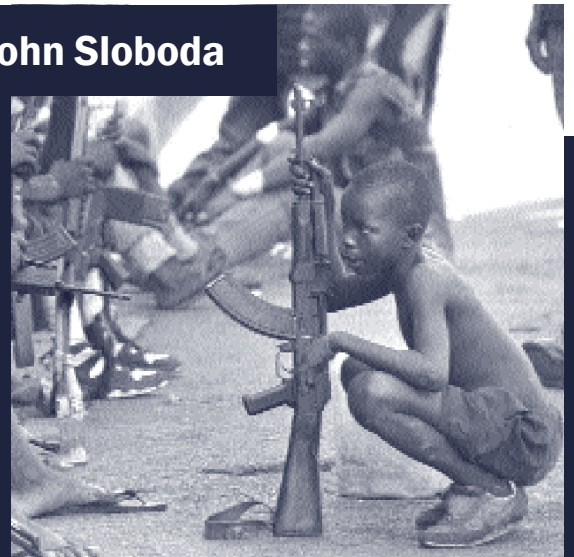


GLOBAL RESPONSES TO GLOBAL THREATS

SUSTAINABLE SECURITY
FOR THE 21ST CENTURY

Chris Abbott, Paul Rogers and John Sloboda



Published by Oxford Research Group, 2006

Oxford Research Group

51 Plantation Road
Oxford OX2 6JE
United Kingdom

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ISBN 0 9552846 0 0
EAN 978 0 9552846 0 1

About the Authors

Chris Abbott is a Research Officer at Oxford Research Group responsible for the Global Security Programme. He is the coordinator of ORG's "global threats" project and lead author of this paper. Previously he has worked as a campaigner and researcher on a number of social and environmental issues. In addition to several ORG reports, his articles on global security issues have appeared in various publications, both in the UK and abroad.

Paul Rogers is Professor of Peace Studies at the University of Bradford, and Global Security Consultant to Oxford Research Group. Paul has worked in the field of international security, arms control and political violence for over 30 years. He lectures at universities and defence colleges in several countries, and has written 20 books. Paul is also a regular commentator on global security issues in both the national and international media.

John Sloboda is Executive Director of Oxford Research Group. He is also Professor of Psychology and Honorary Research Fellow in the School of International Relations, Politics and the Environment at Keele University. He co-founded and manages the Iraq Body Count project, which quickly became a key source of information about civilian casualties during the Iraq war and its aftermath. In July 2004, John was elected to the Fellowship of the British Academy.

Acknowledgements

Oxford Research Group gratefully acknowledges the support of the Joseph Rowntree Charitable Trust, the Polden-Puckham Charitable Foundation and our many supporters and Sustainers for making the publication of this report possible. The authors would like to thank William Peden and Nicky Davies for commenting on an earlier version of this report, Janet Bloomfield and others for their valuable insights, and Vanessa Shields, Emily Esplen and Wendy Conway Lamb for additional research.

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A truly inspirational report. It blows an overdue gust of wise analysis and well-reasoned argument through the counterproductive and self-serving US-driven response to the current world disorder. The younger generation in particular desperately need its imaginative and hopeful ideas for sustainable alternative security strategies.”

**Commander Robert Green RN (Ret.), Disarmament and Security Centre,
New Zealand Peace Foundation**

“This new report argues very persuasively and cogently that the war against terrorism has been a near-term distraction from a set of more fundamental, long-term issues that seriously threaten the future well-being of the globe. If this report can encourage even a few policy-makers to shift their focus from tactics that win elections to solutions that benefit society, it will have served a very useful purpose indeed.”

Professor Jack Mendelsohn, US Department of State (1963-85); Professor of National Security Affairs, US Naval Academy (1998-99)

“A serious, profound, thought-provoking report. This valuable study will greatly benefit the common efforts to build a better world.”

Niu Qiang, Secretary General, Chinese People’s Association for Peace and Disarmament

“Essential reading and reference for anyone concerned with turning the world away from its current disastrous path. Not only does this report show clearly the full picture of the interrelated problems we face, it offers a bracing prescription for how we can change course towards a more secure future.”

Janet Bloomfield, British Coordinator, Atomic Mirror; Chair, Campaign for Nuclear Disarmament (1993-96)

“The post 9/11 mainstream security discourse has run on three myths: that terrorism has no causes worth discussing, that terrorism is only non-governmental, and that the ‘war on terror’ should be given priority over all other global challenges. With a wealth of facts and solid arguments, this report debunks these myths and tells how urgent it is that governments and civil society re-think and widen security concepts as well as policies.”

Dr. Jan Oberg, Director, Transnational Foundation for Peace and Future Research (TFF)

“In this report the authors have examined threats to peace and security from a perspective which seeks to remove these threats and create a world of sustainable security for all. The core issues discussed, and their interconnectedness are extremely important to consider and to consider now, while there is still time and opportunity to address them. The recommendations provided in this report must be taken seriously.

Susi Snyder, Secretary General, Women’s International League for Peace and Freedom (WILPF)



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Executive Summary

Since 9/11 and the development of the ‘war on terror’, international terrorism has been promoted in Washington, London and other Western capitals as the greatest threat facing the world at the current juncture. However, **this paper shows that international terrorism is actually a relatively minor threat when compared to other more serious global trends, and that current responses to those trends are likely to increase, rather than decrease, the risks of further terrorist attacks.**

In examining these issues, this report offers an overview of four groups of factors that the authors have identified as the root causes of conflict and insecurity in today’s world and the likely determinants of future conflict:

- 1 | **Climate change**
- 2 | **Competition over resources**
- 3 | **Marginalisation of the majority world**
- 4 | **Global militarisation**

These factors are the trends that are likely to lead to substantial global and regional instability, and large-scale loss of life, of a magnitude unmatched by other potential threats.

Current responses to these threats can be characterised as a ‘control paradigm’ – an attempt to maintain the status quo through military means and control insecurity without addressing the root causes. **The authors argue that current security policies are self-defeating in the long-term, and so a new approach is needed.**

This new approach to global security can be characterised as a ‘sustainable security paradigm’. The main difference between this and the ‘control paradigm’ is that this approach does not attempt to unilaterally control threats through the use of force (‘attack the symptoms’), but rather it aims to cooperatively resolve the root causes of those threats using the most effective means available (‘cure the disease’). For example, a sustainable security approach prioritises renewable energy as the key solution to climate change; energy efficiency as a response to resource competition; poverty reduction as a means to address marginalisation; and the halting and reversal of WMD development and proliferation as a main component of checking global militarisation. These approaches provide the best chance of averting global disaster, as well as addressing some of the root causes of terrorism.

Governments will be unwilling to embrace these ideas without pressure from below. The authors argue that NGOs and the wider civil society have a unique chance to coordinate their efforts to convince government that this new approach is practical and effective. This will mean a closer linking of peace, development and environmental issues than has so far been attempted. New political leadership in the USA and UK in the coming years may well present the ideal opportunity for progress, but **unless urgent action is taken in the next five to ten years, it will be extremely difficult, if not impossible, to avoid a highly unstable global system by the middle years of the century.**

“Current security policies are self-defeating in the long-term, and a new approach is needed.”

1 | Introduction: A Clear and Present Danger?



One of the unexpected outcomes of the build-up to the US presidential election in 2004 was the rebirth of the long dead Committee on the Present Danger (CPD). First formed in 1950, and then again in the 1970s, past adaptations of the Committee focused on convincing the American public and politicians of the grave danger posed by the Soviet Union. Following the end of the Cold War, the Committee slipped back into the shadows. However, in July 2004 it reformed to face what it considers another clear and present danger to the United States: international Islamic terrorism.

The organisation's website, which flashes up photos of terrorist attacks in New York, Madrid and London, explains that the CPD is dedicated to "protecting and expanding democracy by winning the global war against terrorism and the movements and ideologies that drive it".¹ The Committee is co-chaired by former CIA director James Woolsey, who is well known to consider the fight against what the CPD calls "global radical Islamist and fascist terrorist movements" to be World War IV (with World War III having been the Cold War).²

They, and others like them, have replaced 'red under the bed' with 'terrorist at the gate' – complete with the paranoia and climate of fear associated with such a mind-set. This climate sets the context for statements, such as that made by the British Prime Minister Tony Blair during the state visit of President Bush in November 2003, that "Terrorism is the greatest 21st Century threat".³ However, is international terrorism really the single greatest threat to global security?

Contemporary threats are often interconnected. Led, in large part, by the United Nations, there is growing international awareness that problems such as international terrorism or armed conflict cannot be dealt with in isolation from those of extreme poverty or environmental degradation.⁴ These are all global issues, which threaten human security as well as state security, and they recognise no national borders.

“Contemporary threats are often interconnected... international terrorism or armed conflict cannot be dealt with in isolation from extreme poverty or environmental degradation.”

9/11 demonstrated in the most dramatic way that rich Western countries cannot insulate themselves from developments taking place elsewhere. Poverty is not just a development issue; HIV/AIDS is not just a disease; climate change does not just affect poor countries; terrorism does not just happen in failed states – these have security implications for every country. The different societies that make up humanity are interconnected and interdependent today as never before. Only by working together will countries be able to overcome the threats they face.

In examining these issues, this report offers an overview of four groups of factors that should be considered the root causes of conflict and insecurity in today's world and the likely determinants of future conflict:

- **climate change;**
- **competition over resources;**
- **marginalisation of the majority world;** and
- **global militarisation.**

There are, of course, other threats to consider, but these factors are the trends that the authors have identified as likely to lead to substantial global and regional instability, and large-scale loss of life, of a magnitude unmatched by other potential threats. Another important trend, that of **political violence and international terrorism**, is discussed throughout the report, because while it is unlikely to be a major driver of global insecurity in itself, it is the likely result of current security orthodoxy and the factors outlined above, and will continue to dominate Western security policies, particularly those of the USA and its principal allies. As this report will show, however, this focus is premised on a flawed understanding of movements such as al-Qaida, and as a consequence the policies currently promoted to deal with the threat of international terrorism are inadequate and inappropriate.

“The policies currently promoted to deal with the threat of international terrorism are inadequate and inappropriate.”

The task today is to develop global responses to these global threats. The Cold War way of thinking focused on security as ‘defence’. This paradigm has continued to dominate attitudes to international security, even though the global trend in major armed conflict and interstate wars has continued to decrease in the post-Cold War era and new challenges have emerged to threaten peace and security. Collective security is now needed which promotes a shared and sustainable responsibility for managing these new threats and has respect for international law and fundamental human rights at its heart. What is needed to replace the current “control paradigm” is a system of “sustainable security” that addresses the security concerns of all peoples and tackles both old and new threats.

The report may, at times, appear to be very centred on the USA. There is some focus on the policies of the current US administration, but only because their attitude towards foreign policy and multi-lateralism has affected international relations to such an extent that many of the efforts to address the problems covered in this report have been severely hampered in recent years, and in many instances have actually added to those problems. The long-term effects of this, both in the US and elsewhere, are still unclear at present – though the disastrous impacts on some international treaties are already apparent. Furthermore, the USA is now the most influential global actor and the only country with a truly global military reach, and this further impacts on the security and political issues discussed here.

“The ‘war on terror’ is distracting governments from the genuine threats that humanity faces.”

The fundamental problem is that the security agenda is being hijacked by the ‘war on terror’ and related conflicts in Afghanistan, Iraq and, potentially, Iran. This, coupled with the continued pursuit of narrow national and economic interests, is distracting governments from the genuine threats that humanity faces, causing their responses to these threats to be wholly inadequate. Civil society and governments must engage in constructive debate and work together to redress the balance. This report is one contribution to the debate.

2 | Climate Change



Summary of main points:

- The effects of climate change are likely to lead to the displacement of peoples from coastline and river delta areas, severe natural disasters and increasing food shortages. This would lead to increased human suffering, greater social unrest, revised patterns of living and the pressure of greatly increased levels of migration across the world.
- This has long-term security implications for all countries which are far more serious, lasting and destructive than those of international terrorism.
- However, the response to climate change should not be the increased use of nuclear power, which would only encourage the spread across an unstable world of technology and materials that can also be used in the development of nuclear weapons and their use by 'rogue states' or terrorist networks.
- Instead, a more secure and reliable response is the development of local renewable energy sources and radical energy conservation practices.

