# Strategic Defence Review

## Deterrence, Arms Control and Proliferation

1. Deterrence, arms control and proliferation are critically important to Britain's security. All three issues have inspired sometimes heated public debate, and they have been the subject of many of the submissions made to the Strategic Defence Review and a major focus of the Review itself. Because of the priority the Government attaches to arms control and non-proliferation, they have been a key part of the Defence Diplomacy initiative described in the previous essay.

2. All of Britain's military capabilities have a role to play in preventing war. The possession of robust military forces, in conjunction with those of our Allies, presents potential adversaries with the prospect of losses outweighing any gains they might hope to make from aggression. Both nuclear and conventional forces therefore contribute to deterrence, providing a credible range of options for responding proportionately to an aggressor's behaviour.

3. But nuclear deterrence remains a controversial and complex issue because of the terrible consequences of any use of nuclear weapons. There are no easy answers here. The world would be a better place if such weapons were not still necessary, but the conditions for complete nuclear disarmament do not yet exist.

4. Progress has been made through the Strategic Arms Reduction Treaty process in reducing Russian and United States strategic range nuclear forces and deployed warheads. Nonetheless, very large numbers of strategic and shorter range nuclear weapons, and substantial conventional military capabilities, remain as a potent potential threat to the security of Britain and our Allies should current circumstances change for the worse. We and NATO have radically reduced our reliance on nuclear weapons, but in present conditions nucleardeterrence still has an important contribution to make in insuring against the re-emergence of major strategic military threats, in preventing nuclear coercion, and in preserving peace and stability in Europe.

5. The Government's General Election Manifesto therefore promised to retain Trident as the ultimate guarantee of the United Kingdom's security while pressing for multilateral negotiations towards mutual, balanced and verifiable reductions in nuclear weapons. When we are satisfied with progress towards our goal of the global elimination of nuclear weapons, we will ensure that British nuclear weapons are included in negotiations.

6. Against this background, we have undertaken a fundamental re-examination of all aspects of Britain's nuclear posture. Three Trident submarines are already in service. The fourth and last, VENGEANCE, will be launched later this year and will enter service around the turn of the century. This fleet of four submarines will enable us to maintain continuous deterrent patrols over the lifetime of the Trident force.

### Nuclear Force Reductions

7. Circumstances have, however, changed dramatically since Trident was ordered. The improvements in the strategic landscape have clearly reduced the nuclear

deterrent capability we need to underpin our security.

8. Reductions have already been made in our nuclear forces. Since 1992, the United Kingdom has given up:

– the nuclear Lance missile and artillery roles we undertook previously with US nuclear weapons held under dual-key arrangements;

– our maritime tactical nuclear capability, so that Royal Navy surface ships no longer have any capability to carry or deploy nuclear weapons;

– all of our air-launched nuclear weapons.

Trident is now Britain's only nuclear system. We are the only nuclear power that has so far been prepared to take such an important step on the route to nuclear disarmament.

**Warhead Numbers**

9. The reductions described above are very significant. But the Strategic Defence Review has concluded that in the improved strategic environment we can now go further. We have decided that:

– we will maintain fewer than 200 operationally available nuclear warheads, a reduction of one third from the previous government's plans;

– Trident submarines on deterrent patrol will carry 48 warheads. This is the same number as carried on our Polaris submarines when they entered service. It compares with the previous government's ceiling of 96 warheads on each submarine.

– we have no operational need for any more than the 58 Trident missile bodies already delivered or on order.

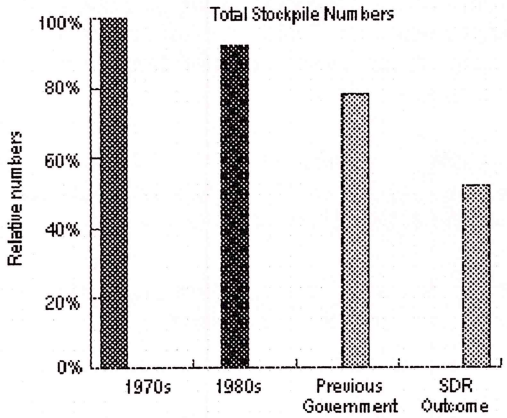
10. At the end of the Cold War, our nuclear forces comprised Chevaline warheads on Polaris missiles and several hundred WE177 free-fall bombs in the sub-strategic role. In future:

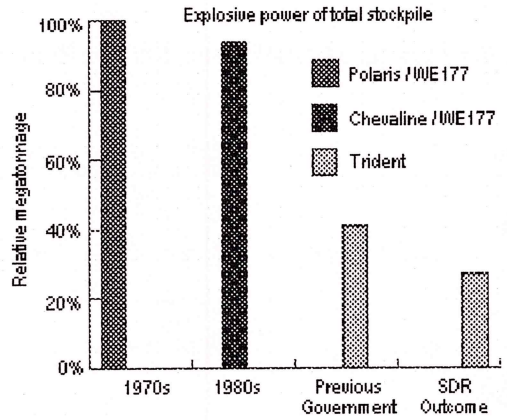
– we will have only half the number of operationally available nuclear weapons, with less than 30% of the explosive power;

