The Great Problem

International relations, global issues and the environment

Briefing paper for the UK Foreign and Commonwealth Office (FCO) conference, *epd@net*

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River Path Associates

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In November 2001, River Path hosted the Foreign & Commonwealth Office's first conference on the environment.

Three government ministers – John Prescott, Margaret Beckett and Peter Hain, addressed delegates from 48 British embassies.

They called for:

- global issues to be placed at the heart of Britain's foreign policy
- successful action on the environment to demonstrate that the international community can solve seemingly intractable environmental problems
- a focus on the environmental problems facing the poor, as part of a long-term effort to build a more peaceful world
- the development of new forms of expertise and new ways of working within the Foreign Office

The conference sparked a debate that will lead to significant change in the way the Foreign Office works.

"The Great Problem – international relations, global issues and the environment," a River Path briefing, provided intellectual fuel for this debate

It explores the rapidly changing nature of international relations, the somewhat-new world order, and the challenges the environment poses to global policy-making.

It is challenging, provocative and broad-ranging. It is still a work-in-progress, however – we'd be glad to hear (and incorporate) your ideas, insights and opinions.

The Great Problem

International relations, global issues and the environment

Don’t get involved in partial problems,
but always take flight to where there is a free
view over the whole single great problem,
even if this view is still not a clear one.

Ludwig Wittgenstein

Introduction

We live in three worlds, not one.

In the first, modern states engage in traditional balance-of-power politics.

In the second, states are disintegrating into a zone of chaos.

While in the third, states are forming an ad hoc, but seemingly stable, post-modern system.

In the post-modern world, the lines between domestic and international policy are blurred. Values compete. And interests are hard to define.

Traditional concerns, such as security and bilateral relations, remain important to foreign policy. But an interaction with global issues has joined them at centre stage.

One of these key issues is the global environment, as human activity causes unpredictable changes to the Earth's physical and biological systems.

Environmental change has forced 'green' concerns onto the international agenda, causing problems for governments who must grapple with what began life as – and is still most powerful as – a protest movement.

Is environmental action in the best interests of their people? And on what timescale should we think about those interests? Is economic growth the enemy, or the answer? Should carrot or stick be employed to help change behaviour?

These questions do not offer easy answers. Uncertainty dominates environmental issues. But action cannot wait until all the evidence is in.

Policy-makers must follow Wittgenstein's injunction to head first for "a free view over the whole single great problem."

This view does not cover the environment alone. It requires an attempt to broadly understand the social, economic and natural challenges we face; how these challenges interact; and how they are developing.

This paper has been written as background for epd@net, a conference organised by the UK Foreign and Commonwealth Office's Environmental Policy Department.

epd@net will explore the role of the environment in British foreign policy; how the FCO works on the environment with other government departments; and what the FCO network of posts can contribute to action on international environmental issues.

The paper's primary audience is FCO environmental attachés. Many have considerable environmental expertise, but some are new to the subject.

It therefore assumes no prior knowledge, but should help all delegates as they begin to think about the key questions the conference will be addressing:

- What is the role of the environment in foreign policy – and how is it changing?
- What practical contribution can the Foreign Office make to the government's social, economic and environmental agenda?
- How should a Foreign Office organised around cross-cutting issues best go about its business?

and

- What skills and expertise will foreign policy-makers need if they are to respond to the global issues at the heart of modern international affairs?

John Prescott with David Steven from River Path and FCO attaches

The Somewhat New World Order

Realism and the balance of power · Idealism and the dream of global government · The pre-modern, modern and post-modern orders · The unplanned international system

There are two seductive theories of international relations:

Realism places all authority (or sovereignty) with the state. The international arena is in a state of anarchy. Each state aims only to help itself and, from the ensuing competition, a 'balance of power' emerges. This persists for a time, before the system makes a painful shift from one steady state to another.

Idealism allows for some form of sovereignty to emerge in the international arena. A state of anarchy is replaced by a form of global government capable of deciding between the competing claims of states. Over time, and to a certain extent, the international arena becomes a zone of cooperation, not competition. Realism and idealism are seductive because of their elegance and simplicity. One is hard, rational and pessimistic; the other soft, aspirational and Utopian. One is well defined, and seeks to explain how the world is. The other is less clear, but seems to tell us what the world might one day become.[1]

The current UK government, however, is influenced by a somewhat different analysis. In 1996, Robert Cooper argued that 1989 marked the end of the balance-of-power system – but only in some parts of the world.[2] According to Cooper, a new world order is emerging, but it is made up of three distinct political systems, each of which works to quite different rules (figure 1). Most primitive is the pre-modern, where the state does not have a monopoly of power, and non-state actors cause internal chaos. Pre-modern states are likely to be few in number (in 1996, Cooper identified three – Somalia, Liberia and Afghanistan), but they present problems that are likely to be persistent, especially as the chaos they generate is exported. In the past, failing states would have been annexed into the empires of successful ones. But today, empires are too costly, politically as well as economically. States are therefore pulled to intervene, but do not know what action to take. The 'zone of chaos' offers neither realist nor idealist an easy solution.

The second political system is the modern, where the classical state remains intact. "An important characteristic of the modern order," says Cooper, "is the recognition of state sovereignty and the consequent separation of domestic and foreign affairs, with a prohibition on external interference in the former." Modern states – such as Pakistan, China or Brazil – must fight hard to preserve their integrity, for in the worst case they risk disintegrating into a pre-modern condition. However, the more successful they are internally, the harder the shell they present to the world, which may in turn destabilise their region. With internal cohesion and the right technology, even small states could prove dangerous. "In the pre-modern world," argues

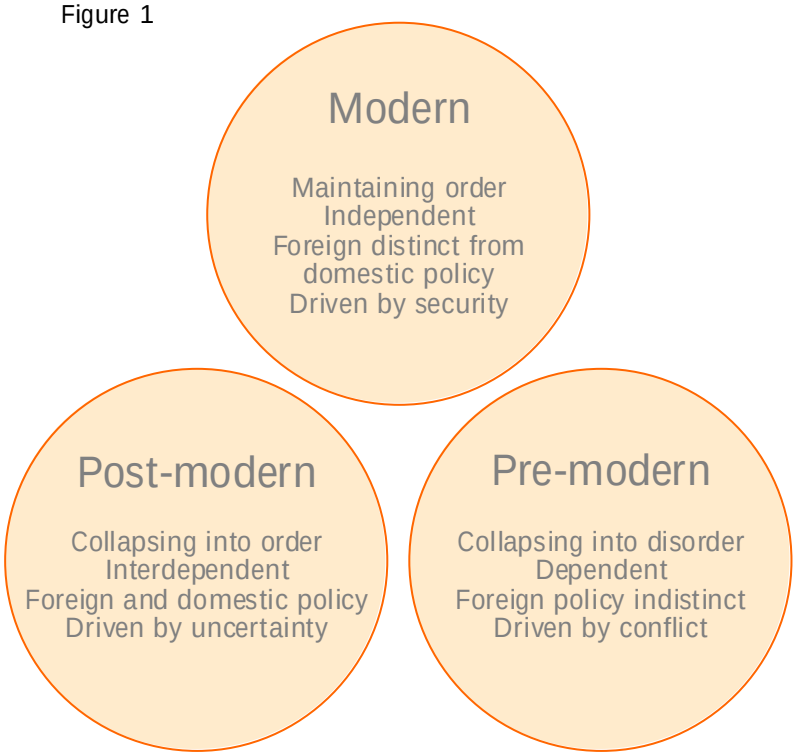
Cooper, “states (or would-be states) may be dangerous because they are failures; in the modern world, it is the successful states which are potentially dangerous.”