The Pentagon's Office of Net Assessment (ONA) identifies climate change as a threat which vastly eclipses that of terrorism. A report commissioned by the head of the ONA, Pentagon insider Andrew Marshall, and published in late-2003, concluded that climate change over the next 20 years could result in a global catastrophe costing millions of lives in wars and natural disasters. The report's authors argue that the risk of abrupt climate change should be "elevated beyond a scientific debate to a US national security concern".⁵

Anyone doubting the serious security implications of environmental disasters, even for rich and powerful countries such as the United States, should simply look at the large-scale loss of life and breakdown of society that occurred in New Orleans and other Gulf Coast cities (as well as rising petrol prices across the world) in a matter of days following Hurricane Katrina in August and September 2005. This is especially worrying because there has been a near doubling in the number of category 4 and 5 storms such as Katrina in the last 35 years, most likely as a result of rises in the temperature of the surface levels of the sea.⁶

The Social Impacts of Climate Change

In January 2004, the UK Government's Chief Scientific Adviser, Sir David King, wrote a guest editorial for the journal *Science*, warning that "climate change is the most severe problem that we are facing today, more serious even than the threat of terrorism". He argues that as a result of global warming "millions more people around the world may in future be exposed to the risk of hunger, drought, flooding, and debilitating diseases such as malaria".⁷

Though there is still some disagreement, most scientists now believe there has been a considerable increase in atmospheric carbon dioxide levels, mainly as a result of human activity such as burning fossil fuels and the cutting down of the world's forests, which has led to a large-scale loss of biodiversity and a global average temperature increase. Studies differ, but models are predicting a future temperature rise of 1.5 to 5 degrees Centigrade by the year 2100. This could cause thermal expansion of the sea and global ice melting, resulting in an alarming rise in sea levels and a significant redrawing of the world map.⁸

“A shift in rainfall distribution is likely to cause a partial drying-out of some of the most fertile regions of the tropics.”

Among the many consequences of this rise in sea levels are the effects on metropolitan areas. As most of the world's large cities are positioned on coasts it could mean a large proportion of them would be lost to the sea. The gradual displacement of peoples from coastline and river delta areas could number in the hundreds of millions and the economic and social consequences would be disastrous.

Furthermore, there are persuasive arguments that climate change is likely to involve elements of 'positive feedback' in that it will encourage further environmental changes that lead to a marked acceleration of carbon emissions. One possibility is that the melting of Arctic sea ice will result in more open water during Arctic summers which will absorb more solar radiation, speeding up the process of ice melting. A second possibility is that the progressive melting of Arctic and near-Arctic permafrost will release large volumes of methane from rotting vegetation which is, itself, an even more potent cause of climate change than carbon dioxide. Losing the sea ice of the Arctic is likely to cause dramatic changes in the climate of the northern region and will have a very big impact on other climate parameters.⁹

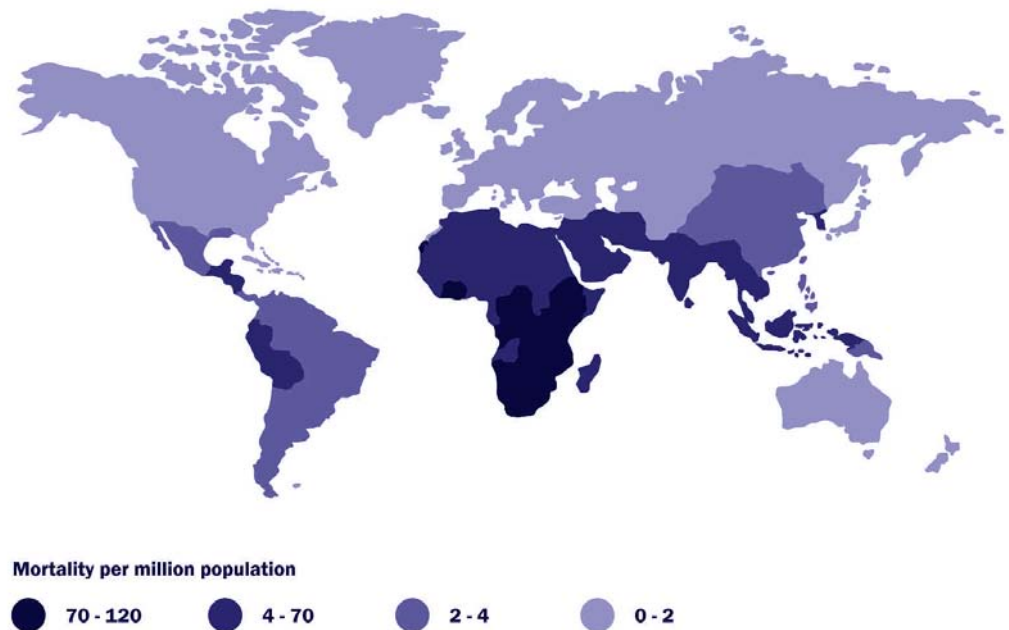
There are also now indications that over the next fifty years there will be considerable shifts in the distribution of rainfall, with more rain tending to fall on the oceans and polar regions and progressively less falling on the tropical land masses. The tropics support a substantial part of the human population, much of it surviving by subsistence agriculture. A shift in rainfall distribution is likely to cause a partial drying-out of some of the most fertile regions of the tropics, resulting in a significant reduction in the ecological carrying-capacity of the land and decreases in food production.¹⁰ China and India, in particular, could be hugely affected, with profound national and regional implications. Many of the countries in this region would have very little capacity to respond to such changes, and the resulting persistent food shortages and even famines would lead to increased suffering, greater social unrest and the pressure of greatly increased migration. Governments should not underestimate the importance of this.

While Africa will be most affected by drought and desertification due to climate change, researchers are also reporting a general drying out of the land and spread of desertification in the Mediterranean region. One of the worst droughts on record hit Spain and Portugal in 2005 and halved some crop yields, causing both countries to apply to the EU for food assistance. Droughts have also badly affected crops in Australia, and one in six countries in the world face food shortages because of severe droughts that could become semi-permanent as a result of climate change.¹¹ In fact, new climate prediction research by the UK Met Office indicates that expected shifts in rain patterns and temperatures over the next 50 years threaten to put far more people at risk of hunger than previously thought.¹²

That is, unless carbon dioxide levels can be stabilised and the threat of global warming and climate change taken seriously. Time is of the essence. The average temperature of the earth's surface has risen by 0.6 degrees Centigrade since reliable records began in the late 1800s. The European Union believes that the eventual rise in the global average temperature must be kept to within two degrees Centigrade of pre-industrial levels to ensure the continued safety of the human population. However, some leading climate scientists suggest that if the concentration of carbon dioxide (CO₂) in the atmosphere exceeds 400 parts per million (ppm), then there will be little hope of achieving this goal. The concentration of CO₂ in the atmosphere is currently 378 ppm, and increasing by about 1.5 ppm per year.¹³ If the scientists are correct, that leaves just 14 years before the 400 ppm point is reached and, in fact, some of the early effects of global warming are already apparent. In 2004, for example, the World Health Organisation estimated that current mortality attributable to man-made climate change was at least 150,000 people per year – with the highest proportion of these deaths occurring in Southern Africa (see map opposite).¹⁴

Estimated mortality attributable to climate change

Source: World Health Organisation



While some governments are taking this threat reasonably seriously, the reaction from the USA has been less than helpful; withdrawing from the Kyoto Protocol being their best known response to what some in the Bush administration still consider the ‘myth’ of climate change. Even though it accounts for only 4% of the world’s population, America is the world’s greatest polluter – producing 20% of the global emissions of greenhouse gases.¹⁵ As the world’s only superpower, the United States must face up to its responsibility to take the threat of climate change seriously. It is also important that China and India, as two of the largest developing countries who have not signed up to the Kyoto Protocol, be brought into greater dialogue on the issue as their energy needs grow. China is of particular concern as it has the second highest carbon dioxide emissions behind the USA, with a rapidly developing economy and increasingly high levels of energy use, especially from coal-fired power stations. In fact, in the next 20 years China looks set to overtake the USA as the world’s biggest producer of greenhouse gases.¹⁶

“The World Health Organisation has estimated that current mortality attributable to man-made climate change is at least 150,000 people per year – with the highest proportion of these deaths occurring in Southern Africa .”

“The response to global warming should not be the increased use of nuclear power.”

Nuclear is not the Answer

However, the response to global warming should not, as some suggest, be the increased use of nuclear power. Even some environmentalists are now promoting the idea that nuclear energy could be the environmentally sound solution to the problem of rising levels of atmospheric carbon dioxide.

Aside from the obvious environmental, economic and safety issues associated with dealing with radioactive waste, there is a very serious global security issue that many seem to ignore.

This ‘nuclear renaissance’ will involve the development of facilities – reactors, waste tanks and reprocessing plants – that are potential terrorist targets,¹⁷ as well as encouraging the spread of technology and materials that can also be used in the development of nuclear weapons by ‘rogue states’ or terrorist networks. The peaceful atom and the military atom are what the Swedish physicist Hannes Alven, a Nobel Prize laureate, called “Siamese twins”. Civil nuclear activity and nuclear weapons proliferation are intimately linked: one of the ‘twins’ cannot be promoted without the other spreading out of control. This is where much of the current concern over Iran’s nuclear programme comes from, but it is important to note that the development of nuclear power in other countries – for example, China, the USA or Japan – is just as worrying in terms of global security.¹⁸

There are serious dangers associated with producing plutonium in large quantities for civil use in conditions of increasing world unrest; conditions made worse by the possible social impacts of climate change already outlined. In particular, there is real concern over the potential use of plutonium in a terrorist weapon – a radiological dispersal device (so-called ‘dirty bomb’) or a crude nuclear weapon. This would have a devastating impact if detonated, for example, in a capital city, but also if the threat of detonation were used to blackmail a government. The problem of safeguarding society against these hazards would become formidable in a ‘plutonium economy’ (that is, an economy significantly dependent on nuclear reactors using mixed oxide fuel and/or plutonium to meet its energy demands). The security measures that might become necessary could seriously affect personal freedoms and have genuine consequences for democracy.¹⁹

It is also important to note that nuclear energy is not a carbon free technology. Electricity is used in many stages of the nuclear cycle – from building reactors to waste disposal and decommissioning – and this electricity will mainly have been produced from fossil fuels. Even under the most favourable conditions, the nuclear cycle will produce approximately one-third as much CO₂ emission as gas-fired electricity production. Furthermore, nuclear power could only supply the entire world electricity demand for three years before sources with low uranium content would have to be mined. Given that one of the main factors is the amount of carbon dioxide produced by the mining and milling of uranium ore, the use of the poorer ores in nuclear reactors would produce more CO₂ emission than burning fossil fuels directly, and may actually consume more electricity than it produces.²⁰ Furthermore, the problems of the depletion of uranium mineable at economic prices would become as serious as the depletion of oil and gas if a significant nuclear renaissance were to occur.

“Attention should be focused on the protection and security of existing nuclear facilities and options for phasing out their use altogether.”

Therefore, while some may argue that nuclear energy could provide a ‘solution’ to climate change, the implications of such developments would be disastrous. In fact, the UK Government’s own advisory body, the Sustainable Development Commission, concluded in March 2006 that nuclear power was dangerous, expensive and unnecessary.²¹ The House of Commons Environmental Audit Committee reached similar conclusions the following month, raising serious concerns relating to safety, the threat of terrorism, and the proliferation of nuclear power across the world.²² So, rather than constructing new nuclear reactors, attention should be focused on the protection and security of existing facilities and options for phasing out their use altogether. This, combined with an accelerated implementation by the nuclear weapon states of their “unequivocal commitment” to nuclear disarmament under Article VI of the Nuclear Non-Proliferation Treaty (NPT), the negotiation of a Fissile Material Cut-Off Treaty (FMCT) to ban the further production of fissile materials for use in nuclear weapons, and the development of policies designed to increase confidence in the nuclear non-proliferation regime, would go a long way to making the world a safer place.

Renewable Energy

Fortunately, there is no need to rely on nuclear energy as an alternative to the current dependence on fossil fuels. A more sustainable and secure response is the rapid development of local renewable energy sources – wind, wave, tidal and solar – and comprehensive energy conservation practices.