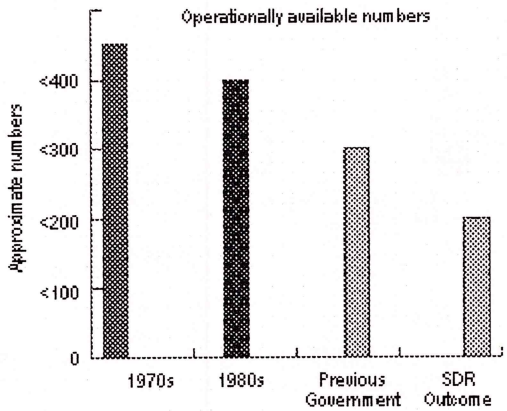
– the 48 warheads deployed on each Trident submarine to meet both our strategic and sub-strategic requirements will have an explosive power one third less than the 32 Chevaline warheads which wereeventually deployed on each Polaris submarine.

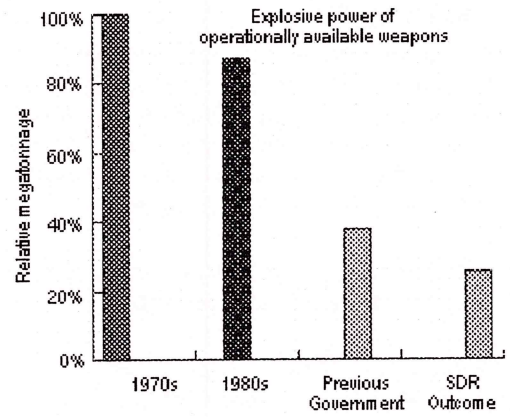
Details of the reductions in the size of our total stockpile and in the numbers of operationally available weapons are shown in *FIGURE 1.*

***United Kingdom Nuclear Stockpile Data***
***Figure 1***


Total Stockpile Numbers
Relative numbers
100%
80%
60%
40%
20%
0%
1970s
1980s
Previous Government
SDR Outcome


Explosive power of total stockpile
Relative megatonnage
Polaris / WE177
Chevaline / WE177
Trident
100%
80%
60%
40%
20%
0%
1970s
1980s
Previous Government
SDR Outcome


Operationally available numbers
Approximate numbers
<400
<300
<200
<100
0
1970s
1980s
Previous Government
SDR Outcome


Explosive power of operationally available weapons
Relative megatonnage
100%
80%
60%
40%
20%
0%
1970s
1980s
Previous Government
SDR Outcome

*Notes:*

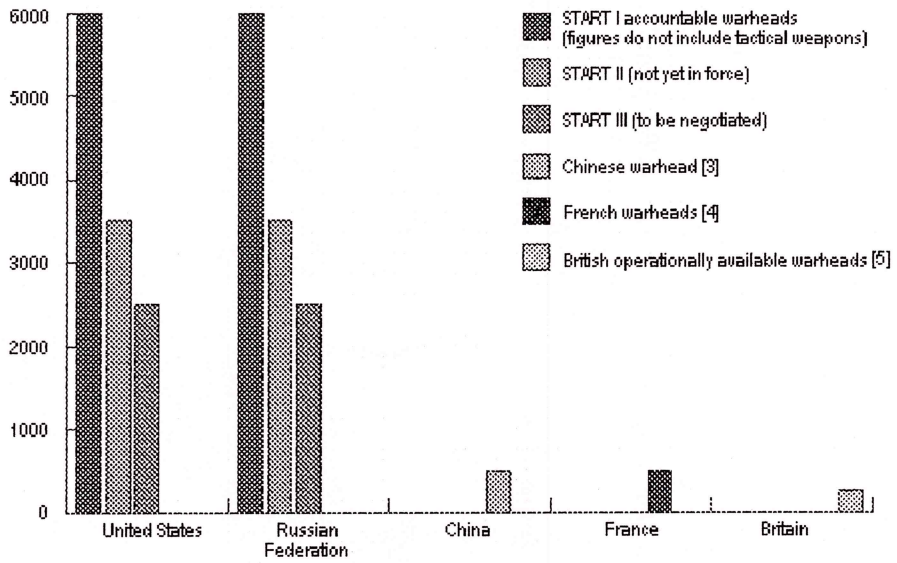
*1. The charts compare our nuclear weapon holdings during the 1970s and 1980s with the previous government's plans for British nuclear forces by the end of 1999 and SDR decisions. The charts do not include United States systems formerly operated by Britain under dual key arrangements.*

*2. The figures for total stockpile numbers include all British nuclear weapons, excluding only weapons, such as WE177 and Chevaline, which have been withdrawn from service and are awaiting final dismantlement.*

*3. The figures for operationally available numbers additionally exclude missile warheads held as a necessary processing margin or for technical surveillance purposes.*

11. A comparison of the United Kingdom's holdings of operational warheads with those of the other four Nuclear Weapon States is shown in *FIGURE 2.*

***Nuclear Holdings of the Five Nuclear Weapon States (Warhead Numbers) Figure 2***




*Notes:*

*1. Table covers the nuclear warhead holdings of the five Nuclear Weapon States, including Britain, under the Nuclear Non-Proliferation Treaty (NPT). Only India, Pakistan, Israel, Cuba and Brazil have not signed the NPT. Brazil has stated its intention to do so.*

