
- return to a security system rooted in effective multilateralism.

In full, Dr Mohamed ElBaradei argued:

Only when global nuclear powers take seriously the responsibility of reducing their arsenals will it be possible to eliminate the most destructive weapons ever created. To reduce the incentive for other countries to acquire nuclear material, we have to guarantee their access to nuclear energy. But most importantly, we must create a more balanced international system.

Imagine this: a country or group of countries serves notice that they plan to withdraw from the nuclear Non-Proliferation Treaty (NPT) in order to acquire nuclear weapons, citing a dangerous deterioration in the international security situation. “Don’t worry,” they tell a shocked world. “The fundamental purpose of our nuclear forces is political: to preserve peace and prevent coercion and any kind of war. Nuclear weapons provide the supreme guarantee of our security. They will play an essential role by ensuring uncertainty in the mind of any aggressor about the nature of our response to military aggression.”

Withdrawing from the NPT is a drastic step, but every state party to the Treaty has the right to do so, giving a mere three months’ notice, if it decides that “extraordinary events” have jeopardized its supreme interests. The international uproar that would follow such a move is predictable. Yet the rationale I have just cited to justify nuclear weapons is taken from NATO’s current Strategic Concept.

A similar rationale underpins the military doctrines of the other states with nuclear weapons. So the obvious question is: if leading world powers believe their security depends on having weapons that could annihilate our entire planet, and if they keep modernising and upgrading their nuclear arsenals and even conducting research into their actual use, how can we credibly expect other nations—in the name of maintaining international security—to refrain forever from seeking the same weapons?

The simple answer is that we cannot. The only way to prevent nuclear weapons from spreading and ultimately being used is to abolish them. At the same time, we must build an inclusive and equitable international security system in which no country feels the need to rely on nuclear weapons.

Fortunately, there is growing momentum behind the idea that eliminating all nuclear weapons is not just a Utopian ideal, but both possible and necessary. Not only the Kissinger-Shultz-Nunn-Perry quartet in the United States, but also other eminent figures such as Mikhail Gorbachev, Helmut Schmidt, Fernando Cardoso, and Desmond Tutu have called for them to be scrapped. I am greatly encouraged that President Obama has made a firm commitment to making the elimination of all nuclear weapons a central tenet of his policies. So what do we need to do as an international community to build on the new momentum?

First, resume disarmament negotiations between the United States and the Russian Federation. Despite major cutbacks in the last 20 years, there are still some 27,000 nuclear warheads on the planet, 95 percent of which are held by these two countries. An initial target could be to cut to 1,000, or even 500, verified warheads on each side. This needs to be accompanied by the long-overdue entry into force of the Comprehensive Test Ban Treaty (CTBT) and early negotiations on a Fissile Material Cut-Off Treaty that would verifiably ban the production of material for nuclear weapons.

Second, we need to establish a mechanism for multinational control of the production of fissile material. This would counteract an emerging phenomenon of more and more countries becoming “nuclear-weapon-capable” states, possessing the technology that could be used to make nuclear weapons in a matter of months, if they so chose. A multinational assurance-of-supply mechanism is a must to ensure that countries that want peaceful nuclear energy have guaranteed supplies of nuclear fuel without having their own uranium enrichment or plutonium reprocessing technology. For any such mechanism to succeed, however, it must be universal, equitable, and apolitical.

Third, we need to significantly improve the physical security of nuclear materials throughout the world. More than 1,500 incidents of illicit trafficking and other unauthorized activities involving nuclear or radioactive material have been reported to the IAEA. And this may be just the tip of the iceberg. The biggest risk we face is that a terrorist group could acquire nuclear or radioactive material which they would certainly use, as the concept of deterrence is irrelevant to them. All countries must therefore make securing these materials one of their highest priorities.

Fourth, the IAEA’s legal authority, technological capability, and resources need to be substantially strengthened so it can credibly verify that countries are not secretly developing nuclear weapons and help to ensure that nuclear energy is used with the highest standards of safety and security. A high-level independent panel that issued a report on the future of the Agency last year said the budget should be doubled by 2020 and called for an immediate cash injection of 80 million dollars to rebuild its dilapidated infrastructure.

Fifth, we need a return to a security system rooted in effective multilateralism. The Security Council must be drastically reformed so the world can rely on it as the primary body for maintaining international peace and security, as foreseen in the UN Charter.

States with nuclear weapons should demonstrate that they plan to live up to their legal and moral obligation to abolish all nuclear weapons. In particular, the five nuclear-weapon states party to the Treaty must show that they are serious about their 40-year-old legal commitment to scrap all nuclear weapons by taking at least some of the steps I have outlined, before next year’s NPT Review Conference. The division between nuclear weapon “haves” and “have nots” is not sustainable in the long term.

Concerns have been raised as to whether eliminating all nuclear weapons could actually have a destabilising effect and make major conventional conflict more likely. No one is suggesting that we will get to zero nuclear weapons overnight. This, however, is no justification for not drastically reducing the number of nuclear weapons in the world and taking concrete steps to diminish, rather than enhance, their role in military doctrines. Finally, it should not be beyond the ingenuity of humankind to figure out how to make the world safer without nuclear weapons, not least by taking a hard look at the root causes of insecurity and inequity.