In 2003, the Institute for Sustainable Solutions and Innovations (ISUSI) found that today's technology could allow a highly-developed industrialised country to completely cover its energy needs with local renewable energy sources, particularly solar and wind energy. Using the example of Japan, ISUSI concluded that it is possible to eliminate fossil fuels and nuclear power without reducing living standards or industrial capacity.²³

Another more recent study by the Environmental Change Institute at the University of Oxford found that wind, solar and Combined Heat and Power (co-generation) could together meet the electricity demand of England and Wales (with a minimum necessity for stand-by capacity from non-renewable sources for times when renewable electricity supply is low and demand is high).²⁴ The UK is particularly well suited to the development of wind power, as the wind tends to blow more strongly during the day and the winter months, when energy demands from the national grid are greatest.²⁵ This is one of the advantages of renewable energy sources because they tend to produce greater levels of electricity during peak demand points of the day (between 6am and midnight) and during the months of highest demand (winter months), whereas nuclear power can only produce a constant 'base-load' 24 hours a day, 365 days a year.²⁶

Diverting resources and personnel from military science to civilian renewable energy programmes would greatly help to accelerate the technological developments already happening in this important area – for example, third generation photovoltaic concentrator cells. However, the 'war on terror' has had the effect of reversing the drop in military expenditure that followed the end of the Cold War. For example, in 2003-04 the UK spent about £2.7 billion on military research and development – approximately 30% of all UK government research and development spending. Overall, in 2003 the world's military spent a massive \$956 billion.²⁷ A substantial proportion of this funding should be reallocated to civil uses, with an emphasis on the development of renewable energy technologies.

A rapid move towards local renewable energy sources and energy efficient practices would reduce the security and political risks associated with a reliance on nuclear energy programmes and/or fossil fuel supplies from increasingly unstable regions of the world. It is just a matter of finding the political will to make it happen.

“It is possible to eliminate fossil fuels and nuclear power without reducing living standards or industrial capacity.”

3 | Competition over Resources



Summary of main points:

- Industrialised and industrialising states are increasingly dependent on imported resources, especially oil and gas.
- Oil is currently the main marketed fossil fuel and the Persian Gulf is the dominant region, with two-thirds of world reserves. It is a deeply unstable region with continuing potential for conflict as the United States seeks to maintain control against opposition from regional state and sub-state paramilitary groups.
- There is also a longer-term concern over trends in oil supplies and markets, in which China is rapidly becoming significant. This is partly because China, like the United States, can no longer produce enough oil from domestic fields and increasingly needs to import oil from the Persian Gulf.
- Oil consumption is a primary cause of climate change and should be rapidly reduced for this reason alone. In a very real sense, the short-term nature of conflict in the Persian Gulf means that this liability of the oil-based economy should also be used to seek a rapid move to renewables.

The 'limits to growth' debate of the 1970s was prompted by an early systems analysis study of the increasing human impact on the global ecosystem. It also did much to stimulate the early development of the environmental movement. The original study of the same name, published in 1971 a few months before the UN Stockholm Environment Conference, was relatively crude and was much derided by market economists. While it was not predicting major problems for several decades, it did argue the case that there were limits to the capability of the global ecosystem to survive the effects of human activity, not least in terms of pollution, resource depletion and food shortages.²⁸

In spite of the early criticisms, the experience of the past 30 years has done much to support elements of the *Limits to Growth* thesis. This includes depletion of maritime resources, erosion of biodiversity, global pollution problems such as ozone depletion, and problems of deforestation. These, together with shortages of water resources and long-term issues of human malnutrition and famine are likely to remain major factors in the coming decades, but there are also issues of resource depletion and potential conflict that are becoming particularly pertinent. Of greatest significance are the problems now being caused by an excessive reliance on fossil fuels, especially oil and natural gas. Both as a source of conflict and as a major factor in climate change, the location and exploitation of oil, in particular, is of massive if largely unrecognised importance.

“Of greatest significance are the problems now being caused by an excessive reliance on fossil fuels, especially oil and gas.”

The Resource Shift

Current problems need to be put in historical context. An important aspect of industrialisation in Western Europe and North America was that the initial period of industrial growth in the 1800s could be based on domestic resources. Britain, for example, had indigenous supplies of coal, iron ore, copper, lead and tin that were more than adequate throughout most of the century. By the mid-twentieth century this had changed dramatically and most Western European states had become heavily dependent on imported raw materials, so much so that states in the Global South became

locked into the world economy as suppliers of low cost primary products.²⁹ In the last 50 years, even the United States has become a net importer of many primary products.

This long-term international trend has been termed the “resource shift” and is a key factor in international political economy. On occasions it leads to intense competition and even conflict – recent examples have included open conflict over cobalt in Zaire in the late 1970s, more recent conflict in the Great Lakes over tantalum supplies (used in mobile phones), and protracted conflict over diamonds in West Africa.

While these are significant in the regions concerned, they are not a focus of global conflict, but this is not the case for oil. It is here that the resource shift is at its most remarkable, and it is a combination of increasing dependence of major industrial states on imported oil, with the very limited location of key oil reserves, that is significant.

Although Norway is still self-sufficient in oil through its North Sea reserves, the United Kingdom is no longer in this position because of the depletion of major fields, and the UK is now therefore joining the rest of Western Europe as a net oil importer. In any case, the North Sea fields are small compared with global reserves – even at their peak in the early 1990s, they made up barely 3% of the world total (compared to over 65% for the Persian Gulf region).

Another major industrial power, Japan, has long been a major oil importer, as has South Korea, but it is the position of the United States and China that is key. Until around 1970, the USA was able to use its major oil fields in Texas, California, Louisiana and the Gulf of Mexico to provide for just about all its needs. From the start of the 1970s, the domestic oil fields were no longer able to keep up with demand, and even the development of the North Slope and Prudhoe Bay fields in Alaska made little difference as demand soared. Over the following 30 years the United States saw production fall as demand rose, and the end result was a massive dependence on imported oil by the end of the century.³⁰

Oil and US Security

Even in the 1970s, oil security began to figure prominently in US military thinking, and the massive oil price hike of 1973-74 (over 400% rise in nine months) had a radical effect on the US defence posture. This was primarily because the Persian Gulf was becoming the world’s main region for oil production, exports and reserves, and there were severe doubts as to whether the US had the military capability to intervene in the region should the Soviet Union or a regional state take action to interrupt supplies. As a result of these fears, the Joint Rapid Deployment Task Force was established by the Pentagon at the end of the 1970s and was later elevated into an entirely new unified military command, US Central Command (CENTCOM) in the mid-1980s. CENTCOM’s zone of responsibility was centred on the Persian Gulf, extending to South West Asia and North East Africa, and it was CENTCOM under General Norman Schwarzkopf that was the centre of the coalition of forces that evicted the Iraqis from Kuwait in 1991.³¹

“Even in the 1970s, oil security began to figure prominently in US military thinking.”

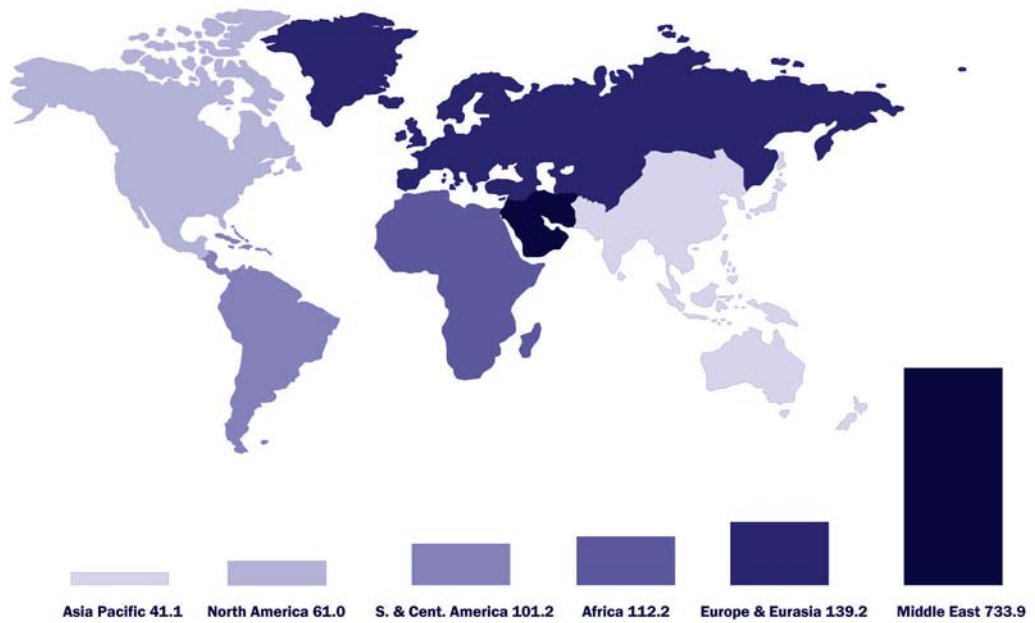
After the 1991 War, CENTCOM remained a major focus for the US military posture which included the re-establishment of the US Navy’s Fifth Fleet to cover the Persian Gulf and the Indian Ocean. It also maintained large military bases in Saudi Arabia in spite of bitter opposition from Islamic radicals who saw the presence of a foreign power in the Kingdom of the Two Holy Places (Mecca and Medina) as entirely unacceptable. This became sufficient to deter the United States from expanding its operations in Saudi Arabia, but other states such as Kuwait and Qatar were readily available, as was the key logistics base of Diego Garcia in the Indian Ocean.

While CENTCOM, with its hundreds of planes, scores of warships and several hundred thousand troops, had an immediate focus on the autocratic regime of Saddam Hussein and the radical Islamic

Republic of Iran, there is also a longer-term concern over trends in oil supplies and markets, in which China is rapidly becoming significant. This is partly because China, like the United States, can no longer produce enough oil from domestic fields and increasingly needs to import oil from the Gulf, and partly because of the overwhelming importance of the Gulf reserves. Significantly, CENTCOM's area of responsibility has now been extended to include the Caspian Basin which, although not having oil reserves that are remotely on the scale of the Persian Gulf, is also a region in which the competing energy interests of China and the United States are becoming increasingly important (the Niger Delta is also similar in that regard, although outside of CENTCOM's area of responsibility).

As of 2005, world oil reserves stand at approximately one trillion barrels. Of this, around 260 billion barrels are located in Saudi Arabia, with these being by far the largest reserves in any one country.³² Even so, the second, third, fourth and fifth countries are also in the Persian Gulf region – Iraq, Iran, Kuwait and the United Arab Emirates. These together have close to two-thirds of all the proved reserves in the world (see graph below for a comparison with other regions). Moreover, the oil tends to be of high quality, much of it is cheap to extract from land-based fields, and some does not even need to be pumped up from underground but comes to the surface under pressure.³³

Proved oil reserves by region at the end of 2004 (thousand million barrels)
Source: BP



Because of the international resource shift, combined with patterns of consumption, the Persian Gulf will be the dominant location for world oil supplies for the next several decades, with the major industrial powers becoming steadily more dependent on Gulf oil. For the United States, it is a core security requirement that it is able to deploy military forces which can maintain control of the region – a trend that developed in the 1970s and will be maintained for as long as the Persian Gulf is central to world oil supplies, especially as competition between China and the United States for oil and gas intensifies.

“The Persian Gulf will be the dominant location for world oil supplies for the next several decades.”

The problem is that such a military posture is already bitterly opposed by states such as Iran and, even more significantly, by radical Islamic paramilitaries such as those linked to al-Qaida. For the al-Qaida movement itself, with its improbable vision of re-establishing an Islamic caliphate,³⁴ the United States’ occupation of Iraq has been a remarkably positive development for three quite different reasons. One is that the widespread coverage of civilian casualties and ‘collateral damage’ on satellite TV news channels such as al-Jazeera has been a powerful recruiting tool; a second is that Iraq is starting to provide a combat training zone in urban guerrilla warfare for paramilitary radicals from outside Iraq who will be able, in due course, to take their experience and capabilities into other areas of al-Qaida operations. The third reason is that Baghdad was the historic centre of the most sustained Islamic Caliphate, the Abbasid Caliphate (750 to 1250 in the Western calendar) and is now easily represented as being occupied by neo-Christian forces.³⁵

At the same time, while the USA may be deeply mired in an insurgency in Iraq, any talk of a complete US withdrawal is specious. At least four permanent military bases are being established in the country (two of them near major oil fields, and a third near suspected substantial oil deposits), even though such a presence will be a continual source of opposition and conflict. Meanwhile, elements within the Bush administration are advocating pre-emptive military action against Iran, viewing it as another component of the ‘axis of evil’, and one with presumed nuclear weapons ambitions.