*2. Holdings for the United States and Russia represent the limit on accountable strategic warheads set under START I (to be achieved by 2001), the upper limit set in START II (to be achieved by 2007 once the Treaty has entered into force) and the upper limit discussed by the US and Russia for a START III treaty. The United States additionally holds some stocks of non-strategic nuclear weapons and Russia has a stockpile of several thousand tactical nuclear weapons.*

*3. Holdings for China represent what is known about the total size of China's nuclear forces, including both strategic and tactical weapons.*

*4. Holdings for France represent all French nuclear forces, comprising submarine-launched ballistic missile warheads and air-launched weapons.*

*5. Holdings for Britain represent SDR decisions on numbers of operationally available Trident warheads to meet both the strategic and sub-strategic roles.*

**Nuclear Operational Posture**

12. The new strategic environment also enables us to maintain our nuclear forces at reduced readiness:

– only one Trident submarine is on deterrent patrol at any time;

– the submarines are routinely at a "notice to fire" measured in days rather than the few minutes' quick reaction alert sustained throughout the Cold War. Their missiles are de-targeted;

– submarines on patrol will carry out a variety of secondary tasks, without compromising their security, including hydrographic data collection, equipment trials and exercises with other vessels;

– over time we plan to reduce from double to single crews for each submarine, reflecting reduced operational tempo.

**Other options considered in the Review**

13. During the Review, consideration was given to more radical de-alerting measures, such as taking submarines off deterrent patrol, and removing warheads from their missiles and storing them separately ashore. Some of the outside inputs to the Review suggested Britain should move in these or similar directions. Our work concluded, however, that neither step would be compatible in current circumstances with maintaining a credible minimum deterrent with a submarine-based nuclear system. Ending continuous deterrent patrols would create new risks of crisis escalation if it proved necessary to sail a Trident submarine in a period of rising tension or crisis. The further step of removing warheads from missiles would also add a new vulnerability to our deterrent posture. This is a particular concern given our reduction to a single nuclear system. It could force a government into earlier and hastier decision making if strategic circumstances were to deteriorate. Either step would undermine the stabilising role that Britain's nuclear deterrent forces would otherwise play in a developing crisis.

**Atomic Weapons Establishment**

14. For as long as Britain has nuclear forces, we will ensure that we have a robust capability at the Atomic Weapons Establishment to underwrite the safety and reliability of our nuclear warheads, without recourse to nuclear testing. There are no current plans for any replacement for Trident, and no decision on any possible successor system would be needed for several years. But we have concluded that it would be premature to abandon a minimum capability to design and produce a successor to Trident should this prove necessary. However, the Government's aim is to take forward the process of nuclear disarmament to ensure that our security can in future be secured without nuclear weapons.

**Nuclear Transparency**

15. Maintaining a degree of uncertainty about our precise capabilities is a necessary element of credible deterrence. Nonetheless, this Government is committed to being as open as possible about Britain's nuclear forces. The information we have now given about the number of warheads deployed on our Trident submarines and on aspects of previous systems such as our WE177 bombs, Polaris and Chevaline goes considerably further than previous governments. We will also be more open about stocks of fissile material; details are set out in paragraph 26.

**Trident Acquisition Costs**

16. The principle of greater openness applies to the costs of nuclear forces. The current estimate of the total acquisition cost of the Trident programme is £12.52Bn.

This figure (known as the non-hybrid estimate) covers allexpenditure, including payments already made, at the price base and exchange rate assumed in the latest long term costing of the Defence programme. It represents a reduction in real terms of £177M from last year.

17. The programme shows an overall reduction in costs, including the savings resulting from the decision to process missiles at the United States facility at Kings Bay, of some £3.7Bn compared with the original estimate. The vast majority of the costs of procuring Trident have now been spent. Expenditure on the Trident acquisition programme to the end of February 1998 represented some 91% of the estimate expressed in actual outturn prices. This is shown in *FIGURE 3.*

***Estimate Table***
***Figure 3***

| | US £M | UK £M | Total £M |
|---|---|---|---|
| **Previous estimate (March 1997) at 1996/97 economic conditions (£1=$1.5205)** | 3,645 | 8,925 | 12570 |
| **Real changes** | -67 | -110 | -177 |
| **Price inflation** | +76 (2.1%) | +262 (3%) | +338 |
| **Exchange rate variation between March 1997 and March 1998** | -211 | n/a | -211 |
| **Revised estimate at 1997/98 economic conditions (£1=$1.6137)** | 3,443 | 9,077 | 12,520 |

*Note:*

*Estimate does not include procurement costs of £167M for Spearfish torpedoes carried by Trident submarines.*

**Trident Operating Costs**

18. Within the Review, the operating costs of the Trident force have been re-examined to ensure that all the costs relevant to the support of Trident have been identified and to take into account recent operating experience. This has shown that the average annual operating cost of the Trident force over a planned thirty-year life is expected to be around £280M. Earlier estimates derived from a less rigorous exercise conducted in advance of actual operating experience. This figure does not represent the amount that would be saved by giving up our deterrent given the substantial transitional costs that would be involved. A breakdown of the operating costs is shown in *FIGURE 4.*