The world has already banned the possession or use of both chemical and biological weapons. It would be a tragedy on an unimaginable scale if we cannot do the same for the most horrific weapons ever invented.

(Mohamed ElBaradei, [Five Steps towards Abolishing Nuclear Weapons](#), *Süddeutsche Zeitung*, 4 February 2009)

In February 2009, the Carnegie Endowment for International Peace published [*Abolishing Nuclear Weapons: A Debate*](#). It explained the rationale underpinning this lengthy report in the following terms:

In the past few years, horizontal and vertical proliferation have collided. That is, the need for significant strengthening of the nonproliferation regime in the wake of nuclear developments in North Korea, Iran, Iraq, and Pakistan is now absolutely clear. So too, however, is growing unwillingness among non-nuclear-weapon states to even consider additional measures in what they see as the absence of serious progress by the nuclear-armed states toward disarmament.

The pathbreaking paper *Abolishing Nuclear Weapons* by George Perkovich and James Acton was first published by the International Institute for Strategic Studies as an Adelphi Paper in September 2008. One of the paper's major aims was to prompt serious international analysis, discussion, and debate, recognizing divergent views within and between nuclear-armed states and those that do not possess these weapons. The absence of such engagement in official forums such as Non-Proliferation Treaty Review Conferences and the Conference on Disarmament makes it vital for nongovernmental actors to take the lead in hopes that governments will see the value of such dialogue and follow.

The present volume takes the next step. To advance the sort of analysis and dialogue Perkovich and Acton call for, they have invited a distinguished group of experts—current and former officials, respected defense analysts—from thirteen countries, nuclear and non-nuclear, to critique the Adelphi Paper. Their diverse views explore pathways around obstacles to nuclear disarmament and sharpen questions requiring further official and nongovernmental deliberation. Perkovich and Acton are grateful to the contributors for the thoroughly constructive character of their critiques.

The volume concludes with an essay by Perkovich and Acton that works through some of the key questions or paradoxes raised by the critiques. Their focus is on major issues and crucial differences. They do not defend their original text, rebut points, or cite passages to show where they may have been misunderstood. Rather, in the spirit of the commentators, they use the points raised from diverse international viewpoints to clarify and sharpen the big picture.

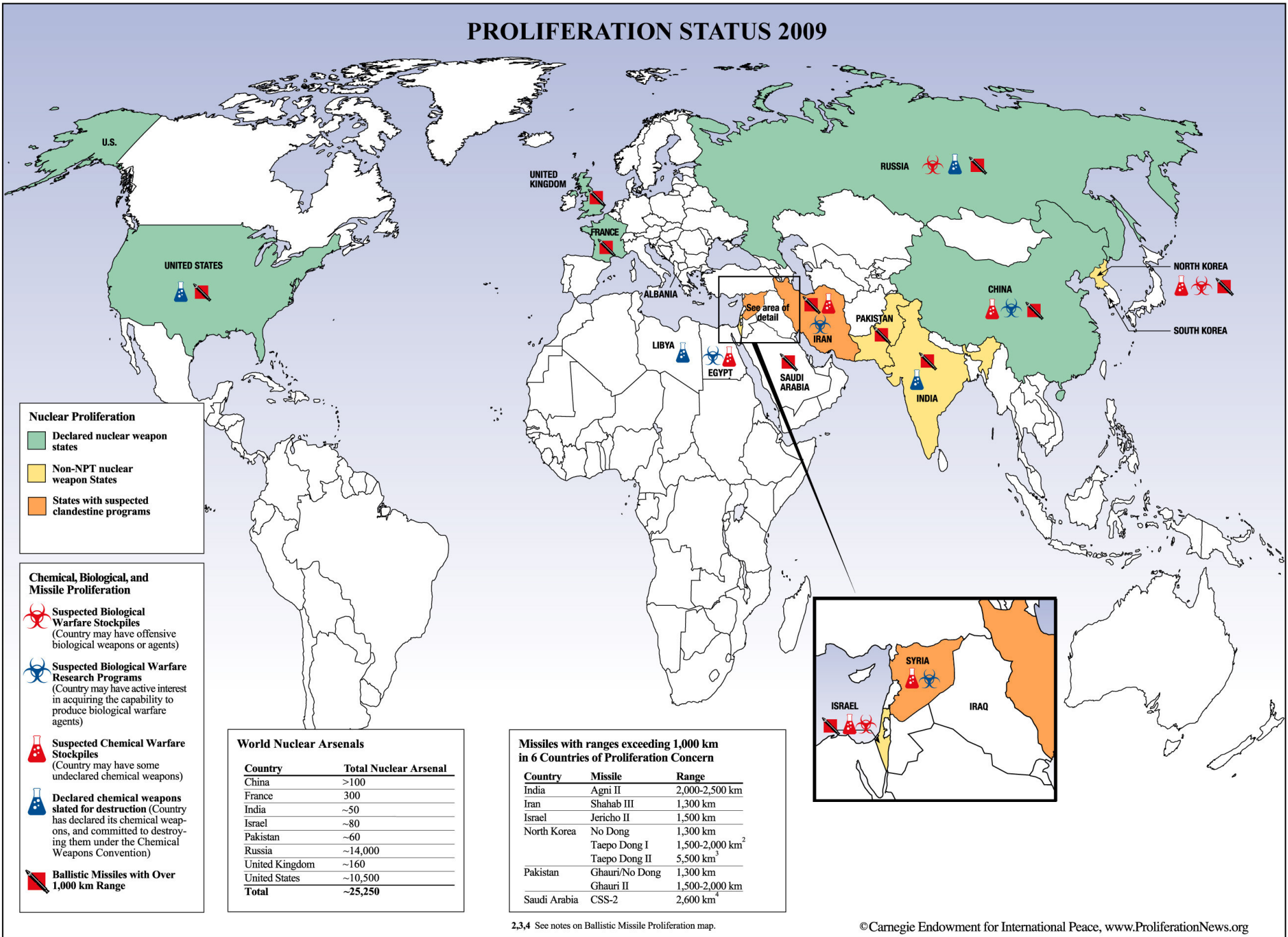
Few, if any, top-tier issues attract as much simplistic analysis, as many verbal red herrings, and as little serious work by governments as does the feasibility of nuclear disarmament. As was pointed out in *Abolishing Nuclear Weapons*, none of the nuclear-weapon states “has an employee, let alone an inter-agency group, tasked full time with figuring out what would be required to verifiably decommission all its nuclear weapons.”