Water Politics

It is worth noting that competition over oil is not the only resource related issue that may lead to instability. For example, there are further concerns over the availability of adequate water supplies. It is unlikely that water scarcity will be a cause of conflict on its own, and certainly not on the same scale as oil, but it may well exacerbate existing tensions and water supply may be used as a ‘tool’ within interstate conflict that has begun for other reasons.³⁶

‘Water politics’ already plays a part in conflict in some regions of the world, particularly the Middle East (where Israel, for example, has already taken action against Syria and Lebanon over supplies from the River Jordan). Demand for fresh water is well beyond that which can be sustained at current, much less future, levels.³⁷ Population growth will mean greater and greater demands on water resources, and where a number of states rely on the same water, tensions are likely to increase. For example, the Nile river complex flows through ten countries, where half the population lives below the poverty line. The population in the Nile basin is expected to double in the next twenty-five years, creating further tensions. Egypt and Sudan have extensive rights over the river’s waters and have been reluctant to renegotiate treaties on its management with other river states.³⁸ A further example of such tensions is between Israel and Palestine, where both populations rely on access to many of the same water sources, especially from the winter rains that fall over the hills of the West Bank.

“Demand for fresh water is well beyond that which can be sustained at current, much less future, levels.”

Water is a source of security and prosperity, and with water shortages likely to increase, with the potential to severely affect food production in some areas, some of these tensions could develop into full-scale armed conflict unless there is a strict observance of water laws and a multi-lateral approach to developing water management agreements.

4 | Marginalisation of the Majority World



Summary of main points:

- While overall global wealth has increased, the benefits of this economic growth have not been equally shared, with a very heavy concentration of growth in relatively few parts of the world.
- These divisions are being exacerbated by increasing oppression and political exclusion, coupled with a growing sense of marginalisation as a result of improvements in education and modern communication technologies, leading in places to increased levels of political violence.
- Current security policies and the ‘war on terror’ are not reacting appropriately to this key trend, and are actually causing an increase in support for radical and violent movements such as the al-Qaida network.
- Policies to control such developments will need to go beyond traditional methods of counter-terrorism to incorporate a wide range of conflict prevention and resolution methods, but going on from these to include determined efforts to address the underlying global socio-economic divisions that the world is currently experiencing.

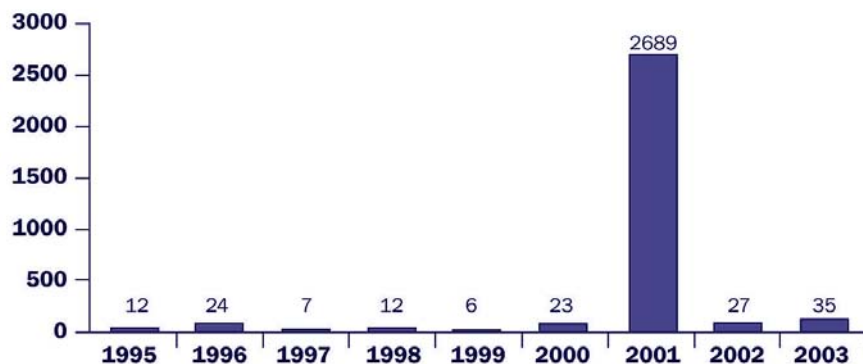
“The number of US citizens killed each year by international terrorism is rarely more than a couple of dozen.”

Despite the clear evidence of the security risks posed by climate change and related environmental issues, the US government, in particular, remains focused on projecting its influence and securing access to resources. This is increasingly undertaken through the ‘war on terror’, which relies on an exaggerated perceived risk of the threat of international terrorism, without addressing the underlying causes of that terrorism.

However, the US State Department’s own figures show that the number of US citizens killed each year by international terrorism is rarely more than a couple of dozen (see graph below).³⁹ Even in 2001, which saw the highest death toll from international terrorism on record, the number of Americans killed was around 2,500.⁴⁰ That number of innocent people killed is horrific, but in the same year in the United States 3,500 people died from malnutrition, 14,000 people died from HIV/AIDS, and 62,000 people died from pneumonia. The biggest killer in the USA that year was heart disease, which killed over 700,000 people. Over 30,000 Americans committed suicide that year and over 42,000 were killed in traffic accidents. In addition, there were nearly 30,000 firearm related deaths and over 20,000 homicides.⁴¹

Number of US citizens killed in acts of international terrorism (1995-2003)

Source: US Department of State



In fact, in 2001 (the year of the 9/11 attacks) a US citizen was over five times more likely to die from HIV/AIDS than from international terrorism. Four years on, and in 2005 the USA spent only around \$2.6 billion fighting HIV/AIDS globally⁴² but a massive \$48.5 billion on homeland security alone.⁴³

The Security Implications of HIV/AIDS

Worldwide, HIV/AIDS has become the leading cause of death among adults aged 15-59 years (followed by heart disease and tuberculosis). Globally, more than 20 million people have died from HIV/AIDS and 34-46 million others are now infected with the virus.⁴⁴ Tackling this is the world's most urgent public health challenge and UNICEF considers AIDS to be the worst catastrophe ever to hit the world,⁴⁵ yet worldwide only around \$6 billion was set aside in 2004 for combating the virus.⁴⁶ According to the UN, 70% of the millions of people infected with HIV/AIDS live in Africa (25 million of these in sub-Saharan Africa), and 7.7% of all Africans of working age are HIV infected. The economic destruction and massive expected deaths, with the loss of the working and parental generation, is likely to overwhelm the social structure and medical facilities of most African countries, threatening the collapse of poor states that have been most highly infected.

This is exacerbated by two further factors. Firstly, there are currently over 12 million children orphaned by AIDS in sub-Saharan Africa – and UNICEF estimates that 18 million children in the region will have lost at least one parent to AIDS by 2010.⁴⁷ With the great societal upheaval that seems almost certain in many African countries, there is the risk that some of these children could become vulnerable to recruitment by rebels, terrorists or criminal gangs (particularly as they rarely receive the public support or services that they need). Secondly, the armed forces in Africa tend to have a higher prevalence of the virus than the rest of the population: in some African countries as many as 50% of new military recruits are HIV positive. This has a serious strategic impact on military readiness and some countries have hesitated to participate in peacekeeping missions for fear that soldiers deployed abroad may further spread the virus or bring it back to their local communities when demobilised.⁴⁸

This all makes HIV/AIDS more than just a humanitarian concern, but also a military and security issue. This has been recognised by the United Nations in Security Council Resolution 1308 (2000), which states that “the HIV/AIDS pandemic, if left unchecked, may pose a risk to stability and security”.⁴⁹ This is made worse by the extreme poverty that is present in much of Africa and the socio-economic divisions that are present worldwide.

Socio-economic Divisions

Globally, more than one billion people must try to survive on less than \$1 a day⁵⁰ and almost half of the world's 2.2 billion children live in poverty.⁵¹ Across the world, some 115 million children who should be in school are not – three-fifths of them girls. Indigenous peoples face persecution and the destruction of their lands for profit. Almost two billion people live in countries where regimes do not fully accommodate civil and political freedoms. About 900 million people worldwide belong to ethnic, religious or linguistic groups that face discrimination.⁵²

“While overall global wealth has increased, the benefits of this economic growth have not been equally shared.”

As a result of natural disasters, war and poverty, 815 million people in developing countries are suffering from acute hunger and each year ten million people die of hunger and hunger-related diseases, despite the fact that there is enough food available to feed the entire global population of 6.4 billion people.⁵³ As discussed earlier, this is something that will only get worse as a result of climate change if the flooding of river delta and coastline areas leads to the large-scale displacement of people, and the drying out of the tropics leads to the food shortages and famine that could be expected.

There is a clear and present danger in the world today: a complex interplay of discrimination, global poverty, majority world debt, infectious disease – the haves and the have nots – global inequality and deepening socio-economic divisions, that are key elements of current global insecurity. While overall global wealth has increased, the benefits of this economic growth have not been equally shared, with a very heavy concentration of growth in relatively few parts of the world. The ‘majority world’ of Asia, Africa and Latin America is being marginalised as North America and Europe try to maintain their political, cultural, economic and military global dominance.

“Multinational corporations exploit the natural resources of many countries with little or no benefit to the local population.”

Unfair international trade rules, such as the high tariffs imposed by the EU, the USA and other Western countries on imported food, clothing and other goods, prevent poorer countries from developing their economies. Aid is often in the form of loans and is tied to products coming from the donor countries, or is directly tied to the privatisation of public services. Many of the least developed nations are crippled by the huge burden of debt that has been forced on them by economic circumstance and by other governments and international financial institutions. Multinational corporations exploit the natural resources of many countries with little or no benefit to the local population and little concern for the social and environmental impacts of their actions.

This situation is often supported by the political elites in those countries, as they are usually the ones that prosper most under such circumstances, further adding to the sense of injustice within the population and often resulting in harsh repression and brutal security measures being employed by those elites. All too often, international arms corporations, with the assistance of their governments, are ready and willing to provide a wide range of weapons systems, often directed at the harsh control of dissident movements.

Organised crime, social disorder and cultural tensions thrive in this poverty and inequality, particularly in the ever-expanding urban areas. Although there are many complex factors at play, addressing these issues would help alleviate some of the root causes of anti-elite action, political violence and international terrorism, much more than any ‘war on terror’ ever could. Whatever their philosophies, the political aims of radical paramilitary groups can only be achieved if they have, among other things, the support of those whom they claim to represent. That will depend on how deep and enduring are the grievances of those people, and the ability of the groups to tap into this underlying reservoir of discontent and marginalisation. The success of groups such as Hezbollah in Lebanon and Hamas in the Palestinian territories, is in part due to the fact that they are able to provide the medical, educational and social services that the local governments have failed to deliver, thus securing the allegiance of a disaffected population and legitimising their violent agenda.

It is a sad fact that if talented and educated people are faced with oppression and lack of opportunity (whether real or perceived) it creates a sense of marginalisation that may make some more likely to turn to radical and violent movements under certain circumstances – as witnessed in Saudi Arabia, Palestine, Iraq and elsewhere. As the perceived driver of globalisation, the USA can become a primary target, alongside local elites, of frustration. The combination of current economic and demographic trends with continued improvements in education and modern communications technologies, such as satellite television and the internet, indicates that this perception of marginalisation is likely to increase rather than decrease.

“Organised crime, social disorder and cultural tensions thrive in poverty and inequality.”

The ‘War on Terror’

This global trend remains unrecognised by most of the world’s political elite. The ‘war on terror’ is distracting them from the fundamental causes of insecurity, and the need to address global poverty and injustice has not made it onto the national security agenda of many, if not most, countries.

Instead, the current US government and its allies have chosen a geopolitical ‘war on terror’ as it pursues its New American Century. Since 9/11 this has cost the US government an estimated \$357 billion in military operations, reconstruction, embassy costs and various aid programmes in Iraq and Afghanistan, and for enhanced security at military bases around the world.⁵⁴ However, the human

cost has been infinitely higher. In Iraq, now on the brink of civil war, at least 40,000 civilians⁵⁵ and thousands of Iraqi military and police have been killed as a result of the invasion. To date the US has suffered nearly 2,500 military fatalities in Iraq, with nearly 18,000 thousand troops wounded in action⁵⁶ and a similar number evacuated because of non-combat injuries and severe physical or mental health problems.⁵⁷ In Afghanistan, while the Taliban may have been ousted from power, more innocent civilians were killed as a direct result of military action there than died in the 9/11 attacks that prompted the US-led invasion.⁵⁸ In the two conflicts, the number of civilians seriously injured is likely to be in the region of one hundred thousand, and tens of thousands have been internally displaced.

Furthermore, the alleged, but now generally discounted, pre-war link between Saddam Hussein's Iraq and al-Qaida has become a self-fulfilling prophecy, in that treating Iraq as part of the 'war on terror' has only spawned new terror in the region and created a combat training zone for paramilitaries and jihadists. People across the world now overwhelmingly believe that the Iraq war has increased the likelihood of terrorist attacks worldwide.⁵⁹ If extended to Iran, the implications of intervention would be disastrous.⁶⁰

It was hoped by the planners in Washington and London that the removal of Saddam Hussein and the spreading of democracy to Iraq would eventually vindicate their policy of pre-emption. However, it has become clear that 'democracy' in this instance actually means the privatisation of state-run industries, plus elections.⁶¹ The US policy of detention without trial of "unlawful combatants" in Guantanamo Bay; the widespread and deliberate bombing of civilian infrastructure in Afghanistan and Iraq; the abuse and torture of prisoners at the Abu Ghraib prison; and the destruction of Fallujah, the "city of mosques", are just four more of the injustices of the 'war on terror' – injustices widely reported across the Muslim world, further adding to the sense of oppression and marginalisation (Islamic militants often also cite Chechnya, Kashmir and Palestine as further examples of Western oppression of Muslims). As the Defense Science Board (an advisory committee to the US Secretary of Defense) concluded in September 2004, "Muslims do not 'hate our freedom', but rather they hate our policies".⁶² A post-7/7 UK Home Office working group also concluded that British foreign policy, especially in the Middle East, was "a key contributory factor" in the motivations of radical extremists.⁶³

This is not the way to curb recruitment to terrorist organisations or address anti-Western attitudes – as recent attacks in Islamabad, Karachi, Djakarta, Bali, Mombassa, Riyadh, Casablanca, Istanbul, Madrid and London reveal. Moreover, as the July 2005 attacks in London may have demonstrated, these actions risk increasing support for al-Qaida and their associates among Islamic communities in Western countries, thus creating a truly transnational phenomenon (the focus by some governments on 'failed states' as a breeding ground for terrorists is misleading in this regard). This is made even more likely by the harsh anti-terrorism and immigration laws enacted by some countries, which are creating a legacy of alienation and disillusionment in many Muslim communities, particularly among young people.