The third political system is the post-modern, where the state system “is collapsing into greater order rather than disorder,” as states pool sovereignty and accept self-imposed limits on their actions. In this world, the lines between state and non-state, public and private, domestic and foreign all become blurred. The system is ad hoc and complex, as countless formal and informal interactions lock governments into what David Held has described as “global, regional and multilayered systems of governance which they can barely monitor, let alone control.”[3]

The post-modern world presents problems for both realists and idealists. Realism is challenged by the changing patterns of sovereignty, the blurring of borders, and the economic and social impact of inexpensive communication technology. Idealism, meanwhile, is getting only part of what it wanted. The post-modern system is transnational, rather than supra-national; ad hoc rather than planned.

According to Cooper, the supranational dream is “one left over from a previous age. It rests on the assumption that nation states are fundamentally dangerous and that the only way to tame the anarchy of nations is to impose hegemony on them.” Post-modern states need flexible structures through which they can express their interdependence, not rigid super-states attempting to impose one-size-fits-all solutions.[4]

Figure 1



Defining Interests

Defining foreign policy interests · The security of the post-modern system · Liberal trade regimes · Global civil society · Values and foreign policy

A post-modern state still pursues its 'interests' through foreign policy, but defining these interests has become increasingly problematic.[5] Traditionally, in the international arena, the primary objective of a state is to guarantee the security of its citizens. Security remains important, but a defining characteristic of post-modern states is the near-certainty that they will be at peace with each other. Their democratic nature makes war empirically unlikely, while their advanced technology makes it unlikely that the post-modern system could withstand what would in effect be a civil war.[6]

Security therefore becomes a concern of the system as a whole, as its constituent states seek to protect it against modern and pre-modern threats. The security of almost all post-modern states will be secured through permanent alliances, such as NATO, and informal coalitions, such as that seen in the Gulf War. Opportunities for independent action will become more limited as security interdependence grows. Few of the challenges facing the system will be simple, however. Pre-modern states will often present problems that can only be partially solved at any one time. There is also unlikely to be any easy solution to a too-powerful modern state that is destabilising its region, but not directly threatening post-modern interests. The lack of obvious solution, however, is unlikely to lessen the pressure to intervene.

Beyond security, the range of interests that a state wishes to protect continues to expand. In recent years, the world economy has become increasingly open, a process that is ongoing but not irreversible.[7] Economic orthodoxy holds that free trade offers benefits to all over time, but this is precisely because the market is given the freedom to engage in 'creative destruction' across borders. International trade negotiations cause governments great puzzlement. Whose interests should they protect? Their producers' or their consumers'? And in what time frame? Is it best to delay gratification, forgoing short term selfish gains for gains that will be felt by all states in the medium term? Or should a 'way of life' be protected now?

This conflict is almost always played out in public, and in full view of other parties to the negotiation. Even the attempt to use intergovernmental mechanisms such as the World Trade Organization, to ensure that negotiations are conducted in private, may be counterproductive. The Economist, for example, has argued that governments are mistaken in allowing "the grubby details of trade negotiations to be kept secret… Proponents of liberal trade can no longer expect trade policy to be sheltered, in the interests of 'effectiveness', from the demands for honest, open and accountable governance that are regarded as compelling in other areas."[8]

Globalisation, meanwhile, is not just an economic force. Technology has enabled an explosion in communication and the sharing of

knowledge. This, in turn, has allowed the emergence of a global civil society, whose most visible emanation to date has been the wave of public protests facing international meetings and institutions. The Financial Times has dubbed this protest movement the fifth estate, a "movement of movements, an unruly, unregulated and unaccountable check on corporations, politicians and the institutions of democracy."[9] But its power is now undeniable, and is increased by its protean nature. Its current form may be anti-capitalism, but it is already shifting to an anti-war stance where it will continue to be a significant force.

Perhaps most importantly, the fifth estate is a vehicle for the expression of values, rather than interests. While labour elements may primarily be intent on protecting jobs in rich countries, the movement's dominant voice is ideological, and its focus is idealist. Attempts to counter its arguments almost inevitably demand that pro-free trade leaders state their vision of the world they would like to live in. The current UK government remains committed to "open, competitive markets and international co-operation,"[10] for example, but it has also promised to make "globalisation work for the poor", in a White Paper that argues that "managed wisely, the new wealth being created by globalisation creates the opportunity to lift millions of the world's poorest people out of their poverty." The White Paper's motivations are not purely charitable, but act as an indirect defence of British interests in an open system. If "democrats and internationalists" do not address "legitimate public concerns", argues the Paper, "those who advocate narrow nationalism, xenophobia, protectionism and the dismantling of multilateral institutions will gain in strength and influence with disastrous consequences for us all."[11]

For all these reasons, foreign policy-making is increasingly complex for the post-modern state. Security interests are seldom likely to be simple, with Kosovo more common than the Falklands. The lines between domestic and foreign policy are blurred, as a growing number of players seek to influence the foreign policy agenda. Expediency in international relations is more difficult, as decisions are subjected to often passionate scrutiny. And a value-driven foreign policy proves complicated and messy, as policy-makers choose between values, try to express them, and risk that good intentions may be bedevilled by unintended consequences.

On top of all this, complexity is compounded by the inevitably Byzantine nature of the emerging post-modern international system. Interdependence is breeding intergovernmental institutions, which see alliances becoming simultaneously more formal and more fluid. The European Union, for example, is intended to be permanent, and demands huge investment from states to maintain its many intergovernmental fora. However, within these fora, states are free to form and break mini-alliances on a myriad of issues. In the post-modern world, states must have the intelligence, the negotiating power, and the energy to forge agreement case-by-case, deciding

which interest to protect, how strongly, and with which partners.

Coping with Complexity

Articulating legitimacy · Protecting security · Vision and route maps ·Strategic partners

To deliver a coherent foreign policy, post-modern states need to cut complexity. They must develop and express consistent, comprehensible, but not simplistic positions across a range of interests. Skills in 'strategic communication' are therefore in demand. Strategies that are not communicated, or cannot be communicated, will be ineffective. Similarly, the temptation to communicate an incoherent set of ad hoc positions must also be resisted.

The first priority is to articulate legitimacy. When there is a straightforward balance-of-power system, the pre-eminence of states is unquestionable. Within a post-modern system, however, states still should be pre-eminent, but this can no longer be taken for granted. Legitimacy springs from the representative nature of a democratic state, but non-state actors will repeatedly question this legitimacy, especially when they seem to enjoy more trust from electorates than governments do.[12] Articulating legitimacy involves expressing the unique role of the state in the international arena; clarifying relations with non-state actors; and ensuring that those charged with international relations do not neglect the domestic roots of their licence to operate. This task must be undertaken internationally, as well as nationally, in order that the interests of both corporations and the fifth estate can be balanced and mediated. And it must be carried out constantly, rather than sporadically when another crisis calls attention to the problem.

The second priority is to re-establish the primacy of security within foreign policy. Again, the realist would take this for granted, but the complexity of security challenges has ensured that almost all post-modern states are unclear about what they understand security to be, and how they plan to defend this position. The Powell Doctrine was well understood, but has proved unequal to the challenges offered by pre-modern states. Security policy has become value-laden, as the anguished debate about intervention in Kosovo and Afghanistan has shown. However, the time to establish a consistent approach – and to build some consensus behind it – is between rather than during conflicts. In theory, security is a service that a democratic state offers its citizens in return for their electoral support. At present, the detail of this contract has fallen into disrepute.

The third priority is to achieve clarity of vision for the broad range of non-security issues in which post-modern states have legitimate interests. States will inevitably become overwhelmed by the complexity of the international system unless they draw, distribute and follow clear route maps. A tactical vision, based on bilateral relations, must

therefore be supplanted by a strategic one, driven by policies that engage with overarching global issues. John Kerr has described how "long-term we are moving away from a Foreign Office which was basically a geographical structure to one which pays more and more attention to thematic issues and cross-cutting issues." The focus on issues will have practical implications, helping to internationalise domestic departments, and enabling foreign policy functions to act as a link between the domestic and global expression of any given issue. It also allows connections to be built between people across countries, by reflecting the "growing domain of interests that we all share – interests that affect every human being regardless of nationality."[13]

A clear expression of legitimacy, a consistent position on security, and a clear vision for key global issues provides a platform for the fourth priority, the bread-and-butter work of diplomacy – building partnerships. From a strategic vision spring strategic partnerships and, as many commentators have noted, these partnerships need to be quantitatively and qualitatively different from those that have come before. Between states, a commitment to dialogue is becoming more important than 'policy projection', and governments must make multiple connections, reflecting the internationalisation of their domestic departments. With non-state actors, meanwhile, clear rights and responsibilities are essential, as is a recognition of competencies, as states focus on areas where they can operate most effectively.