Perkovich and Acton's endeavor launched with *Abolishing Nuclear Weapons*, advanced in this volume, and continuing into the future, is to jump-start a broad and deep international debate, based on serious analysis, of what it would take to achieve the immensely important and equally difficult goal of nuclear disarmament. Like this volume, that debate will have to include active participation by all states—non-nuclear as well as nuclear-armed.

(Carnegie Endowment for International Peace, [*Abolishing Nuclear Weapons: A Debate*](#), February 2009)

Finally, the Carnegie Endowment for International Peace has produced a [Global Proliferation Status Map 2009](#). It explains that the map “designates countries that have nuclear weapons capabilities. It distinguishes between nuclear-weapon states that have signed the Non-Proliferation Treaty (NPT), those that are not party to the NPT (including North Korea, which has withdrawn), and states with suspected clandestine programs. This last category includes Syria, which is suspected of building an undeclared nuclear reactor that was destroyed by an Israeli airstrike in September 2007, and Iran, which was found to be in non-compliance with its IAEA safeguards agreement in September 2005, subsequently referred to the UN Security Council in February 2006, and whose case remains under investigation to date. Both states are signatories of the NPT. The map includes tables indicating world nuclear arsenals as well as chemical, biological, and missile proliferation.” The map is reproduced overleaf.

PROLIFERATION STATUS 2009



Nuclear Proliferation

- Declared nuclear weapon states
- Non-NPT nuclear weapon States
- States with suspected clandestine programs

Chemical, Biological, and Missile Proliferation

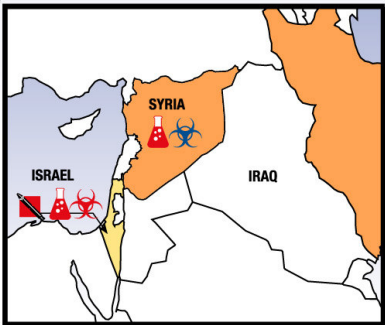
- ☠ **Suspected Biological Warfare Stockpiles**
(Country may have offensive biological weapons or agents)
- ☠ **Suspected Biological Warfare Research Programs**
(Country may have active interest in acquiring the capability to produce biological warfare agents)
- 🧪 **Suspected Chemical Warfare Stockpiles**
(Country may have some undeclared chemical weapons)
- 🧪 **Declared chemical weapons slated for destruction** (Country has declared its chemical weapons, and committed to destroying them under the Chemical Weapons Convention)
- 🚀 **Ballistic Missiles with Over 1,000 km Range**

World Nuclear Arsenals

Country	Total Nuclear Arsenal
China	>100
France	300
India	~50
Israel	~80
Pakistan	~60
Russia	~14,000
United Kingdom	~160
United States	~10,500
Total	~25,250

Missiles with ranges exceeding 1,000 km in 6 Countries of Proliferation Concern

Country	Missile	Range
India	Agni II	2,000-2,500 km
Iran	Shahab III	1,300 km
Israel	Jericho II	1,500 km
North Korea	No Dong	1,300 km
	Taepo Dong I	1,500-2,000 km ²
	Taepo Dong II	5,500 km ³
Pakistan	Ghauri/No Dong	1,300 km
	Ghauri II	1,500-2,000 km
Saudi Arabia	CSS-2	2,600 km ⁴



2,3,4 See notes on Ballistic Missile Proliferation map.