The 'war on terror' is, however, creating a climate of fear that can be politically advantageous for those in power; a climate in which, for example, a sizeable percentage of Americans consistently, and unrealistically, report they are worried that they or someone in their family will become a victim of terrorism⁶⁴ and a majority believe there will be another terrorist attack in the United States.⁶⁵ If 'weapons of mass destruction' or 'rogue states' are added into the mix, then that climate of fear really begins to take hold (helped along to a great extent by the media), allowing governments to pursue policies that would otherwise be impossible. However, while many countries are at risk of further terrorist attacks, much of the currently perceived threat from international terrorism is somewhat of a fear of a phantom enemy. That 'phantom enemy' is not international terrorism per se but rather a popular image of Islamic fundamentalism epitomised by what most think of as 'al-Qaida'.

“People across the world now overwhelmingly believe that the Iraq war has increased the likelihood of terrorist attacks worldwide.”

“It is important to understand that al-Qaida is not an organisation as such.”

It is important to understand that al-Qaida is not an organisation as such: it is more an ideology about freeing Muslim lands and cleansing a corrupt world through religious violence.⁶⁶ Furthermore, far from sleeper cells in every country, it is more realistic to think of al-Qaida as a ‘consortium’; a kind of network of networks, sharing a radical worldview but with individual ‘member’ groups and associates working independently of top-down leadership from Osama bin Laden and al-Qaida, and often fighting for different local objectives (though sometimes sharing resources and support). The broad aims of the movement can, however, be identified as: the expulsion of foreign troops from the Middle East; termination of the House of Saud and other elitist and pro-Western regimes across the region; the elimination of Israel and the creation of a Palestinian state; and support for insurgents in other regions of the Muslim world.⁶⁷

‘Al-Qaida’, if it ever really existed as most people understand it, did not survive past the end of 2001. The individuals and groups so often called al-Qaida today may actually have very few substantial links to bin Laden; they merely follow similar precepts and methods – acting autonomously, but in the ‘style’ of al-Qaida that bin Laden now personifies. After 9/11 and the US invasion of Afghanistan that followed, bin Laden’s role in the radical Islamic movement has been limited to that of a propagandist making effective use of modern communications technology; a “counter-cultural symbol” with cult status, representing a discourse of dissent in much of the Muslim world.⁶⁸

“Terrorist organisations and ‘rogue states’ are not isolated phenomena that can be defeated militarily on a case-by-case basis.”

Terrorist organisations and ‘rogue states’ are not isolated phenomena that can be defeated militarily on a case-by-case basis, thereby regaining control and maintaining the existing world order. Al-Qaida and the like are more of an indicator, a ‘symptom’, of a longer-term trend. It follows that policies to control such developments will need to go beyond the traditional, if often effective, methods of counter-terrorism to incorporate a wide range of conflict prevention and conflict resolution methods, but going on from these to include determined efforts to address the underlying socio-economic divisions that are leading to the deep global divisions that the world is currently experiencing.

Violent groups often grow out of local conditions to address grievances, whether local or global, which they feel cannot be dealt with through the political system available to them. Radical philosophies may offer these people an explanation of what is happening around them, and suggest violent actions that make sense from within an environment of marginalisation and hopelessness. These groups, whether religious or secular, old or new, must be brought into the political process wherever possible; no matter how painful that route may be at times. By genuinely addressing the root causes of political violence and bringing groups into dialogue, violence can be stopped.⁶⁹ In other words, the ‘war on terror’ should be viewed less as a ‘war’, than a sustained campaign to win hearts and minds.⁷⁰ This is not to excuse terrorism in any form. To try to understand is not to condone. It is only by truly understanding terrorism and the causes of terrorism that there will be any hope of avoiding future attacks.

In the short-term, security strategies that demand increasing levels of social control may just about keep the growing instability and violence elsewhere at bay, but this will only serve to intensify such instability in the long-term. However, the continuing problems in Iraq and Afghanistan, as well as the failure to control the activities of the al-Qaida movement, may well make it increasingly obvious that a sustainable security alternative to the current US-led security paradigm of a ‘war on terror’ and pre-emptive strikes is long overdue.

5 | Global Militarisation



Summary of main points:

- The current focus is on maintaining international security by the vigorous use of military force; the first five years of the ‘war on terror’ suggest that this is failing.
- A brief history of the Cold War shows that there is a persistent tendency by the authorities to maintain an aura of control and responsibility, when this is very far from what is actually happening.
- Post-Cold War nuclear developments involve the modernisation and proliferation of nuclear systems, with an increasing risk of limited nuclear weapons use in warfare – breaking a threshold that has held for 60 years.
- Biological weapons have the potential to become effective weapons of war, given likely developments in genetic manipulation and biotechnology. The negotiation of a much-strengthened Biological and Toxin Weapons Convention should be a priority.

Outside of the two World Wars, the most sustained period of militarisation was during the Cold War from the late 1940s through to the end of the 1980s. During this period, close to 85% of all world military spending was undertaken by the NATO and Warsaw Pact alliances, peaking in the mid-1980s at \$1 trillion per year at today’s prices.⁷¹ As well as massive spending on conventional weapons, the two superpowers engaged in a sustained nuclear arms race that reached a peak of close to 70,000 warheads worldwide. The largest thermonuclear weapons deployed at the height of the Cold War, the US Titan (ICBM) intercontinental ballistic missile (9 megatons) and the Soviet SS-18 ICBM (25 megatons), could each entirely destroy any of the world’s largest cities in a single detonation.⁷² The United States and Soviet Union also developed large arsenals of chemical weapons, together accumulating in excess of 80,000 tonnes of active agent.⁷³

In addition to the processes of weaponisation, the Cold War had three other effects. One was the mass diversion of monetary resources away from social welfare and developmental priorities, and a second was the diversion of intellectual and technical resources away from civil research and development into military programmes. Most significant, however, was the diversion of conflict from the direct superpower confrontation to ‘proxy’ wars fought indirectly between the superpowers. Worldwide conflicts during the 1945-2000 period are thought to have caused 25 million deaths and 75 million serious injuries,⁷⁴ but many of these were fought under the shadow of the Cold War and included Korea, Vietnam, Afghanistan and the Horn of Africa. Such proxy wars caused around 10 million deaths and 30 million serious injuries.⁷⁵ The idea that the Cold War was a period in which nuclear weapons kept the peace is a myth.

“The idea that the Cold War was a period in which nuclear weapons kept the peace is a myth.”

We also now know that the nuclear arms race was every bit as dangerous as the more radical anti-nuclear campaigners claimed at the time. As the archives are opened up and former opponents meet to compare their experiences, it is clear that crises such as Cuba (1962) and Able Archer (1983) were far more dangerous than was previously realised.⁷⁶ Moreover, there are known to have been a number of incidents in which nuclear weapons were lost and never recovered, and others in which nuclear weapons were damaged or came remarkably close to accidental detonation. The former included one US and two Soviet submarines in the 1960s and 1980s and the latter included accidents involving US B-52 strategic nuclear bombers in the 1960s.

One of the lessons from this brief excursion into Cold War history is that there is a persistent tendency by the authorities to maintain an aura of control and responsibility, when this is very far from what is actually happening. An impression of ‘being in control’ is a pre-requisite for preventing the challenging of dangerous policies, but is frequently entirely false.

Forces in Transition

The early 1990s were marked by three major developments in military postures and deployments. The first was that the states of the former Soviet Union experienced massive economic problems leading, among other things, to the near collapse of their armed forces. Russia, in particular, lost most of its armed forces and was hard-pressed to engage in the internal war in Chechnya, let alone maintain an internationally significant force.

Secondly, a combination of multilateral and unilateral nuclear disarmament measures resulted in nuclear arsenals in Russia and the USA decreasing from around 70,000 to 20,000, although supplies of core fissile material in the withdrawn weapons were not irreversibly deactivated. There was also a significant international agreement to ban chemical weapons, the Chemical Weapons Convention, and this has resulted in the destruction of the large chemical arsenals – a technically difficult process that will take some years to complete.

“By the end of the 1990s the United States was the only country with a true global reach.”

Finally, the United States embarked on a progressive transformation of its armed forces. There were substantial decreases in Cold War-type deployments such as heavy armour in Europe and the anti-submarine warfare systems of the US Navy, but this was accompanied by the maintenance and even enhancement of forces intended to fight more limited wars at a distance. Amphibious forces, aircraft carriers, long-range air strike capabilities and Special Forces were all emphasised in the ‘global reach’ outlook, as well as more concentration on national and theatre missile defence. By the end of the 1990s the United States was the only country with a true global reach, with just the UK and France having limited capabilities, and the tendency to use military force to maintain an ‘aura of control’ was firmly entrenched.⁷⁷

The 9/11 Attacks and After

Prior to 9/11, the Bush administration had come to power with a very strong strand of neo-conservatism embedded in its foreign and security policy. Multilateral approaches to arms control were seen as constraining and inappropriate: the Comprehensive Test Ban Treaty and the Anti-Ballistic Missile Treaty were not considered useful to the United States, there was opposition to the new International Criminal Court and withdrawal from the Kyoto accords. Of perhaps greater significance, if largely unrecognised at the time, was the refusal of the Bush administration to support the strengthening of the 1972 Biological and Toxin Weapons Convention.

Behind all this lay a belief in the New American Century: that the United States had a mission to encourage a world political and economic system that followed the American model. As one commentator remarked, the United States was not just any hegemon, it ran a uniquely benign imperium.⁷⁸ The world would be a safer place if it followed the American ideal.

The 9/11 attacks were a particularly grievous assault on this concept and the response was immediate. The Taliban regime in Afghanistan was rapidly terminated, an ‘axis of evil’ comprising Iran, Iraq and North Korea was identified and a policy of early pre-emption of potential threats was enunciated as part of a wider ‘Bush doctrine’. Within 18 months of 9/11, a second regime, that of Saddam Hussein, was ready for termination. In the past four years, as discussed earlier, wars have been fought in Afghanistan and Iraq that have together resulted in the deaths of well over 40,000 civilians and serious injury to many tens of thousands more, and up to 20,000 people are detained without trial in Iraq, Afghanistan, Guantanamo and elsewhere. This has resulted in a massive US military presence in the region (see map opposite).

Map of the Middle East showing US military bases in the region



“There is every reason to see the Persian Gulf region as a focus for long-term conflict.”

Even so, the al-Qaida movement remains highly active, more so than in the four years before 9/11, and numerous attacks have been staged in the Middle East, South and South-East Asia and Western Europe. The United States has around 150,000 troops in Iraq engaged in a bitter and increasingly chaotic insurgency that is currently degenerating into a civil war, and a further 20,000 troops in Afghanistan fighting a counter-insurgency campaign. No end is in sight for either conflict and, as already discussed, there is every reason to see the Persian Gulf region, in particular, as a focus for long-term conflict.

Weapons of Mass Destruction

Meanwhile, the largely unstructured progress on nuclear arms control and disarmament of the early 1990s has been replaced by a surge in modernisation and proliferation, and there appears to be no possibility whatsoever of progress on the control of biological weapons. The biological issue has considerable potential significance and is one that governments should address with urgency.