Generally, working through partnerships reflects the need to balance hard and soft power – 'soft power' has been described by Joseph Nye as resting "on the appeal of one's ideas or the ability to set the agenda in ways that shape the preferences of others."[14] Such ideas spring naturally from an engagement with issues, and it is to these that we will now turn.

John Ashton, Head of Environmental Policy Department, FCO, with John Prescott

Stephen Tindale, Greenpeace

Global Issues

Global economy · Global society · Global environment

The description of a set of global issues allows disparate interests to be pulled together under a single banner, with thinking across these interests guided by consistent principles.[15] It is important that the set of issues is chosen for its balance across 'the domain of interest we share', and that each issue is approached not in isolation, but in the context of the others. Our model focuses on three spheres, reflecting economic, social and environmental interests.[16]

- Global economy – the UK expresses a commitment to globalisation, and a belief that it offers answers for rich and poor countries. Key areas within this sphere currently include international trade policy; international fiscal policy; intellectual property; the international movement of labour; and the elimination of absolute poverty. Individually, each of these areas offers serious foreign policy challenges, but a basic liberal position (that "economic integration is a force for good; and … globalisation, far from being the greatest cause of poverty, is its only feasible cure") provides explicit guidance for policy-making.[17]

- Global society – the Washington Consensus has recently softened, as the social origin of markets has become more widely accepted.[18] Levels of human and social development are therefore critical – to the competitiveness of rich states, to the prospects of development for poor or failing states, and to the broad stability of the global system. Key human development areas include international public health; universal education in poor countries; the global higher education system; demographic change; and human rights.[19] Key social development areas are global and national governance; international crime; and conflict resolution. All these have clear security as well as economic implications.

- Global environment – science[20] has allowed growing understanding of the Earth's physical and biological systems, and the changes that human activity can cause to this system. Environmentalism, meanwhile, has successfully bracketed a huge number of disparate political issues under a 'green' umbrella. Many of these have significant international implications, crossing borders, threatening security, and questioning the feasibility of social and economic policy. Key environmental areas include natural resources; pollution; biodiversity; biotechnology; and climate change – each of which is approached very differently by states in different parts of the world.

A wholehearted engagement with these issues will not be easy to achieve. All have organisational implications, and call for the ability to set priorities across government and then express these priorities internationally. A new level of intellectual engagement will be required, as specialists broaden their expertise and generalists attempt to work from an understanding of a series of complex and inter-related problems.

The potential rewards are significant, however – in terms of relevance, salience with the public, and the development of a new type of international vision.

Beyond Environmentalism

Scientific knowledge · New technologies, strong resistance · Contested responses · Governments and action · Pro-people? · Pro-growth? · Pro-liberal?

The complexity of the global environment is such that it has only recently been accessible to human understanding – current knowledge is still very limited.[21] Governments are generally slow to respond to novelty and dislike uncertainty, so the running on the environment has been made by a young environmental movement that has reacted both to the new knowledge and to the remaining uncertainty. Successive waves of issues have prompted new concerns, usually as part of a pattern in which "powerful new technologies… provoke strong resistance" (figure 2).[22] Over time, however, the movement as a whole has gradually evolved though a six-stage model typical of new and contested policy concerns (figure 3).[23]

Currently, the environment is locked into the 'contested response' phase. There is growing consensus that this is an area where action should be taken and can be effective, but a range of different responses are still competing for implementation. This is a paradoxical stage. More is being tried than ever before, but at times, less seems to be happening. The pioneering protests are in the past, and the less glamorous work of trial-and-error implementation has taken over. This should be good news for governments. Governments, for all their failings, have skills in implementation. They provide fora in which the interests of different actors can be balanced. And they have an unparalleled ability to work with other states to tackle environmental issues that cross national boundaries.

But the integration of the environment into a broader government agenda has not been a painless process. Protest is by nature 'anti' – whereas governments are clearly 'pro' many things. Government environment action has therefore needed to demonstrate that it is 'post-environmentalist', by taking into account the necessity for complementary action on other important global issues. It has therefore tended to be implicitly or explicitly:

- Pro-people – democratic governments can never follow some environmentalists in elevating the concerns of nature (pristine and in need of protection) over people (profligate and in need of containment or elimination). Governments have therefore tended to place concern for the environment within a wider context of sustainable development, famously defined by the Brundtland Commission in 1972 as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." They have usually emphasised sustaining quality of life, and agreed that all state-sponsored environmental action must have the needs of today's – and tomorrow's – people at its heart.

- Pro-growth – many environmentalists have attacked economic growth, but electorates continue to favour growth and there is currently no precedent for deliberately shrinking an economy.[24] Governments have therefore placed increasing emphasis on the potential for innovation and new technologies to enable more efficient use of existing resources. There is a proliferating range of targets for resource efficiency. The Factor 10 Club, for example, has called for current resource productivity to be increased by an average of a factor of 10 in the next 30–50 years.[25] Implicit in resource efficiency is an appeal to human creativity, and the belief that 'win-win' situations are possible – where environmental limits stimulate innovation, creating leaner, cleaner and more productive industries. The environmentalist suspicion of new technology ('what consequences will it have?') is balanced by the fact that many technologies will offer a net gain, because they perform more effectively than those they replace.

Margaret Beckett

Peter Hain

- Pro-liberal – some forms of environmentalism imply the need for considerable coercion to achieve environmental ends. Campaigners have tended to focus on the need to force businesses to change their behaviour, with the need for people to make parallel 'adjustments' being less explicit. The resulting 'command and control' model is already creaking, however, with the UN Environment Programme (UNEP)'s Global Environment Outlook noting a shift towards "deregulation, increased use of economic instruments and subsidy reform, reliance on voluntary action by the private sector, and more public and NGO participation. This development is fed by the increasing complexity of environmental regulation and high control costs as well as demands from the private sector for more flexibility, self-regulation and cost-effectiveness." Attention is also switching to the US$700,000 million that governments are thought to spend on environmentally unsound subsidies. UNEP estimates that removing all energy subsidies, for example, would reduce global carbon dioxide emissions by 10 per cent, at the same time increasing market efficiency.