***Estimate [1] for Direct Operating Cost of the Trident submarine force over its service life***
***Figure 4***

| | Annual operating costs, £million, averaged over 30-year life of Trident |
|---|---|
| **Manpower** [2] | 33 |
| **In-service support of submarine** | 33 |
| **In-service support** | 13 |
| **In-service support** | 47 |
| **Base / site running costs** | 61 |
| **Refit-maintenance** | 53 |
| **Stores and spares** | 35 |
| **In-service trials** | 1 |

| | |
|---|---|
| **Dedicated communications** | 1 |
| **Total** | 277 |

*Notes:*

*1. This estimate has been derived from a compilation of 30-year estimates covering the activities listed above which are directly attributable to the operation of the Trident force. They are based on current assumptions about operating patterns. These estimates are shown as an annual average for presentational purposes only. They do not represent actual expenditure in a given year nor the amount which might be saved if the activity were terminated.*

*2. Includes: operational crews, specialist crew training, dedicated shore staff, and technical staff.*

*3. Includes: the command system, sonar and Spearfish.*

**Nuclear Warhead Programme Costs**

19. The nuclear warhead programme costs directly related to Trident in financial year 1997/98 are estimated at £114M. Expenditure on our nuclear warhead programme as a whole amounted to £410M. This included the cost of decommissioning weapons withdrawn from service; substantial continuing costs arising from earlier stages of our nuclear warhead programme; infrastructure costs at the Atomic Weapons Establishment (including expenditure to achieve safety and environmental improvements); and other activities, including support to other Government Departments and Comprehensive Test Ban Treaty verification. The overall cost of the warhead programme is declining. A breakdown of the costs is shown in *FIGURE 5.*

**Nuclear Warhead Programme: Estimated Expenditure in 1997/98 on current and earlier Nuclear-Warhead Related Activities**
**Figure 5**

| | **£m** |
|---|---|
| **Direct Trident-related warhead expenditure** | |
| (a) Trident Production costs at Atomic Weapons Establishment (AWE) | 20 |
| (b) Trident In-Service Support at AWE | 9 |
| (c) Research, Development and Capability Maintenance at AWE | 58 |
| (d) Trident related waste management at AWE | 4 |
| (e) Other warhead programme expenditure outside AWE | 23 |
| Sub-Total | 114 |
| **AWE infrastructure** | |
| (f) Maintenance, safety and environmental improvements to meet Nuclear Installations Inspectorate requirements | 168 |
| **Other actitivites** | |
| (g) Other activities including support to other Government Departments and Comprehensive Test Ban Treaty monitoring | 19 |
| **Costs arising from earlier programmes** | |
| (h) Breakdown and dismantlement of WE177 and Chevaline warheads | 11 |
| (i) Payments to British Nuclear Fuels Limited and United Kingdom Atomic Energy Authority etc. in respect of liabilities from earlier stages of the UK nuclear programme | 103 |
| (j) Management and disposal of waste at AWE from earlier stages of UK nuclear programme, and decommissioning of | 13 |

| | |
|---|---|
| redundant facilities | |
| Sub-total | 127 |
| **Total** | 428 |
| Less 1996/97 VAT receipt £18m | 18 |
| **GRAND TOTAL** | 410 |

*Note:*

***Total AWE running costs** comprise all above elements excluding (e) and (i) to give a total of **£302M.***

***Arms Control***

20. Consideration of how best to carry forward the Government's commitment to the elimination of nuclear weapons has been a key aspect of the Review. But this goal cannot be achieved in isolation from wider political and security realities, including the recent nuclear tests in India and Pakistan. The challenge is to create the conditions in which no state judges that it needs nuclear weapons to guarantee its security. The radical improvements in European security in recent years have shown that this is not an impossible objective. But it is not a task for the Nuclear Weapon States alone. All states have their part to play.

21. The Government welcomes the continuing bilateral START process between the US and Russia, and looks forward to prompt Russian ratification of START II, to enable early negotiations on further bilateral reductions in their strategic holdings, under START III, as agreed by Presidents Clinton and Yeltsin at Helsinki in March 1997. In parallel, with our NATO Allies, we are consulting with Russia in the NATO-Russia Permanent Joint Council on issues relating to Russia's continuing substantial holdings of non-strategic nuclear weapons.

**The Nuclear Non-Proliferation Treaty**

22. The Government is unequivocally committed to Britain's obligations under the Nuclear Non-Proliferation Treaty. The effective implementation of all its provisions is vital for global peace and security, and we attach great importance to the strengthened review process agreed in 1995. We also welcome the various measures taken by the International Atomic Energy Agency in recent years to strengthen its safeguards systems.

23. We have to stop nuclear proliferation to reach our goal of a world free of nuclear weapons. There is a clear international consensus that the way to achieve this is through the Nuclear Non-Proliferation Treaty (NPT) and the Comprehensive Nuclear Test Ban Treaty (CTBT). By testing, India and Pakistan have challenged this consensus. They risk igniting a dangerous arms race and endangering stability in and beyond their region. This is the wrong way to go. We and many other states, including through a resolution by the UN Security Council, have called upon both countries to join the global regime against nuclear proliferation by signing the CTBT and joining in negotiations on a Fissile Material Cut-Off Treaty without conditions. We are seeking commitments that they will not weaponise or deploy nuclear weapons or missiles. Our goal continues to be the adherence by all states, including India and Pakistan, to the NPT as it stands. This treaty is the cornerstone of the international non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament.