The 1972 Biological and Toxin Weapons Convention (BTWC) is a worldwide convention banning such weapons, but it does not have any verification of inspection procedures built into it. Without teeth it is primarily a 'paper' treaty. This is in contrast to the more recent Chemical Weapons Convention (1997) that does have such procedures. Given the capacity for biological weapons to be produced using fairly widespread technical competences, this is a substantial problem that remains unresolved. In practice, biological weapons were not regarded as hugely significant systems for modern warfare, primarily because most agents, apart from anthrax and some others, did not have the necessary characteristics to make them effective. What is changing is that major developments in genetic manipulation and biotechnology give rise to the prospect of the development of effective biological agents.⁷⁹

This was recognised nearly a decade ago and sustained efforts to strengthen the treaty started in Geneva shortly afterwards. After more than six years of negotiations, the process was effectively abandoned some two years ago. The attitudes of several countries proved problematic but it was the Bush administration that caused the most substantial difficulties, being strongly opposed to its domestic biotechnology industries being open to international inspection. As of now, prospects for re-engaging in the process of getting an effective treaty are very limited yet, without an effective treaty, there is a real risk that biological warfare systems will become, for the first time ever, highly effective.

“There is a real risk that biological warfare systems will become, for the first time ever, highly effective.”

On the nuclear side, Britain, France and China are all engaged in processes to modernise their nuclear systems. In the case of the UK and France, their modernised systems are more flexible, have a longer range and are more accurate than older systems, and both countries have policies of first use, not just against nuclear-armed opponents but against the use or even the potential use of chemical and biological weapons. Russia is trying to reconstitute an effective strategic arsenal and is beginning to modernise some strategic systems and, in the context of weak conventional forces, is more committed to nuclear first-use. Israel maintains a substantial nuclear force, and India and Pakistan are both vigorously developing their smaller forces. North Korea now probably has a very small stock of nuclear weapons and Iran is developing a civil nuclear power programme that would at least give it the potential to break out into nuclear weapons status.

The USA has already modernised one nuclear system, the B61-11 earth-penetrating warhead and is researching the Robust Nuclear Earth Penetrator, a system with much greater potential for use against deeply buried targets such as command centres or nuclear or biological weapon development facilities.⁸⁰ More generally, the US nuclear posture is evolving into an outlook that envisages the pre-emptive use of nuclear weapons against states that may be seeking to acquire their own nuclear arsenals, but it goes further than this. What is clear is that the United States is moving towards a nuclear posture that envisages a range of small, lower yield, precise and more 'useable' nuclear weapons that are particularly suited for operations against deeply-buried targets. Moreover, this includes the maintenance of such weapons on a high alert status in a posture that envisages pre-emptive strikes.

“There is an increasing risk of smaller scale use of nuclear weapons.”

The overall impact of nuclear weapon modernisations in existing nuclear weapons states is likely to serve as a substantial encouragement to nuclear proliferation, as states such as Iran, with their perceptions of vulnerability, deem it necessary to develop their own deterrent forces.

In broad historical terms, the first 50 years of the nuclear age, 1945 to 1995, saw the proliferation of nuclear weapons to just six countries (USA, USSR/Russia, UK, France, China and Israel), even if the USA and USSR deployed nuclear weapons in many countries. During this era, Brazil and Argentina withdrew from a mutual potential nuclear arms race in the 1980s, South Africa gave up its small arsenal in the early 1990s, and three post-Soviet countries (Belarus, Ukraine and Kazakhstan) returned Cold War-era nuclear arsenals to Russia. In the sixth decade of the nuclear age, 1995 to 2005, India has weaponised its nuclear capabilities, Pakistan has gone nuclear, North Korea probably now has a small cluster of nuclear warheads and there is a possibility that Iran may follow suit. Countries including Japan, Saudi Arabia and Egypt may now also become candidates for nuclear proliferation.

In this environment, the 2005 Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in New York achieved nothing of note, and there are no prospects of bringing into force an effective Comprehensive Test Ban Treaty. The current situation is quite different to that at the height of the Cold War. In that era there was a small but clear risk of an all-out central nuclear exchange that would have been an utter global catastrophe, what has been described as “into the abyss”. The situation is now more akin to a “slippery slope” in which there is an increasing risk of smaller scale use of nuclear weapons. This might be in circumstances that do not lead on to global nuclear war but have the dangerous effect of breaking the 60-year nuclear threshold, taking us into an era in which nuclear weapons are seen as available weapons of war, with all the attending consequences.

Moreover, these dangerous trends may well be exacerbated by developments in directed energy weapons (lasers) and a race towards the weaponisation of space, as the United States remains determined to maintain its dominance there, along with its commitment to a national missile defence system and its interest in promoting regional missile defence in East Asia, even if this incites an escalatory Chinese reaction. States such as China and Russia will not accept a situation in which the USA will have the unique combination of offensive nuclear forces and defensive systems, nor will they accept a US dominance of space, as this would represent a near-revolution in warfare and geo-politics. An enhanced and renewed nuclear arms race is one likely outcome, combined with the competitive and uncontrolled weaponisation of space.

6 | Discussion: The Way Forward



This report has involved a wide-ranging assessment of the variety of threats to global security, among which international terrorism is only one, and in terms of lives lost, a relatively minor one. The response to terrorism needs to be placed in a broader perspective, to take account of economic, health, environmental and other long-term threats to human survival and well-being. Current responses to terrorism may, at best, ignore these broader threats, or at worst, actually contribute to them – making future terrorist attacks more likely, not less likely.

Our analysis concludes that future insecurity will actually arise out of four main groups of factors:

- **the adverse effects of climate change and global warming;**
- **competition for increasingly scarce resources, especially oil;**
- **increasing socio-economic divisions and the marginalisation of the majority world; and**
- **the further spread of military technologies (including WMD).**

However, an increasingly ineffective ‘war on terror’ continues to dominate government policies. The security agenda is being hijacked by this ‘war’ and the related conflicts in Afghanistan, Iraq and, potentially, Iran. This, coupled with the continued pursuit of narrow national and economic interests, is distracting political elites from the genuine threats that humanity faces, causing their responses to these threats to be wholly inadequate.

Future Security Priorities

Of these threats, climate change is one of the most important problems facing the world community, and the effects of climate change on international security and human well-being will be profound. In particular, it now seems probable that climate change will have a massive effect on the world’s tropical regions, primarily by decreasing rainfall over the land masses and thereby reducing the carrying-capacity of most of the world’s existing major croplands, resulting in persistent food shortages and even famines that would lead to increased human suffering, greater social unrest, revised patterns of living and greatly increased pressure on migration.

For this reason alone, a fundamental transition from fossil fuels to renewables, along with a more rigorous approach to energy conservation, must be a core long-term focus of governments and NGOs alike. One of the key fossil fuel resources – oil – is also already a focus for major conflict and it is almost certain that, on present trends, instability and conflict will persist in the Persian Gulf region.

In essence, there are therefore two distinct reasons why rapid movement away from reliance on fossil fuels in general, and oil in particular, should be at the core of future energy policies. While climate change is widely recognised as one of these, conflict in the Persian Gulf over oil security is far less readily acknowledged. Why, then, should organisations take this on board in their advocacy and policy work? The main reason is one of timescales. While climate change is becoming steadily more recognised by non-activists as a key issue, its actual impact is still in its early stages of development. Oil insecurity, on the other hand, is already here, and is evidenced by the ongoing conflict in the Gulf. If the two are put together, it is much easier to advocate a move to renewables (including hydrogen fuel cells for transport) as essential for short-term as well as longer-term reasons. The addiction to oil can be presented in an immediate and recognisable manner, and the need for rapid action can therefore be argued much more effectively. This does not mean a major re-orientation of campaigning on climate change towards the issues of oil security in the Middle East, but it represents a clear recognition that this immediate issue can be of real assistance in emphasising the wider need to move away from fossil fuel-based economic development.

“A fundamental transition from fossil fuels to renewables must be a core long-term focus of governments and NGOs alike.”

“It is the deepening global socio-economic divisions that will almost certainly be one of the most serious trends in terms of security.”

While climate change will undoubtedly overshadow every other issue of international security in the coming decades, it is the deepening global socio-economic divisions that will almost certainly be one of the most serious trends in terms of security. It is in this context that the marginalised majority is increasingly likely to support political violence against the rich minorities of the world. While middle-power states may be increasingly unwilling to accept the dominance of the West, Western leaders will nonetheless try to maintain the status quo and increase their access to resources, particularly Persian Gulf oil, by military means if necessary. It is safe to assume that socio-economic divisions will worsen, exacerbated by the effects of climate change, and taking place in a world where military technologies will proliferate.

Ensuring the control of both nuclear and biological weapons should therefore be considered as core aspects of government policy, even though neither is currently prominent in the public eye. Opportunities to control nuclear weapons were lost in the late 1940s, the mid-1960s and the early 1990s, and this might be the best remaining opportunity to avoid the evolution of a world system involving the substantial further proliferation of nuclear weapons and a tendency to see them as useable in limited wars. The biological weapon problem is still one for the future, but trends in genetic manipulation make this a matter for urgent action now.

In terms of conventional military systems, one of the main effects of the 9/11 attacks and the pre-existing neoconservative attitudes in the United States has been to see military responses as the prime methods for maintaining international control. However, the experience of the first four years of the ‘war on terror’ indicates the need for a substantial re-think of this stance. It is now essential to develop alternative security strategies, and to devote greater effort and resources to promoting them.

Future regional concerns will include the near-term effects of HIV/AIDS in Africa and the longer-term impacts of climate change on the tropical regions. Instability in the Persian Gulf and the wider Middle East is likely to increase as a result of conflict, particularly conflict related to securing oil supplies, and there is likely to be increased competition between the USA and China over those supplies. There is also a further risk of conflict between the USA and China over the issue of Taiwan’s independence. While the serious crisis over Iran’s alleged nuclear weapons programme looks likely to deepen and could potentially result in US or Israeli air strikes, future progress on the Israeli-Palestinian peace process, as well as further diplomatic links between Israel and Muslim countries, may well bring some stability to the region.

“Ensuring the control of both nuclear and biological weapons should be considered as core aspects of government policy.”

Many European countries, but especially the UK and other US allies, will face an increased level of threat from home grown radical elements in response, in large part, to Western foreign policy in relation to the Middle East. Russia and some of the Eastern European countries may also face increased levels of Islamist terrorism, but mostly as a result of harsh internal counter-terrorism measures and military action against jihadi militants (many with separatist agendas) either within or close to their national borders.

Finally, many Central and South American countries, especially the oil exporting countries such as Ecuador, will undoubtedly experience increasingly violent and coordinated social unrest as a result of widening socio-economic divisions and the marginalisation of the poor, particularly the rural, shanty town and indigenous populations. This could be even worse if, as in previous years, the USA once again focuses some of its attention on the region, and feels the need to intervene in light of the increasing numbers of left-wing and anti-American governments being elected there.

On the positive side, the ongoing reduction in inter-state conflict that has been occurring since the end of the Cold War, particularly between established democracies, looks likely to continue – although this may be offset by further military interventions by the USA and its allies.

“The current security orthodoxy is deeply flawed.”

From the “Control Paradigm” to “Sustainable Security”

9/11 presented a serious shock to the international system and American perceptions of invulnerability. In situations of shock, the key impulse of any leadership is to take the initiative to regain the appearance of control as soon as possible. It is remarkable how quickly and effectively the US government was able to project international terrorism as the greatest security threat facing the world, and gain adherents for this view, not only among American citizens, but in capitals and board rooms around the world. So complete has the dominance of this US-led agenda become that in just over four years it has acquired the status of current security orthodoxy, an approach that might be called the ‘control paradigm’.

This orthodoxy advances the following responses to the threats outlined in this report:

- 1 | **Competition over resources.** An obsession with national energy security through securing control of, or access to, key resources such as Persian Gulf oil, which leads to further conflict and tension in the region.
- 2 | **Climate change.** An unshakable and unrealistic belief in the capacity of technological advances (including new generation civil nuclear reactors) operating within free markets as the primary means of responding to what some still consider the ‘myth’ of climate change.
- 3 | **Marginalisation of the majority world.** Problems of poverty and socio-economic divisions are largely ignored as a security issue. But when immediate threats to the ‘homeland’ are perceived, the usual response is heavy societal control in an attempt ‘keep the lid on’ civil discontent, which only makes matters worse in the long-term, and a belief is promoted that the free market will enable people to work their way out of poverty.
- 4 | **International terrorism.** A series of counter-productive, controversial and often illegal counter-terrorism measures and attacks on civil liberties, including indefinite detention of terrorist suspects without trial and the ‘extraordinary rendition’ of suspects to countries that are known to use torture.
- 5 | **Global militarisation.** Counter-proliferation measures focused on preventing WMD materials or capacity being acquired by terrorist groups or ‘rogue states’ considered to sponsor terrorism. Where it is believed that actors already possess, or are close to achieving the capacity for WMDs, a strategy of pre-emptive military strikes has been initiated.