Figure 2

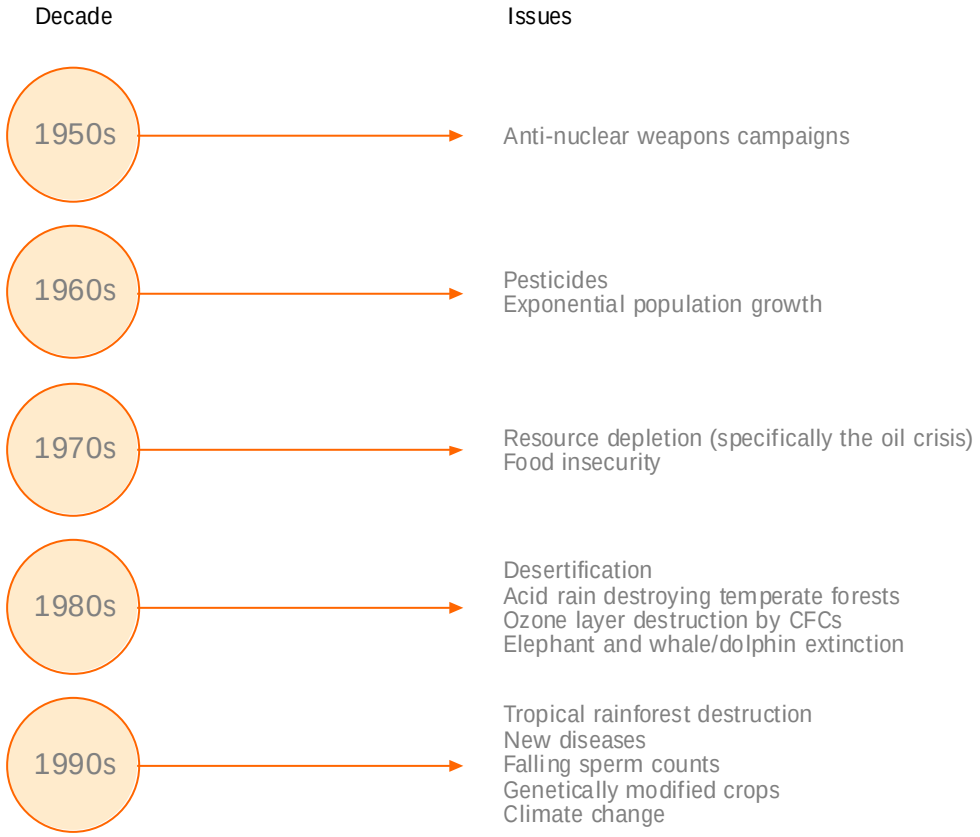


Figure 3

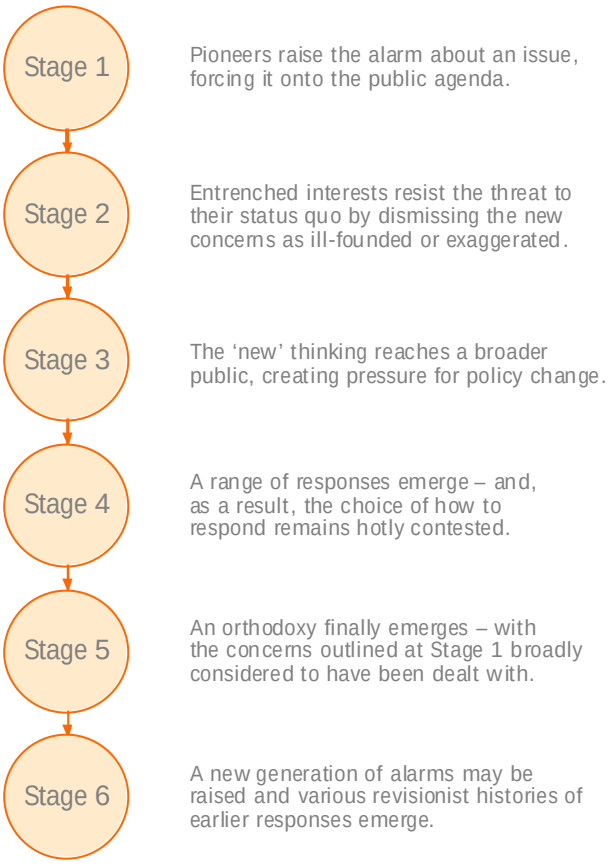
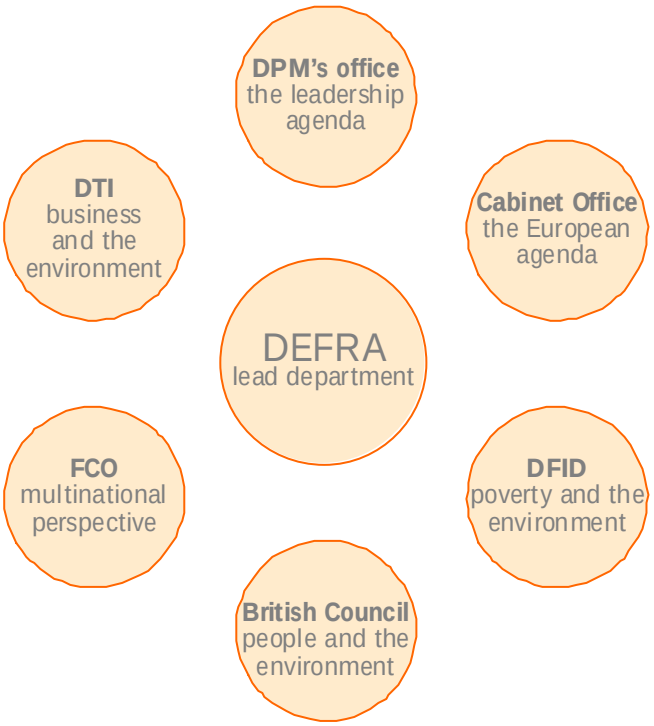


Figure 4



A Risky Policy

Knowledge and uncertainty · Beyond calculated risk · Disaster, subtle change or no change · The global view · The multinational view

An environmental agenda that is people-focused, favours economic growth and technological solutions, and is liberal in its actions, is some way from the traditional 'green agenda'. It reflects the government's role in balancing different civil society interests, businesses and NGOs, both nationally and internationally. It also recognises the diversity of the business and NGO communities, which are composed of many groups with quite different priorities, objectives and approaches.

Whatever agenda a government adopts will continue to be influenced by the twin pulls of knowledge and uncertainty. Such uncertainty is intrinsic to any study of the environment, where complex systems are exceptionally difficult to model and understand. Scientists currently find it hard to accurately shadow a weather system for more than 3–4 hours – over the next 72 hours, perhaps 90 per cent of forecasting errors are due to imperfections in the model. Over time, a further uncertainty becomes increasingly important: the 'butterfly effect' in which even small variations in complex systems create unpredictable outcomes.[26] Compared to short-term weather forecasting, environmental modelling over 50 or 100 years poses problems that are greater by many orders of magnitude.

It is this uncertainty that makes many environmental problems so compelling and so controversial. The New Scientist, for example, recently described humans as "about as subtle as the asteroid that wiped out the dinosaurs." It develops three scenarios – based on the effects of climate change, pollution, and overpopulation – describing them as "routes to catastrophe that we face unless we can tackle the evils of over-consumption and the yawning gap between rich and poor." "Aspects of all three," it declares, "will strike before this century is out." The Economist, meanwhile, has written about "our durable planet," arguing that the "modest amount of global warming… under way" demands modest, but not drastic, action. On the same issue, the New Scientist predicts that by the end of the century "burning fossil fuels and using the atmosphere as an open sewer [will have] turned out to be a recipe for disaster."

Neither the Economist nor the New Scientist position is fundamentally implausible, and both use the same starting point. They reflect the fact that knowledge tends to increase uncertainty and risks cannot accurately be calculated.[27] Anthony Giddens has talked of "a new riskiness to risk."[28] Even the precautionary principle – whereby action is taken to combat a risk even when the risk is poorly understood – offers only a partial solution. That action may itself involve unquantifiable risks, creating the need for judgement between a risky status quo and various risky reactions.

Given the riskiness and inevitable controversy that surround environmental issues – and the global nature of much of this risk – foreign policy-makers can make a significant contribution to the global environmental debate. This contribution will not be made alone, but with a number of domestic policy functions. Within a cross-governmental partnership (figure 4) they contribute a unique contribution of two perspectives:

- A global view – placing the environment in a truly international context and considering how it relates to other social and economic global issues; and
- A multinational view – explaining why an issue looks different from country to country, and developing an understanding of the internal debate that has helped create a country's position.

The importance of this dual perspective can best be illustrated by consideration of two critical issues: the differing perspectives of rich and poor on environmental issues, and multiplying attempts to legislate for the environment at global level through multilateral environment agreements (MEAs).

Rich and Poor Problems

Developing and developed world perceptions · Population size · Consumption levels · Choice of technologies · Dirty environment problems · Clean environment problems ·Kuznets Curve

In 1992, the leaders of the world's nations met at the Earth Summit (officially known as the United Nations Conference on Environment and Development) in Rio to discuss the environmental, economic and social challenges facing the international community. The meeting caught the public imagination. Souvenirs were even produced and sold – including a million special edition Swatches.