**The Comprehensive Test Ban Treaty**

24. Britain ratified the Comprehensive Nuclear Test Ban Treaty on 6 April this year, alongside France. We were the first two Nuclear Weapon States to do so, and hope the others will soon follow; this is a prerequisite for the Treaty to enter into force. By

ending nuclear testing the Treaty constrains the development of new types of nuclear weapons. It therefore represents an important step towards global disarmament. Britain played an important role in the Treaty negotiations, particularly in the design of the International Monitoring System to verify compliance. The Government is working for its effective establishment at the earliest practicable date. Britain is one of the few countries so far to have paid its contributions to it in full. We will also maintain our national monitoring and analysis capability.

**A Fissile Material Cut-Off Treaty**

25. To complement the Comprehensive Test Ban Treaty, a key priority is a verifiable, legally binding convention banning the future production of fissile material for nuclear weapons or other nuclear explosive devices (a FissileMaterial Cut-Off Treaty). This is an essential step towards global elimination of nuclear weapons, and the Government is prepared to enter into immediate negotiations for such a treaty in the Conference on Disarmament.

**Fissile Material Management**

26. Britain is legally entitled to hold stocks of nuclear materials needed for national security outside international safeguards. As part of our commitment to the control of fissile material, the Government is now ready to be the first Nuclear Weapon State to declare the total size of these stocks. They comprise:

– 7.6 tonnes of plutonium;

– 21.9 tonnes of highly enriched uranium; and

– 15,000 tonnes of other forms of uranium.

Much of this stock is no longer required for defence purposes, and 4.4 tonnes of plutonium, including 0.3 tonnes of weapons-grade plutonium, and over 9,000 tonnes of non-highly enriched uranium will now be placed under European Atomic Energy Community (EURATOM) safeguards, and made liable to inspection by the International Atomic Energy Agency (IAEA). All stocks of highly enriched uranium will, however, be retained outside safeguards, since material no longer needed for nuclear weapons will be used for the naval propulsion programme. We have considered whether further disaggregation of these totals at this time would be compatible with our continuing, if reduced, security requirement. We have concluded that it would not.

27. All re-processing of spent fuel from defence reactors at Chapelcross will in future be conducted under EURATOM safeguards and made liable to inspection by the IAEA. This will mean that all planned future reprocessing and enrichment in the UK will take place under international safeguards. We will, however, retain the right to resume such activities outside safeguards until agreement is reached on a Fissile Material Cut-Off Treaty. Britain also has the right to withdraw material from safeguards for reasons of national security (including such purposes as radiography at defence nuclear facilities), but withdrawals will be limited to small quantities of materials not suitable for explosive purposes, and the details will be made public. Defence nuclear facilities will continue to remain outside international supervision.

28. Eliminating nuclear weapons will require states which have had nuclear programmes outside international safeguards to account for fissile material produced. We will therefore begin a process of declassification and historical accounting with the aim of producing by Spring 2000 an initial report of defence fissile material production since the start of Britain's defence nuclear programme in the 1940s.

**Nuclear Verification**

29. Verification of arms control and non-proliferation agreements is critical to their effectiveness, and has therefore been examined in the Review. It has traditionally

been an issue on which Britain has made a substantial contribution. Over time we have developed particular expertise in the nuclear field in the monitoring of fissile materials, particularly through our involvement in the development of the IAEA's safeguards system, and in monitoring of nuclear tests. The Government intends to maintain these strengths, which will be important in implementing the Comprehensive Nuclear Test Ban Treaty and in negotiating a Fissile Material Cut-Off Treaty.

30. But Britain has only a very limited capability at present to verify the reduction and elimination of nuclear weapons. A programme is therefore being set in hand to develop expertise in this area, drawing in particular on the skills of specialists at the Atomic Weapons Establishment. A small team will be established to consider technologies, skills and techniques, and to identify what is already available to us in the United Kingdom. The Government will consider how to take this programme forward in the light of the team's interim conclusions. The aim is to ensure that, when the time comes for the inclusion of British nuclear weapons in multilateral negotiations, we will have a significant national capability to contribute to the verification process.

**Negative Security Assurances**

31. Britain has repeatedly made it clear that we will not use nuclear weapons against a non-nuclear weapon state not in material breach of its nuclear non-proliferation obligations, unless it attacks us, our Allies or a state to which we have a security commitment, in association or alliance with a nuclear weapon state. Britain has also undertaken to seek immediate UN Security Council action to assist any non-nuclear-weapon state party to the Non-Proliferation Treaty that is attacked or threatened with nuclear weapons. In addition, we would be prepared to take appropriate measures in response to a request from the victim for technical, medical, scientific or humanitarian assistance.