This approach of attempting to maintain the status quo through military means and ‘keep the lid on’ insecurity without addressing the root causes (“liddism”), will not work in the long-term and, in fact, is already failing in the face of increased paramilitary action and asymmetric warfare.⁸¹ The analysis presented in this report suggests that the current security orthodoxy is deeply flawed, and is distracting the world’s political elites from developing realistic and sustainable solutions to the non-traditional threats facing the world, among which terrorism is by no means the greatest or most serious. This report has outlined general recommendations that would enable governments and NGOs to make a real difference and improve the chances for sustainable security over the coming decades. Of these recommendations, the key elements of a sustainable response might be:

- 1 | **Competition over resources.** Comprehensive energy efficiency, recycling and resource conservation and management policies and practices.
- 2 | **Climate change.** Rapid replacement of carbon-based sources by diversified local renewable energy sources as the primary basis of future energy generation, and the worldwide phasing out of civil nuclear power programmes.

- 3 | **Marginalisation of the majority world.** Reform of global systems of trade, aid and debt relief in order to make poverty reduction a world priority.
- 4 | **International terrorism.** Addressing the legitimate political grievances and aspirations of marginalised groups, coupled with intelligence-led counter-terrorism police operations against violent revolutionary groups and dialogue with terrorist leaderships wherever possible.
- 5 | **Global militarisation.** Alongside non-proliferation measures, nuclear weapons states must take bold, visible and substantial steps towards disarmament, at the same time as halting vertical proliferation initiatives, such as the development of new nuclear weapons and new bio-weapons.

Together these constitute elements of a new paradigm, which could be called the ‘sustainable security paradigm’. The main difference between this and the ‘control paradigm’ is that this approach does not attempt to unilaterally control threats through the use of force (‘attack the symptoms’), but rather it aims to cooperatively resolve the root causes of those threats using the most effective means available (‘cure the disease’). Furthermore, a sustainable security approach is inherently preventative, in that it addresses the likely causes of conflict and instability well before the ill effects are felt, rather than waiting until the crisis is underway and then attempting to control the situation, at which point it is often too late. It follows that this cooperative approach must be coordinated through a reformed United Nations, as individual governments or ‘coalitions’ are too focused on their own interests.

This analysis can be summarised, albeit simplistically, in a diagram representing a five-rung ‘ladder’ of the key causes of instability, each of which negatively impacts on the other rungs.



“If there is no change in thinking, Western security policy will continue to be based on the mistaken assumption that the status quo can be maintained.”

Over the next decade, a shift from a ‘control paradigm’ to a ‘sustainable security paradigm’ will be hugely important. If there is no change in thinking, Western security policy will continue to be based on the mistaken assumption that the status quo can be maintained: an elite minority can maintain its position, environmental problems can be marginalised, and the lid can be kept on dissent and insecurity. In this scenario, little attempt will be made to address the core causes of insecurity, even if failure to do so threatens the elite minority as well as the marginalised majority. Alternatively, a change in thinking could lead to an era of substantial progress in developing a more socially just and environmentally sustainable world order.⁸²

“Governments will need to take as a starting point the sustainable approach to future threats which is outlined in this report, and develop it into fully workable security policies.”

Conclusion

What is ultimately needed is recognition by governments that current security measures will be ineffective in the long-term and that a radical rethink of what is meant by ‘security’ is long overdue. Leading on from this, governments will need to take as a starting point the sustainable approach to future threats which is outlined in this report, and develop it into fully workable security policies. However, this is unlikely to happen without pressure from below because these issues are sometimes seen as distant concerns whereas terrorism, for example, is much more immediate. Therefore, the question for those concerned with promoting peace and security must now be: how do we move beyond the current situation in order to promote sustainable global security for all?

NGOs and the wider civil society (including journalists) will need to coordinate their efforts to convince government that this new approach is practical and effective, and is the only real way to ensure security. New leadership in the USA and UK in the coming years may well present the ideal opportunity for progress on this front. Genuine reform of regional organisations and the United Nations, particularly the Security Council, may also help governments move beyond the current narrow national and economic interests that are barriers to global stability. Furthermore, the energy and resources currently devoted to opposing war (anti-war) could be harnessed into positive efforts to promote peace and security (pro-peace). This is because an anti-war stance focused on a specific conflict does not address the structural changes needed to avoid future wars. Organisations would be well advised to incorporate their relevant research, policies and campaigns within a pro-peace framework that interlinks all the strands together with a vision of what needs to change in order to achieve a peaceful and secure world, and addresses the various causes of global insecurity in a cohesive way.

For example, it is no longer enough to focus on environmental issues in isolation from the threat of socio-economic divisions and marginalisation discussed in this report. What this report has argued is that all these issues are interconnected, and that governments must address environmental issues with reference to those of development and security (and vice versa). Working on one of these issues in isolation from the other two, no longer makes sense; measures are needed which simultaneously ensure environmental protection, sustainable development and global security. This calls for a new policy approach, linking the peace movement with the anti-poverty and environmental movements.

The issues analysed in this report are those that are likely to dominate the international security environment over the next 30 years. Unless urgent action is taken in the next five to ten years, it will be extremely difficult, if not impossible, to avoid a highly unstable global system by the middle years of the century. Governments, NGOs and concerned citizens must work together and recognise that they now have an urgent responsibility to embrace a sustainable approach to global security.

“Unless urgent action is taken in the next five to ten years, it will be extremely difficult, if not impossible, to avoid a highly unstable global system by the middle years of the century.”

Notes and References

- ¹ Committee on the Present Danger www.fightingterror.org.
- ² Jim Lobe, "They're Back: Neocons Revive the Committee on the Present Danger, This Time Against Terrorism", *Foreign Policy in Focus* (21 July 2004).
- ³ "Key Points: Bush and Blair", *BBC News* (20 November 2003)
http://news.bbc.co.uk/1/hi/uk_politics/3222768.stm.
- ⁴ See, Secretary-General's High-Level Panel on Threats, Challenges and Change, *A More Secure World: Our Shared Responsibility* (New York: United Nations, 2004).
- ⁵ Peter Schwartz and Doug Randall, *An Abrupt Climate Change Scenario and Its Implications for United States National Security* (October 2003).
- ⁶ "Storm Warning: The hurricane forecast is becoming clearer, and the news is not good", *New Scientist* (24 September 2005).
- ⁷ David King, "Climate Change Science: Adapt, Mitigate or Ignore?", *Science*, 303 (5655), pp.176-177 (2004).
- ⁸ David King, *The Science of Climate Change: Adapt, Mitigate or Ignore?* (Ninth Zuckerman Lecture, 2002).
- ⁹ Steve Connor, "Global Warming past point of no return", *The Independent* (16 September 2005).
- ¹⁰ David Rind, "Drying Out the Tropics", *New Scientist* (6 May 1995).
- ¹¹ John Vidal and Tim Radford, "One in Six Countries Facing Food Shortage", *The Guardian* (30 June 2005).
- ¹² Jonathan Amos, "Climate food crisis to deepen", *BBC News* (5 September 2005)
<http://news.bbc.co.uk/1/hi/sci/tech/4217480.stm>.
- ¹³ US National Oceanic & Atmospheric Administration (NOAA), *After Two Large Annual Gains, Rate of Atmospheric CO₂ Increase Returns to Average* (31 March 2005)
<http://www.noaanews.noaa.gov/stories2005/s2412.htm>.
- ¹⁴ Jonathan Patz, Diarmid Campbell-Lendrum, Tracey Holloway and Jonathan Foley, "Impact of Regional Climate Change on Human Health", *Nature* (17 November 2005).
- ¹⁵ Steve Connor, "US Climate Policy Bigger Threat to World than Terrorism", *The Independent* (9 January 2004).
- ¹⁶ Michael McCarthy, "China Crisis: threat to the global environment", *The Independent* (19 October 2005).
- ¹⁷ See, Paul Rogers, *The Risk of Nuclear Terrorism in Britain* (Oxford: Oxford Research Group, 2006).
- ¹⁸ See, Frank Barnaby and Shaun Burnie, *Thinking the Unthinkable: Japanese Nuclear Power and Proliferation in East Asia* (Oxford: Oxford Research Group, 2005).
- ¹⁹ Royal Commission on Environmental Pollution, *Sixth Report: Nuclear Power and the Environment* (London: Her Majesty's Stationary Office, 1976).

²⁰ Jan-Willem Storm van Leeuwen and Philip Smith, *Nuclear Power: the Energy Balance* (August 2005) www.stormsmith.nl.

²¹ Sustainable Development Commission, *The Role of Nuclear Power in a Low Carbon Economy* (London: SDC, 2006).

²² Environmental Audit Committee, *Keeping the Lights On: Nuclear, Renewables and Climate Change, Volume 1* (London: The Stationery Office, 2006).

²³ Harry Lehmann, *Energy Rich Japan* (Aachen: Institute for Sustainable Solutions and Innovations, 2003).

²⁴ Environmental Change Institute, *Submission to The Science and Technology Select Committee of the House of Lords: The Practicalities of Developing Renewable Energy Stand-by Capacity and Intermittency* (University of Oxford, 2004).

²⁵ Graham Sinden, *Wind Power and the UK Wind Resource* (Oxford: Environmental Change Institute, University of Oxford, 2005).

²⁶ Frank Barnaby, Keith Barnham and Malcolm Savidge, *Memorandum to the Environmental Audit Committee Inquiry "Keeping the Lights on: Nuclear, Renewables and Climate Change"* (Oxford Research Group, September 2005).

²⁷ Chris Langley, *Soldiers in the Laboratory: Military Involvement in Science and Technology and some Alternatives* (Folkestone: Scientists for Global Responsibility, 2005).

²⁸ Donella H. Meadows, Jorgen Randers and Dennis L. Meadows, *Limits to Growth* (London: Earth Island, 1972).

²⁹ Belinda Coote, *The Trade Trap: Poverty and the Global Commodity Markets* (Oxford: Oxfam Publishing, 1992).

³⁰ China became a net importer of oil more recently, in 1993, but import demands are now rising rapidly.

³¹ Paul Rogers and Malcolm Dando, *A Violent Peace* (London: Brassey's, 1992).

³² *BP Statistical Review of World Energy 2005* (June 2005)
<http://www.bp.com/genericsection.do?categoryId=92&contentId=7005893>.

³³ The firing of Kuwaiti oil wells by retreating Iraqi forces in 1991 was only feasible because of this.

³⁴ A 'caliph' is the term or title for the Islamic leader of the *Ummah*, or community of Islam. A 'caliphate' is the office or territorial jurisdiction of a caliph.

³⁵ Paul Rogers, *Iraq and the War on Terror: Twelve Months of Insurgency 2004/2005* (London: I.B. Tauris, 2005).

³⁶ Joint Doctrine and Concepts Centre, *Strategic Trends* (Ministry of Defence, 2004)
www.jdcc-strategictrends.org.

³⁷ "Study Highlights Global Decline", *BBC News* (30 March 2005)
<http://news.bbc.co.uk/1/hi/sci/tech/4391835.stm>.

³⁸ Jessica Williams, *50 Facts that Should Change the World* (Cambridge: Icon Books, 2004).