According to Maurice Strong, Secretary General of the Conference, the most contentious issue before the conference was the involvement of developing countries. He reports an encounter with Mahbub ul Haq, the Pakistani economist who devised the UN Development Programme (UNDP) Human Development Index, who "made a spirited attack on the whole concept of the environment. … His position was devastating and simple. Industrialization had given developed countries disproportionate benefits and huge reservoirs of wealth and at the same time had caused the very environmental problems we were now asking developing countries to join in resolving. The cost of cleaning up the mess, therefore, should be borne by the countries that had caused it in the first place."[29] The bitter divide between rich and poor countries continues to dominate international discussion of the environment and, although countries do not split

neatly into two blocs, an understanding of the basic differences is essential to environmental policy-making.[30]

According to UNEP, "the same driving forces – population size, consumption levels and choice of technologies – underlie all environmental problems." However, population, consumption and choice of technology are quite different in rich and poor countries, and the environmental problems they face, or prioritise, are correspondingly different (figure 5):

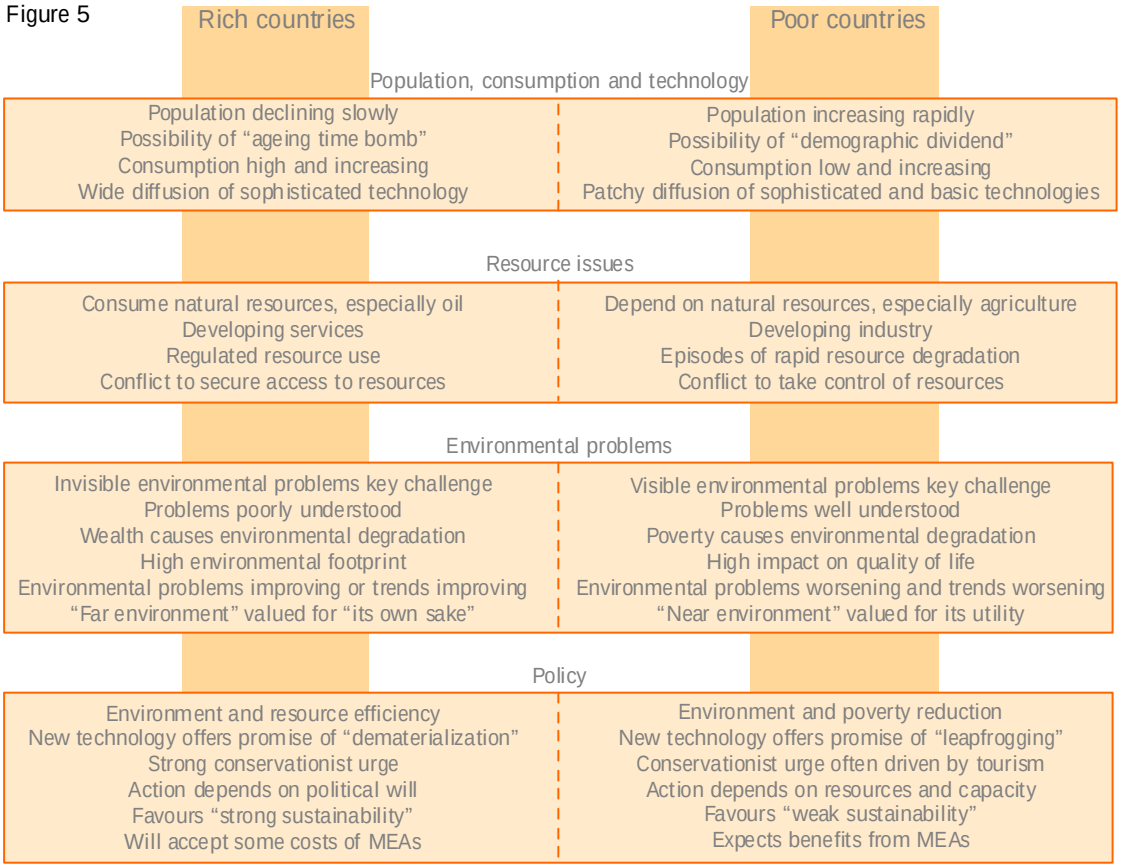
- Population – the latest research shows that the global population has an 85 per cent chance of reaching around 9 billion in 2100 and will then start to fall. In rich and poor countries populations are ageing, but for poor countries this means a smaller proportion of children and a growing number of adults, offering the possibility of a demographic dividend as an enlarged workforce boosts output. In rich countries, the number of old people is rising and the workforce is shrinking, raising fears of economic contraction and unsustainable social security burdens.[31]

- Consumption – is rising in both rich and poor countries, but there is greater need for this increase in the developed world. 1.2 billion people live on less than US$1 a day (46 percent of the population of sub-Saharan Africa; 40 per cent of the population of South Asia; 15 per cent of the population of East Asia and the Pacific, and Latin America). Relative, not absolute, poverty is a greater problem in the rich world.

- Technology – is distributed unevenly. Out of the 72 countries in the new UNDP Technology Achievement Index, there are 18 leaders – including Finland, the USA, Sweden and Japan – who enjoy self-sustaining technological innovation. The 18 potential leaders – including Spain, Poland and Chile – have invested in high levels of human skills, but invent little. The 25 dynamic adopters – including Brazil, China, India, South Africa and Indonesia – have growing skill bases and significant technology hubs, but patchy distribution of technology. Finally, the marginalised – eight countries, including Nepal, Sudan and Mozambique, have low skills and little diffusion of even basic technologies.[32]

Rich and poor resource use is also different. The developed world is an importer of developing world resources, and is especially reliant on oil. The prices of natural resources have generally been declining, reflecting their diminishing importance to developed world economies. Many poor countries find themselves over-reliant on resource exports and have suffered poor economic performance as a result. They are also vulnerable to the sudden and rapid degradation of a resource when governance mechanisms break down, due to conflict, inadequate property rights, or perverse incentives. While developed countries

Figure 5



are willing to fight short, decisive conflicts to secure access to oil, developing countries are more likely to see long-running conflicts to control a resource such as diamonds, narcotic crops or water.[33] Indeed, resource conflict may be one factor in a nation's reversion to a pre-modern state, while so-called 'new wars' often lead to rapid and simultaneous degradation of quality of life and environmental indicators.

Where developed and developing countries suffer similar problems, however, is in their inability to manage resources where there is unclear ownership. Fish stocks, for example, continue to be eroded in what is commonly known as a 'tragedy of the commons'.

Very broadly, the environmental problems that seem most pressing in the developing world are 'dirty' environment problems. In developing countries, 968 million people lack access to clean water; 2.4 billion people lack access to basic sanitation; and 2.2 million people die annually from indoor air pollution.[34] Although developing countries have occasionally adopted agrarian anti-development policies, the vast majority of developing country governments see development as the solution to these problems, and are prepared to increase

environmental pressures in order to improve human quality of life. In densely populated regions with plentiful supplies of labour, such as South-East Asia, problems are likely to be those associated with rapid industrialisation, such as growing energy use, pollution, and urbanisation. In less-populated regions, such as sub-Saharan Africa, inadequate management of natural resources is likely to be the most serious problem.

Within a pro-development context, the extent to which the environment will deteriorate with rising per capita income will be determined by four main factors. First, the extent of knowledge of the problems environmental damage causes; second, the priority given to these problems over the achievement of other needs; third, the ability to use alternative technologies to solve or partially solve the problems; and fourth, the resources necessary to access this technology. This process is known as the environmental Kuznets Curve, whereby the environment initially degrades as income rises, but a combination of knowledge, technology, wealth and political will acts to reverse the trend. A Kuznets Curve does not have any inevitable shape, but can be steep or flat according to circumstance.