32. We:

– welcome and support the recent re-establishment of an Ad Hoc Committee on Security Assurances at the Conference on Disarmament in Geneva;

– believe that the further extension of regional nuclear-weapon-free zones has an important role to play where the conditions are right;

– ratified the relevant protocols to the Treaty of Raratonga (South Pacific Nuclear Free Zone) in September 1997;

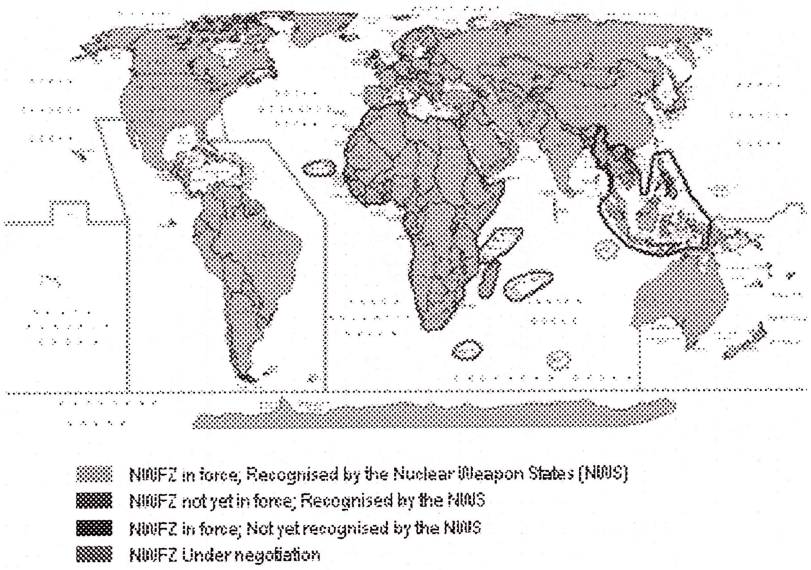
– intend to ratify the protocols to the Treaty of Pelindaba (African Nuclear-Weapon-Free Zone) soon;

– hope to be able to sign the protocol to the Treaty of Bangkok (South East Asian Nuclear-Weapon-Free Zone);

– support the initiative by the States of Central Asia to establish a nuclear-weapon-free zone in their region.

*FIGURE 6* shows Nuclear-Weapon-Free Zones.

**Nuclear-Weapon-Free Zones**
**Figure 6**




Note: boundaries are not authoritative

33. In the modern world, nuclear weapons are not the only weapon of mass destruction. The Review therefore addressed the continuing risks arising from the proliferation of chemical and biological weapons. The Government is committed to their elimination. But the difficulty and complexity of this task should not be underestimated.

34. The Government's policy has two main strands:

– existing international arms control and non-proliferation regimes must be strengthened, increasing the political and economic costs to proliferators, and the risk of their being detected by the international community;

– as long as risks remain, British forces must be trained and equipped to operate in a chemical or biological environment. This fulfils our duty of care to our people and, by ensuring that there is no military benefit from using chemical or biological weapons, it reduces the incentives for a proliferator to acquire them.

In the long term, we seek to create the conditions where no state can credibly judge that the gains from acquiring such weapons would be equal to the costs and risks involved.

**Chemical Weapons**

35. The Chemical Weapons Convention was opened for signature in 1993 and entered into force last year. It bans the development, production, stockpiling and use of chemical weapons, and requires the destruction of existing stockpiles. The Government is working closely with the international inspectorate - the Organisation for the Prohibition of Chemical Weapons (OPCW) - to ensure that the Treaty is implemented in full as soon as possible. The Chemical and Biological Defence sector at Porton Down has a programme to develop chemical and biological arms control technologies. We are also considering whether we can assist Russia in dismantling the vast stocks of chemical weapons it inherited from the Soviet Union.

36. Implementation of the Chemical Weapons Convention in the United Kingdom is the responsibility of the Department of Trade and Industry. Britain was one of the first states to agree to have its relevant defence and industrial facilities inspected under the Convention, and all these inspections to date have been completed successfully. We are working with the OPCW in developing its inspection capabilities; in February this year, at our invitation, the OPCW conducted its first joint practice challenge

inspection at RAF Valley in Anglesey.

**Biological Weapons**

37. The Government also wants to strengthen the Biological and Toxin Weapons Convention (BTWC), which entered into force in 1975. It is now known that at least two states, the Soviet Union and Iraq, conducted illegal offensive programmes for many years after signing it. Since 1996 negotiations have been underway in Geneva on measures to strengthen the Convention.

38. Britain is playing a major role in the BTWC negotiations and, during our Presidency, the European Union agreed a common position. This contains an undertaking to seek to conclude substantive negotiations this year, to allow an agreed Protocol to be adopted by the States Parties to the BTWC at a Special Conference early in 1999. It spells out four key elements which we believe must be in the Protocol:

– declarations of a range of facilities and activities of potential relevance under the Convention, so as to enhance transparency;

– provision for visits to facilities in order to promote accurate and complete declarations, and thus further enhance transparency and confidence;

– provision for rapid and effective investigations into concerns over non-compliance, including facility and field investigations;

– a cost-effective and independent organisation, including a small permanent staff, capable of implementing the Protocol effectively.

39. Britain has firmly supported the efforts of the United Nations Special Commission on Iraq (UNSCOM) to identify and destroy Iraq's arsenal of chemical and biological weapons, along with its nuclear weapons programmes and its ballistic missile delivery systems, in accordance with Iraq's own undertakings to this effect. But Iraq's latest attempts to evade its commitments under numerous UN Security Council resolutions, and the Soviet Union's previous clandestine offensive biological weapons programme, have demonstrated how difficult it is to prevent a nation determined to ignore international norms and controls from acquiring chemical or biological weapons.