- ³⁹ US Department of State, *Patterns of Global Terrorism* (reports from 1995-2003) <http://www.state.gov/s/ct/rls/crt/>.
- ⁴⁰ A total number of 2,689 US citizens were killed in international terrorist attacks in 2001. See, US Department of State, *Patterns of Global Terrorism 2003 – Statistical Review* <http://www.state.gov/s/ct/rls/crt/2003/33777.htm>.
- ⁴¹ Center for Disease Control, *National Vital Statistics Reports*, Vol. 52, No. 3 (18 September 2003).
- ⁴² The Henry J Kaiser Family Foundation, *US Federal Funding for HIV/AIDS: The FY 2006 Budget Request* (HIV/AIDS Policy Fact Sheet, February 2005) <http://www.kff.org/hivaids/upload/Fact-Sheet-U-S-Federal-Funding-for-HIV-AIDS-The-FY-2006-Budget-Request.pdf>.
- ⁴³ Steven Kosiak, *Overview of the Administration's FY 2006 Request for Homeland Security* (Center for Strategic and Budgetary Assessments, May 2005) <http://www.csbaonline.org/4Publications/Archive/U.20050503.FY06HomelandSecBudget/U.20050503.FY06HomelandSecBudget.pdf>.
- ⁴⁴ World Health Organisation, *World Health Report 2004* <http://www.who.int/whr/2004/en/>.
- ⁴⁵ Rory Carroll and Sarah Boseley, "The Greatest Catastrophe: Aids worst disaster in history, says UN chief", *The Guardian* (10 December 2004).
- ⁴⁶ UNAIDS, *Financing the Expanded Response to AIDS* (July 2004) <http://www.unaids.org/bangkok2004/docs/Financing2response.pdf>.
- ⁴⁷ See, <http://www.unicef.org/uniteforchildren/index.html>.
- ⁴⁸ Andrew Koch, "Briefing: The US in Africa", *Jane's Defence Weekly* (12 January 2005).
- ⁴⁹ "Security Council resolution 1308 (2000) on the responsibility of the Security Council in the maintenance of international peace and security: HIV/AIDS and international peacekeeping operations", *United Nations* (17 July 2000).
- ⁵⁰ United Nations Development Programme, *United Nations Human Development Report 2005* <http://hdr.undp.org/reports/global/2005/>.
- ⁵¹ Rory Carroll and Sarah Boseley, op. cit.
- ⁵² United Nations Development Programme, op. cit.
- ⁵³ The United Nations World Food Programme reports that one in nearly seven people do not get enough food to be healthy and lead an active life, making hunger and malnutrition the number one risk to health worldwide – greater than AIDS, malaria and tuberculosis combined. See <http://www.wfp.org>.
- ⁵⁴ Amy Belasco, *The Cost of Iraq, Afghanistan and Enhanced Base Security Since 9/11* (CRS Report for Congress, October 2005) <http://www.fas.org/sgp/crs/natsec/RL33110.pdf>.
- ⁵⁵ In July 2005, Iraq Body Count and Oxford Research Group reported that 24,864 Iraqi civilians had been reported killed, and at least 42,500 wounded, between 20 March 2003 and 19 March 2005, with US-led forces alone being responsible for 37% of the deaths. See, Iraq Body Count, *A Dossier of Civilian Casualties in Iraq, 2003-2005* (Oxford: Oxford Research Group, 2005). By 11 May 2006, Iraq Body Count were reporting that between 35,119 and 39,296 civilians had been reported killed in Iraq. See www.iraqbodycount.org.

⁵⁶ On 11 May 2006, Iraq Coalition Casualty Count were reporting 2,430 US military fatalities since January 2003. In addition, 17,983 US military personnel had been wounded in action. See <http://icasualties.org/oif/>.

⁵⁷ "Iraq: The Uncounted", CBS News (21 November 2004) <http://www.cbsnews.com/stories/2004/11/19/60minutes/main656756.shtml>; Scott Shane, "A Flood of Troubled Soldiers is in the Offing, Experts Predict", *The New York Times* (16 December 2004).

⁵⁸ Professor Marc Herold of the University of New Hampshire estimated that a minimum of 3,100-3,500 Afghan civilians were killed as a direct result of US bombing between October 2001 and February 2002 (this does not include persons dying later from injuries, hunger, disease or cold). See, Marc W. Herold, "US Bombing and Afghan Civilian Deaths: Official Neglect of 'Unworthy' Bodies", *International Journal of Urban and Regional Research*, Vol. 26, No. 3 (September 2003). Official figures put the number of people killed in the 9/11 terrorist attacks at around 2,900. See, *The 9/11 Commission Report* <http://www.9-11commission.gov/report/911Report.pdf> and Center for Disease Control, "Deaths in the World Trade Center Terrorist Attacks – New York City, 2001", *Morbidity and Mortality Weekly Report*, Vol. 51 (11 September 2002).

⁵⁹ "Iraq Makes Terror More Likely", BBC News (28 February 2006) http://news.bbc.co.uk/1/hi/world/middle_east/4755706.stm.

⁶⁰ See, Paul Rogers, *Iran: Consequences of a War* (Oxford: Oxford Research Group, 2006).

⁶¹ David Beetham, *The War in Iraq and the Future of Democracy, East and West*, paper presented at the Centre for Democratisation Studies, University of Leeds (12 February 2003).

⁶² Defense Science Board, *Report of the Defense Science Board Task Force on Strategic Communication* (Department of Defense, September 2004) p.48.

⁶³ "Tackling Extremism and Radicalisation: Working Group Report", in *Preventing Extremism Together* (Home Office, October 2005), p.90.

⁶⁴ According to CNN/USA Today/Gallup polls from November 2001 to January 2006. See, <http://www.pollingreport.com/terror2.htm>.

⁶⁵ According to CBS News polls from October 2001 to January 2006. See, <http://www.pollingreport.com/terror2.htm>.

⁶⁶ Jason Burke, *Al-Qaeda: The True Story of Radical Islam* (London: Penguin Books, 2004).

⁶⁷ Paul Rogers, "Al-Qaida: a question of leadership", *Open Democracy* (17 November 2005).

⁶⁸ Jason Burke, op. cit., p.39.

⁶⁹ Scilla Elworthy and Gabrielle Rifkind, *Hearts and Minds: Human Security Approaches to Political Violence* (London: Demos, 2005).

⁷⁰ Prince El Hassan bin Talal, "Rebuilding lives is the key to lasting peace", *Jane's Defence Weekly* (9 November 2005).

⁷¹ See successive editions of: Ruth Leger Sivard, *World Military and Social Expenditure* (Washington DC: World Priorities Inc).

⁷² Paul Rogers, *A Guide to Nuclear Weapons* (Oxford: Berg Publishers, 1988).

⁷³ For details of chemical arsenals during and after the Cold War, see successive editions of: *SIPRI Yearbook: Armaments, Disarmament and International Security* (Stockholm: Stockholm International Peace Research Institute).

⁷⁴ See, Ruth Leger Sivard, *op. cit.*

⁷⁵ Paul Rogers, "A World Becoming More Peaceful?", *Open Democracy* (17 October 2005).

⁷⁶ Able Archer was a test of NATO's nuclear-release procedures, but the Soviet leadership thought that the war games were a cover for an imminent NATO attack and placed nuclear-capable planes on standby at East German bases. Unlike the Cuban missile crisis, Able Archer happened without most of the world realising and it was not until afterwards that the USA learned how close it had come to nuclear war.

⁷⁷ While the UK and France do have some global military projection, it is simply not on the same scale as the USA. For example, a single US aircraft carrier battle group has a more powerful military capability than all the aircraft carriers of Britain and France combined.

⁷⁸ Charles Krauthammer, "The Bush Doctrine: ABM, Kyoto and the New American Unilateralism", *The Weekly Standard* (4 June 2001).

⁷⁹ See, the University of Bradford's project on *Preventing Biological Warfare: Strengthening the Biological and Toxin Weapons Convention*, <http://www.brad.ac.uk/acad/sbtwc/>.

⁸⁰ Although the US Congress has withdrawn funding for this project, there are fears that it may continue under 'black programme' funding.

⁸¹ Paul Rogers, *Losing Control: Global Security in the Twenty-first Century* (London: Pluto Press, 2002).

⁸² *Ibid.*

Website addresses correct at time of publication.

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Glossary

Al-Qaida	A radical Islamist movement or international ‘network of networks’ which shares a commitment to using violence to achieve its broad political aims.
Axis of evil	Term used by President Bush in his State of the Union Address on 29 January 2002 to describe “regimes that sponsor terror”. Originally referring to Iraq, Iran and North Korea, and then later also Syria.
Global security	An approach to international security which treats the world as a systemic whole, rather than focusing on the interactions of individual nation states, and promotes comprehensive, systematic and worldwide responses rooted in a deeper understanding of underlying trends and causes of insecurity and conflict.
Human security	The set of conditions in which civilian populations are enabled to pursue lives free from hunger, poverty, oppression, avoidable illness, unemployment and arbitrary dislocation. It differs from the traditional conception of security, which is a state-centred approach, because of its focus on the individual.
Majority world	Refers generally to the countries of Asia, Africa and Latin America. Used as an alternative term to describe the ‘Third World’, and reflects the fact that most of the world’s population lives in developing countries.
Marginalisation	The state of being considered unimportant, undesirable, unworthy, insignificant and different, resulting in inequity, unfairness, deprivation and lack of access to mainstream power.
Paradigm shift	A significant change in human understanding from one predominant world view (paradigm) to another previously thought impossible or unacceptable.
Rogue state	A state which, according to the person using the term, operates outside of the norms of the international community and, for example, attempts to acquire weapons of mass destruction, commits crimes against humanity, harbours terrorists, or seeks to overthrow or corrupt the political processes of other countries.
Sustainable security	A sustainable approach to global security emphasising the long-term resolution of the root causes of insecurity and conflict.
War on terror	An ongoing military and political campaign by the governments of the United States and its principal allies ostensibly aimed at destroying groups deemed to be “terrorist” (primarily radical Islamist organisations such as al-Qaida) and ensuring that “rogue states” no longer support terrorist activities.

Also available from Oxford Research Group



Everyone's Guide to Achieving Change: A step-by-step approach to dialogue with decision-makers

May 2006 (5th edition)

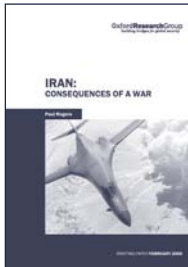
This handbook is designed to introduce the reader to a successful way of achieving change, based on over 20 years of experience of dialogue with decision-makers. It offers a step-by-step approach for groups of citizens or individuals to engage directly with government decision-makers and policy advisers on issues of national or international security, adopting an informed non-confrontational approach.



The Future of Britain's Nuclear Weapons: Experts Reframe the Debate

Edited by Ken Booth and Frank Barnaby, March 2006

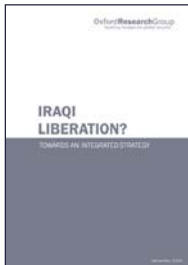
This Current Decisions Report provides a platform for pairs of public figures with long experience and specialist knowledge in their respective fields, to set out their contrasting positions on the key aspects involved in the Trident replacement decision. The report points to the need to reframe the debate in the post 9/11 global security environment, and move it resolutely beyond outdated and polarised Cold War thinking.



Iran: Consequences of a War

Paul Rogers, February 2006

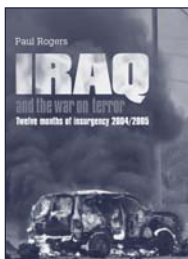
This briefing paper provides a comprehensive analysis of the likely nature of US or Israeli military action that would be intended to disable Iran's nuclear capabilities. It outlines both the immediate consequences in terms of loss of human life, facilities and infrastructure, and also the likely Iran responses, which would be extensive. (Also available in German).



Iraqi Liberation? Towards an Integrated Strategy

November 2005

This discussion document draws on the expertise of an international high-level consultative panel, including British, Iraqi, Middle Eastern and American experts from the military, foreign service, intelligence community and civil society. It brings together seven key elements of a positive alternative strategy for Iraqi stabilisation and development. (Also available in Arabic).



Iraq and the War on Terror: Twelve Months of Insurgency, 2004/2005

Paul Rogers, November 2005

Since the start of the Iraq conflict, Paul Rogers has produced a series of monthly briefings for the ORG website scrutinising developments in the occupation, and the Iraqi response. These briefings, from May 2004 to April 2005, have been brought together with new analysis by I.B. Tauris to provide a detailed and authoritative analysis of the 'war on terror' and related conflicts in Iraq and Afghanistan.

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About this report

Current security policies assume international terrorism to be the greatest threat to global security, and attempt to maintain the status quo and control insecurity through the projection of military force. The authors argue that the failure of this approach has been clearly demonstrated during the last five years of the ‘war on terror’ and it is distracting governments from the real threats that humanity faces. Unless urgent action is taken within the next five to ten years, it will be extremely difficult, if not impossible, to avoid a highly unstable global system by the middle years of the century. This report outlines a more sustainable approach.

“Current US and UK foreign policy is totally counterproductive and is encouraging terrorism and proliferation of WMD. This report offers a serious alternative which would make the world safer and British people proud of our role in the world. I hope it is widely read.”

Rt. Hon. Clare Short MP, UK Secretary of State for International Development (1997-2003)

“This report takes a measured look at the challenges that the planet faces in the coming years, and offers a coherent strategy to make the world a safer place. If we are to reverse the deepening crisis, a global approach to security in all its aspects is needed. The authors offer a compelling starting point for policy-makers.”

Air Marshal the Lord Garden KCB, Assistant Chief of the Defence Staff, UK Ministry of Defence (1992-94); Liberal Democrat Spokesperson on Defence in the House of Lords

Oxford Research Group

51 Plantation Road
Oxford OX2 6JE
United Kingdom

T +44 (0)1865 242 819

F +44 (0)1865 794 652

E org@oxfordresearchgroup.org.uk

www.oxfordresearchgroup.org.uk

Registered Charity No. 299436

ISBN 0-9552846-0-0



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