Developed countries, meanwhile, have already tackled most 'dirty' and many other obvious environmental problems. Sulphur dioxide emissions fell by more than half between 1980 and 1995 in Western Europe; forest area has grown by 10 per cent since the 1960s; while emissions of carbon monoxide, particulates and sulphur dioxide have all fallen rapidly in North America. Problems with less clear and direct consequences, such as CO2 emissions, continue to deteriorate, albeit at often slowing rates. Unlike 'dirty' environmental problems, these do not have obvious solutions and are politically contentious – both domestically and internationally.

New Forms of Cooperation

Poor country and resource issues · Rich countries and political will · Multilateral environment agreements · Foreign policy perspective

Facing different environmental issues, rich and poor countries understandably favour different policy responses.

Developed countries are motivated by the need to use resources more efficiently, while the complex relationship between poor people and their environment is more relevant in a developing country context. Both will be attracted by new technologies, but rich countries will increasingly look to the benefits of dematerialisation, while poor countries will be interested in the potential of 'leapfrogging', whereby they are able to use existing knowledge to skip economic development phases and avoid adopting 'legacy' technology.[35] Rich country governments will, in part, be motivated by conservationist lobbies,

while poor countries are likely to favour resource management unless conservation opens up a new use, such as tourism.[36] Poor country policy on the environment is likely to depend on resource and capacity issues, while in rich countries action will depend more on political will.

Finally, rich countries are more likely to be attracted to MEAs, as they provide a mechanism for ensuring that all their competitors take the same kind of action on the environment at the same time. This acts as an insurance against taking action in the face of uncertainty. All will bear the same costs, receive the same benefits, or make the same mistakes. Developing countries, meanwhile, are unlikely to embrace MEAs enthusiastically, even though they are least likely to be able to protect themselves against future environmental degradation. They are likely to expect immediate benefits from MEAs, such as improved terms of trade, increased flows of aid, or the more rapid transfer of technology.

Multilateral environment agreements illustrate the benefits of the global, as well as the multinational, perspective.[37] It is easy to forget their unprecedented nature in terms of the problems being tackled; the level of uncertainty surrounding these problems; the solutions proffered; and the mechanisms by which these solutions are to be achieved. Global emissions trading, for example, is an attempt to create a totally new form of global property rights and a market in which they can be traded. According to one critic of the Kyoto process, successful domestic experiments in emissions trading (such as the US system for trading sulphur dioxide emissions) offer "little assurance that international permit trading will work."[38] Certainly, there are significant difficulties to be overcome in setting up such a system, and even more pressures as it comes into force. The integrity of the system would be seriously damaged if a major player withdraws, while success offers a model for international cooperation that can be used as a precedent for work on other issues.

The sheer complexity of negotiating MEAs means that many members of delegations will inevitably be forced to focus on technical issues. A foreign policy perspective – developed from a clear vision and a strategic engagement, not with the environment, but with the global issues as a whole – will add significant value.

Meeting the Challenge

Environment and global issues · Proliferating uncertainty · New expertise · New structures · New knowledge

Foreign policy-makers face an increasingly complex world. Post-modern states must develop methods of relating to other states in the post-modern system. And they must develop different modes of interaction with modern states, and those that have descended into pre-modern crisis. Protecting security interests is seldom likely to be

black and white, while a growing number of non-security interests are becoming foreign policy goals.

Although the post-modern state still has great legitimacy, it must work hard to explain and develop its role, through an engagement with global issues and partnerships with state and non-state actors. Foreign policy must be developed out of an engagement with global issues and from an understanding of what each issue looks like globally, as well as from the perspective of many different nations (figure 6). The environment is an issue of significance, but it cannot be considered in isolation. It requires input from policy-makers prepared to consider the economic and social consequences of actions they are advocating or opposing. It is not possible to consider any issue as of purely international consequence. In a post-modern system, the distinction between domestic and foreign policy is inevitably blurred, with domestic departments becoming increasingly international in their perspective, and leading on most global issues.

Engaging with the environmental agenda presents foreign policy-makers with many challenges. They need to develop and express environmental policy that 'fits' with the aspirational nature of broader government policy. Simultaneously, they have to work in an area where levels of uncertainty are high. Proliferating uncertainty must not lead to paralysis, so skills must be developed in making decisions on the basis of imperfect information. In this area, as in many others, the search for the perfect can become the enemy of the good.

Figure 6

Answers will seldom appear, but they may evolve, especially when a clear vision provides parameters against which action can be judged. Pragmatism, and a willingness to experiment, are important, but within a strategic approach that sets goals and priorities. Communication is intrinsic to the process, as new narratives are developed with an understanding of competing values at its heart.

These challenges will not be met without new types of expertise, new ways of working, and new organisational structures. According to a January 2000 Foresight Report on the future of the Foreign Office, the FCO is currently good at tactics in international relations, gaining access to decision-makers, and explaining itself clearly. However, it needs to improve its ability to develop strategies, set priorities, and encourage creativity and ideas. It also identifies a need for a 'step change in expertise', with the current expectation that staff will excel in languages developed to reward excellence in understanding of global issues.

The new organisational forms will favour flexibility, with two types of expertise likely to be valuable: deep knowledge of a key technical subject; and broad knowledge across a number of interlinked policy areas. Most people will be expected to develop 'light armour' expertise across a number of issues, developing:

- a broad, big picture view of the issue;
- a 'functional' understanding of a small number of key components within that issue;
- an 'operational' understanding of one or two key components within the issue.[39]

The challenge is to develop a new way of developing and using knowledge. According to Michael Gibbons, “it is the nature of contemporary knowledge production that no matter where one is, more than 99 per cent of the knowledge needed lies elsewhere, outside the institution.” Organisations must respond by creating networks of expertise, problem-solving complexes that “bubble up like molasses on the stove” as intellectual resources shift from “area to area, problem to problem to problem, grouping to grouping.”[40]

The challenge is a profound one, which has the potential to fundamentally change the way foreign policy is approached. As Gibbons concludes: “though problems may be transient and groups short-lived, the organisation and communication pattern persists as a matrix from which further groups and networks, dedicated to similar problems, will be formed.”

Novel problems always call for organisational innovation. The global environment is no exception, requiring us to address what we govern, how we govern it – and why.

[1] Henry Kissinger, often considered the pre-eminent realist, has recently advocated a merger of idealism and realism:

"Coinciding with the end of the Cold War, the combination of self-satisfaction and prosperity has engendered a sense of American destiny that expresses itself as a dual myth: on the left, many see the United States as the ultimate arbitrator of domestic evolutions all over the world… On the right, some imagine that the Soviet Union's collapse came about more or less automatically as the result of a new American assertiveness expressed in the change of rhetoric ('the Evil Empire') rather than from bipartisan exertions spanning nine administrations over almost half a century… Either interpretation makes it difficult to elaborate a long-range approach to a world in transition. Such controversy on foreign policy as takes place is divided between an attitude of missionary rectitude on one side and a sense that the accumulation of power is self-implementing on the other. The debate focuses on an abstract issue: whether values or interest, idealism or realism, should guide American foreign policy. The real challenge is to merge the two."

Kissinger argues for "an unapologetic concept of enlightened self-interest," where the USA avoids the "self-indulgence or self-righteousness of the protest period," while avoiding a "return to the policies of the Cold War or of eighteenth-century diplomacy."

America at War: Henry Kissinger, The National Interest, No. 64, Summer 2001.

[2] The Postmodern State and the World Order: Robert Cooper, Demos, 1996. A second edition of Cooper's pamphlet has been published by Demos and the Foreign Policy Centre, 2000. Cooper was Head of the Policy Planning Staff at the FCO and is now Deputy Secretary of the Defence and Overseas Secretariat in the British Cabinet Office.

[3] Globalisation: David Held, Anthony McGrew, David Goldblatt and Jonathan Perraton, Foreign Policy Centre, 1999.