**The risks from proliferation**

40. Our assessment is that there could be around 20 countries that either possess or have shown an interest in developing offensive chemical and/or biological warfare capabilities. The Government is also concerned about the nuclear programmes of some non-nuclear weapons states, as well as India and Pakistan. Proliferation is not simply a matter of weapons but of delivery systems as well. These include ballistic missiles, which may be used to deliver nuclear, biological or chemical weapons. At present, any risk to Britain from the ballistic missiles of nations of concern in terms of proliferation is many years off, but the risk to some of our NATO allies is less distant; and British forces must be able to operate in regions, such as the Gulf, where they might face these risks.

**Non-Proliferation and Export Controls**

**International Export Control Regimes**
**Figure 7**

| Member country | Australia Group (chemical and biological weapons) | Nuclear Suppliers Group (nuclear) | Zangger Committee (nuclear) | Missile Technology Control Regime | Wassenaar Agreement (conventional / dual use goods) |
|---|---|---|---|---|---|
| Argentina | ♣ | ♥ | ♠ | ♦ | ♣ |
| Australia | ♣ | ♥ | ♠ | ♦ | ♣ |
| Austria | ♣ | ♥ | ♠ | ♦ | ♣ |
| Belgium | ♣ | ♥ | ♠ | ♦ | ♣ |
| Brazil | | ♥ | | ♦ | |
| Bulgaria | | ♥ | ♠ | | ♣ |
| Canada | ♣ | ♥ | ♠ | ♦ | ♣ |
| China | | | ♠ | | |
| Czech Republic | ♣ | ♥ | ♠ | | ♣ |
| Denmark | ♣ | ♥ | ♠ | ♦ | ♣ |
| Finland | ♣ | ♥ | ♠ | ♦ | ♣ |
| France | ♣ | ♥ | ♠ | ♦ | ♣ |
| Germany | ♣ | ♥ | ♠ | ♦ | ♣ |
| Greece | ♣ | ♥ | ♠ | ♦ | ♣ |
| Hungary | ♣ | ♥ | ♠ | ♦ | ♣ |
| Iceland | ♣ | | | ♦ | |
| Ireland | ♣ | ♥ | ♠ | ♦ | ♣ |
| Italy | ♣ | ♥ | ♠ | ♦ | ♣ |
| Japan | ♣ | ♥ | ♠ | ♦ | ♣ |
| Latvia | | ♥ | | | |
| Luxembourg | ♣ | ♥ | ♠ | ♦ | ♣ |
| Netherlands | ♣ | ♥ | ♠ | ♦ | ♣ |
| New Zealand | ♣ | ♥ | | ♦ | ♣ |
| Norway | ♣ | ♥ | ♠ | ♦ | ♣ |
| Poland | ♣ | ♥ | ♠ | | ♣ |
| Portugal | ♣ | ♥ | ♠ | ♦ | ♣ |
| Romania | ♣ | ♥ | ♠ | | ♣ |
| Russia | | ♥ | ♠ | ♦ | ♣ |
| Slovakia | ♣ | ♥ | ♠ | ♦ | ♣ |
| South Africa | | ♥ | ♠ | ♦ | |
| South Korea | ♣ | ♥ | ♠ | | ♣ |
| Spain | ♣ | ♥ | ♠ | ♦ | ♣ |
| Sweden | ♣ | ♥ | ♠ | ♦ | ♣ |
| Switzerland | ♣ | ♥ | ♠ | ♦ | ♣ |
| Turkey | | | | ♦ | ♣ |
| Ukraine | | ♥ | ♠ | | ♣ |
| United Kingdom | ♣ | ♥ | ♠ | ♦ | ♣ |
| United States | ♣ | ♥ | ♠ | ♦ | ♣ |

Note: As at 30 June 1998

41. The Government strongly supports diplomatic measures to prevent the proliferation and development of chemical and biological weapons, and their means of delivery, and will continue to work actively to this end. Britain is a founding member of all the export control regimes (the Nuclear Suppliers Group, Zangger Committee, Australia Group, the Missile Technology Control Regime and the Wassenaar Arrangement) and we are committed to improving their effectiveness.

***Defence Responses to Proliferation***

42. In addition to these measures, we need military capabilities to address the risks to British forces deployed overseas posed by nuclear, biological and chemical weapons and their means of delivery. To do otherwise would be an unacceptable constraint on our political freedom of action and could put our people at undue risk. Britain has played a pivotal role in NATO work in defining the capabilities needed to respond to these risks. The Strategic Defence Review addressed responses which might now be required at the national level.

43. A crucial element is to ensure the fullest possible information on the intentions and capabilities of countries of concern. It is often difficult to establish the facts but we will continue to devote significant resources to this effort.

44. There is no "silver bullet" which will provide a complete answer to the risks posed by chemical and biological weapons. What is needed is a balance of capabilities, to deter, counter, and defend against the use of such weapons. Protective measures will play an important part, including detection capabilities and the possibility of immunising personnel; so too will other conventional capabilities which can play a role in defeating key targets relating to the programmes of countries of concern.

**Ballistic Missile Defence**

45. A number of systems intended to destroy ballistic missiles are under development, notably in the United States. These may play a role within a balanced spectrum of capabilities to counter the risks posed by chemical and biological weapons and their means of delivery. But technologies in this area are changing rapidly and it would, at this stage, be premature to decide on acquiring such a capability. We will, however, monitor developments in the risks posed by ballistic missiles and in the technology available to counter them, participate in NATO studies, and work closely with our Allies to inform future decisions.

**Review of Defence Responses to Proliferation** 46. The Strategic Defence Review has heightened awareness of the challenge British forces would face if they had to operate in a potentially hostile nuclear, biological or chemical environment and has identified various inherited shortfalls in Britain's defensive capabilities against these weapons. To address these shortfalls, we will:

– increase planned procurement of land-based biological detection equipments;

– establish a joint Army and Royal Air Force nuclear, biological and chemical defence capability, manned mostly by Regular personnel, available at high readiness to help protect deployed forces;

– continue to develop vaccines against known biological agents.

47. These measures will help meet immediate problems. In the longer term, we intend to go further to ensure a coherent national response to these threats. A further detailed review, building on work undertaken in NATO, has been set in hand. Work should be completed by the Summer Recess. A summary of the resulting conclusions will then be made public.

***Conventional Arms Control***

48. Conventional arms control has contributed very significantly to the overall lowering of tension in Europe. The Government is firmly committed, with our Allies and Partners, to proceed with this process. The main conventional arms control agreements involving the United Kingdom are the Conventional Armed Forces in Europe Treaty (CFE and CFE1A), the Vienna Document 94 and the Open Skies Treaty.

**CFE Adaptation**

49. The central challenge at present is to ensure the continuing relevance of the 1990 CFE Treaty. This limits the numbers of heavy weapons in the 30 countries of NATO and the former Warsaw Pact. Over 50,000 heavy weapons have now been destroyed or otherwise reduced since the Treaty was signed. But the Treaty was negotiated at the end of the Cold War, and now needs adapting to reflect changes in the European security environment. Negotiations between the 30 States Parties started in Vienna in January 1997, and are likely to last well into 1999. The Government is fully committed to their successful conclusion. As CFE is at the heart of co-operative European security, its adaptation is a fundamental part of NATO's developing relationship with Russia and other partners, and of the process of building security conditions in Europe which in time may allow us to dispense with nuclear weapons.

**The Vienna Document and Open Skies**

50. In the same vein and a similar timescale, work is under way to revise the Vienna Document 94. This is a politically binding agreement by the 54 participating States of the Organisation for Security and Co-operation in Europe (OSCE), which promotes transparency, stability and openness in military affairs. Britain also continues to use contacts with Russia, Ukraine and Belarus to encourage their ratification of the 1992 Open Skies Treaty. When it enters into force, this will enhance other arms control agreements by providing for the over-flight and photography of participating States Parties' territory. To demonstrate that we are committed to putting principles into action, the Government will restore Britain's active contribution to Open Skies implementation by committing a specialised Andover aircraft to conduct photographic overflights, and encourage other states to undertake similar flights over Britain.

**The Dayton Agreement**

51. Britain also actively supports the Dayton Arms Control process as a member of the Contact Group. We welcomed the OSCE decision last December to initiate consultations and negotiations on a new agreement to further enhance stability and security in the Balkans and the surrounding region. This will build on the successes of the current agreements under Dayton Articles II (confidence and security building measures) and IV (CFE-style reductions and limitations).

***Humanitarian Obligations***

52. All States have an obligation to minimise and alleviate the consequences of conflict for innocent civilians. This is fundamental to an ethical security and defence policy, and we have clearly shown our commitment in this area, in particular by our efforts to ban anti-personnel landmines, and to ratify the Additional Protocols to the Geneva Convention.

**Anti-personnel landmines**

53. The Government has devoted much energy to the issue of anti-personnel landmines (APLs) since coming to office, and we were delighted to be among the first signatories of the Ottawa Convention on 3 December 1997. Our intention is to ratify the Convention as quickly as possible. In the meantime, work is well under way to fulfil our obligations under the Convention by, for example, a programme to destroy stockpiled operational APLs by 1 January 2000, well in advance of the agreed deadline. We have also considerably enhanced our activities in the area of humanitarian demining, for example by establishing a Mine Information and Training Centre at Minley, and by the gift of ten demining tractors to the HALO Trust.

**Additional Protocols**

54. The United Kingdom signed but did not ratify the Additional Protocols to the 1949 Geneva Conventions in 1977. They further codify and develop the laws of armed conflict set out in the Geneva Conventions and Britain played a leading role in their negotiation. Additional Protocol I contains rules protecting the victims of international armed conflict, particularly women and children. Additional Protocol II governs internal armed conflict and provides fundamental guarantees of humane treatment for persons who do not take part or have ceased to take a direct part in hostilities. We regarded our ratification after 20 years as a matter of priority. The United Kingdom accordingly ratified on 28 January 1998.

**Conclusion**

55. The Government is committed to the goal of the global elimination of nuclear, biological and chemical weapons. We will work to create conditions in which even a minimum level of nuclear deterrence is no longer necessary. Until then, Britain will maintain the minimum level of nuclear deterrent necessary to prevent the possibility of

major war in Europe. At the same time, we will work to remove the risk of proliferation of nuclear, biological and chemical weapons worldwide, while maintaining a robust defensive capability to protect British interests in the event of their use. The Government is convinced that the interconnecting policies and programmes set out above, which have either emerged from or been confirmed by the analysis and conclusions of the Strategic Defence Review, represent a coherent, ethical and militarily sound contribution to British security.



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