[4] Cooper is dismissive of the work of Francis Fukuyama. Although he believes "the open state system is the ultimate consequence of the open society," he denies that this is "intended to represent some inevitable Hegelian progression. Progress it certainly represents, but there is nothing inevitable about it. In particular, there is nothing inevitable about the survival of the post-modern state, in what remains a difficult environment."

It seems certain, however, that Cooper owes a debt to Fukuyama and his influential concept of "the end of history". For Fukuyama, as for Hegel and Marx, History ("a single, coherent, evolutionary process, when taking into account the experience of all peoples in all times") can be distinguished from history ("the occurrence of events"). It is history that has ended, as liberal democracy offers a system of government that satisfies the basic needs of humankind.

Fukuyama proposes that modern science, which is directional and progressive, has driven the evolution of capitalism, with the "progressive conquest of nature" allowing the increased satisfaction of human desires. Technology has had a uniform effect on societies, all of which need advanced weapons to maintain their security. It has also led to a homogenisation of societies – "all countries undergoing economic modernization must increasingly resemble one another: they must unify nationally on the basis of a centralized state, urbanize, replace traditional forms of social organisation like tribe, sect, and family with economically rational ones based on function and efficiency, and provide for the universal education of their citizens." Centrally planned systems are capable of some economic development, but cannot cope with the growing complexity of an advanced economy, or allocate resources as effectively as the market. Capitalism is not reversible, because technologies cannot be uninvented: "Modern natural science… is so powerful, both for good and for evil, that is very doubtful whether it can ever be forgotten or 'uninvented' under conditions other than the physical annihilation of the human race."

Humans, however, are not just defined by their needs. Hegel believed that people were motivated by a desire for recognition of their dignity. He described a primordial "first man" who competed for recognition and became either master or slave, depending on his boldness. The condition of each was imperfect. The slave had no rights and was unrecognised. The master was only recognised by his mastery over slaves, which was unsatisfactory because of the slaves' debasement. In time, however, the slave begins to achieve a measure of self-recognition through the dignity of work. "Work itself represented freedom because it demonstrated man's ability to overcome natural determinations, to create through his labour." The master, meanwhile, became degraded by his idleness and his need for wars that would reinforce his self-worth. "It was the slave's continuing desire for recognition that was the motor which propelled history forward, not the idle complacency and unchanging self-identity of the master. Liberal democracy cleared the way for the last man, who exists in a state of mutual recognition. … No other arrangement of human social institutions is better able to satisfy this longing and hence no further progressive historical change is possible."

Like Cooper, however, Fukuyama believes that the world will face a divided system for the time being, as nations decide whether other forms of government (Islamic or authoritarian capitalist, for example) are indeed as satisfying as liberal democracy. He divides the world into the historical and the post-historical: "within the post-historical world, the chief axis of interaction between states would be economic, and the old rules of power politics would have decreasing relevance… On the other hand, the historical world would still be driven with a variety of religions, national and ideological conflicts depending on the stage of development of the particular countries concerned, in which the old rules of power politics continue to apply."

The End of History and the Last Man: Francis Fukuyama, Penguin Books, 1992.

[5] Lord Palmerston famously said: "We have no eternal allies, and we have no perpetual enemies. Our interests are eternal and perpetual, and these interests it is our duty to follow."

Some criticise the current government for failing to understand Palmerston's dictum: "In the face of the reckless policies of Tony Blair—whom I have characterized elsewhere as the British Gorbachev, in that he believes that statesmanship consists of taking flying leaps into the future without any clear idea of where one will land—that tradition and that political culture are proving incapable of keeping even the United Kingdom united. Already the term 'British' has a diminished application… Was it Nietzsche or was it De Gaulle who described states as 'cold monsters'? [it was Nietzsche] In any case it was Britain's own Lord Palmerston who insisted that "We have no eternal allies and we have no perpetual enemies. Our interests are eternal and perpetual, and those interests it is our duty to follow."

The Anglosphere Illusion: Owen Harries, The National Interest, No. 63, Spring 2001.

[6] The argument that economic interdependence makes war unlikely between advanced industrialised economies was famously made by Norman Angell – 2 years before the outbreak of the First World War. The claim that democracies do not fight each other has a better pedigree.

The Great Illusion: A Study of Relations of Military Power in Nations to Their Economic and Social Advantage: Normal Angell, William Heinemann, 1912.

[7] Again, the last time economic globalisation was seen as irreversible was before the First World War, as memorably characterised by Keynes: "That happy age lost sight of a view of the world which filled with deep-seated melancholy the founders of our political economy. Before the eighteenth century mankind entertained no false hopes. To lay the illusions which grew popular at that age's latter end, Malthus disclosed a devil. For half a century all serious economical writings held that devil in clear prospect. For the next half century he was chained up and out of sight. Now perhaps we have loosed him again.

What an extraordinary episode in the economic progress of man that age was which came to an end in

August 1914! The greater part of the population, it is true, worked hard and lived at a low standard of comfort, yet were, to all appearances, reasonably contented with this lot. But escape was possible, for any man of capacity or character at all exceeding the average, into the middle and upper classes, for whom life offered, at a low cost and with the least trouble, conveniences, comforts, and amenities beyond the compass of the richest and most powerful monarchs of other ages. The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages; or he could decide to couple the security of his fortunes with the good faith of the townspeople of any substantial municipality in any continent that fancy or information might recommend. He could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without passport or other formality, could despatch his servant to the neighbouring office of a bank for such supply of the precious metals as might seem convenient, and could then proceed abroad to foreign quarters, without knowledge of their religion, language, or customs, bearing coined wealth upon his person, and would consider himself greatly aggrieved and much surprised at the least interference. But, most important of all, he regarded this state of affairs as normal, certain, and permanent, except in the direction of further improvement, and any deviation from it as aberrant, scandalous, and avoidable. The projects and politics of militarism and imperialism, of racial and cultural rivalries, of monopolies, restrictions, and exclusion, which were to play the serpent to this paradise, were little more than the amusements of his daily newspaper, and appeared to exercise almost no influence at all on the ordinary course of social and economic life, the internationalisation of which was nearly complete in practice."

The Economic Consequences of the Peace: John Maynard Keynes, Harcourt, Brace and Howe, 1920.

[8] Who Elected the WTO? Economist, September 27 2001.

[9] Clamour against Capitalism Stilled: Financial Times, October 10 2001.

[10] Speech by the Chancellor Gordon Brown to an audience of American and British businessmen at the Yale Club, New York. www.hm-treasury.gov.uk/press/2001/p91_01.html

[11] Opposition to this view is clearly stated in an Ecologist editorial on the World Bank, International Monetary Fund and World Trade Organization:

"One strategy could be to use the threat of securing sufficient public support for the severing of national contributions to the World Bank, IMF and WTO to exact far-reaching changes that might make them tolerable in the short-term. The World Bank and IMF would thus be forced to cease entirely from imposing policies of structural adjustment, however renamed, and in all contexts, including that of debt relief. The Bank would be made to close its private sector divisions that dole out loans and guarantees to corporations, and end lending towards most large-scale infrastructure projects, including fossil fuel developments. The WTO, meanwhile, would be gutted of all the agreements and rules that prevent countries protecting their small farmers, workers, traditional cultures and natural environment. All multilateral debt that is owed to the three institutions would be forgiven, and all three would be forced to undergo fundamental democratisation that would remove control over them by the G7 countries.

"But to make these institutions truly compatible with the interests of the world's citizens would require a more complete transformation of their goals away from fostering policies of economic globalisation, that serve primarily the interests of large corporations, towards promoting policies that facilitate localisation and environmental protection. The nurturing of vibrant local economies is the only sustainable way to generate and protect sufficiently secure livelihoods, food security, community cohesion, political accountability, a healthy environment, and cultural diversity, which are the best remedies for poverty.

"It is doubtful that the staff and culture of the World Bank, IMF or WTO – used as they are to adopting a veritably Maoist approach in their uniform prescriptions for development around the world – would be best placed or able to fulfil such new functions. Necessary institutions – whether global or regional – might have to be built from scratch and in such a way that they remain immune from the sort of corporate capture that seems to have befallen most global and indeed national institutions to date. Their exact design could be decided by a second Bretton Woods conference made up largely of citizens' organisations from around the world."

Editorial: Ecologist, 2001.

Eliminating World Poverty: Making Globalisation Work for the Poor: White Paper on International Development, Department for International Development, December 2000.

[12] The Clinton Administration's 'Reinventing Government' initiative helped put 'distrust of government' onto the agenda, and several initiatives are examining how trust can be rebuilt. These include a Harvard University John F. Kennedy School of Government initiative "Visions of Governance for the Twenty-First Century", led by Dr Elaine C. Kamarck, and the Public Relations Society of America's "Deconstructing Distrust" seminars. The latest UK House of Lords Science & Technology Committee report suggests "much interest [but] little trust" in government and industry-led scientific research, and notes that "various surveys consistently show negative public responses in respect of science associated with government or industry, and in respect of science not obviously directed towards a clearly beneficial purpose such as human health." Publications on the Internet, Science and Technology – Third Report. Science and Technology Committee Publications, House of Lords, Session 1999–2000.

[13] The End of Foreign Policy? British Interest, Global Linkages and Natural Limits, Peter Hain, Fabian Society, Green Alliance and Royal Institute of International Affairs.

Hain makes interesting reference to foreign policy networks: "International policy will no longer be split into arbitrary compartments. Rather, work will centre on 'convergent' policy solutions which provide gains for all actors. Networks will form around these issues where all with an ability to contribute, or a stake in the problem, will work towards solutions." He comments that "International organizations will have to become more permeable to participate effectively in these new networks. They will have to build stronger and more explicit partnerships with other bodies, and reject the counterproductive turf wars of the past."

Successful networks are, we believe, most likely to develop when each node has a clear sense of its own identity, remit and objectives – another reason that states assert and express their legitimacy in order to facilitate partnerships. It is possible, in less confrontational times, that such assertion will be welcomed by NGOs and business, as they become correspondingly more able to assert their own roles and play to their own strengths. An acceptance of such a mixed economy is still a distant goal, unfortunately.

[14] Joseph S Nye Jr (1998): U.S. Security Policy: Challenges For The 21st Century. USIA Electronic Journal, Vol. 3, No. 3, July 1998

[15] Environmental Modernisation: The New Labour Agenda, Michael Jacobs, Fabian Society, 1999.

[16] The three spheres are not independent. They intersect, with positive or negative feedback between spheres being more common that not. Anything that affects the 'capabilities' of people is likely to have an impact on economic growth, while wealth allows societies to further improve quality of life. The environment, meanwhile, provides people with goods and services, but can also provide conditions detrimental to human needs. In effect, three hugely complex systems are interacting, in poorly understood but vitally important ways.

[17] Globalisation and its Critics, Economist, September 27 2001.

The Economist adds: “The liberal case for globalisation is emphatically not the case for domestic or international laisser faire. Liberalism lays down no certainties about the requirements of social justice in terms of income redistribution or the extent of the welfare state. It recognises that markets have their limits, for instance in tending to the supply of public goods (such as a clean environment). A liberal outlook is consistent with support for a wide range of government interventions; indeed a liberal outlook demands many such interventions. But the starting point for all liberals is a presumption that, under ordinary circumstances, the individual knows best what serves his interests and that the blending of these individual choices will produce socially good results. Two other things follow. The first is an initial scepticism, at least, about collective decision-making that overrides the individual kind. The other is a high regard for markets—not as a place where profits are made, it must be stressed, but as a place where society advances in the common good.”

[18] According to John Williamson, the inventor of the term ‘Washington Consensus’, his formulation has been misused:

“In the minds of many economists, the term has become a synonym for 'neoliberalism' or what George Soros has called 'market fundamentalism' (which is far and away my favorite term for this set of beliefs). Now anyone who read the preceding section of this paper will recognize that this was hardly the sense in which I originally used the term. On the contrary, I thought of the Washington Consensus as the lowest common denominator of policy advice being addressed by the Washington institutions to Latin American countries as of 1989, a year when the market fundamentalism of Reagan's first term had already been superseded by the return of rational economic policymaking and it was pretty clear which of the ideas of the Reagan years were going to survive and which were not (monetary discipline but not monetarism, tax reform but not tax-slashing, liberalisation of trade and FDI but maybe not complete freedom of capital movements, deregulation of entry and exit but not a casual attitude to prudential supervision of financial institutions or the suppression of regulations designed to protect the environment).”

What Should the Bank Think about the Washington Consensus: John Williamson, background paper for the World Bank's World Development Report 2000, July 1999, www.iie.com/papers/williamson0799.htm

We use the term here in its bastardised sense.

[19] Bloom, Kasselow and River Path have argued that health is another important cross-cutting issue that is increasingly important to international relations and justifies action (here argued from a US perspective):

Three reasons for action stand out. First, new diseases will almost certainly emerge and protective measures can be taken now. Second, the assumption that globalization is “normal, certain, and permanent, except in the direction of future improvement” is as mistaken today as when John Maynard Keynes wrote those words about the world of 1914.[19] And third, because the ability to tackle health problems is rooted in scientific and technological progress, which the US has the capacity and will to deliver.

The United States and Global Health, David E. Bloom, Jordan Kasselow and River Path Associates, unpublished

[20] Role of science: international research programmes (International Geosphere–Biosphere Programme, World Climate Change Research Programme, International Human Dimensions of Global Change Programme, Global Climate Observing System, Global Ocean Observing System, Global Terrestrial Observing System); policy advice to bodies such as the Intergovernmental Forum on Chemical Safety, the Intergovernmental Forum on Forests, and the climate change, biodiversity and desertification conventions; independent scientific assessment such as the Intergovernmental Panel on Climate Change and the Joint Group of Experts of Scientific Aspects of Marine Environmental Protection. (UNEP 2000)

[21] It is still frustratingly difficult, for example, to reach agreement on which countries are closed to achieving sustainability.

The Earth Institute's Center for International Earth Science Information Network at Columbia University, the Yale University Center for Environmental Law and Policy, and the Global Leaders for Tomorrow Environment Task Force of the World Economic Forum have recently developed an Environmental Sustainability Index, described as "the most comprehensive global report comparing environmental conditions and environmental performance across nations… Comparable to the Gross Domestic Product (GDP), a central indicator for health of a country's economy, the ESI distils the health of a country's environment to a single number ranging from 0 to 100. This number represents a country's environmental success—its ability to sustain human life through food resources and a safe environment, to cope with environmental challenges and to cooperate with other countries in the management and improvement of common environmental problems." According to the ESI, the top country, Finland, registered 80.5 and the bottom country, Haiti, scored 24.7. The United States was placed 12th.

The Ecologist, however, described the ESI as "misleading in the extreme, and represents some of the worst ecovillains as the world's good guys; to the benefit of the powerful nations. This implies not only that modern industrialised nations are getting it right on the environment, but also that to be 'environmentally sustainable', poorer countries need to go down the same development path as richer countries. In fact, achieving genuine sustainability will require far more changes from richer countries." It recalculated the index, using the same data but different weightings, and found that the "very unsustainable US… plunges from 11th in the rankings to 112th. At the other end of the scale, the Central African Republic, Bolivia and Mongolia are elevated to the top three. This reflects the good environmental conditions in their own country, and the small effect their development has on global ecosystems."

Environmental Sustainability Index – An Initiative of the Global Leaders of Tomorrow: Environment Task Force, World Economic Forum, Annual Meeting 2001, Davos, Switzerland.

Study Shows Finland, Norway and Canada Rank as Top Countries in Environmental Sustainability: ESI Press Release, 25 January 2001.

Keeping Score: Ecologist.

[22] The Global Food Fight: Robert Paarlberg, Foreign Affairs, May/June 2000.

[23] The green movement, and later the sustainable development movement, have created a battery of new concepts. The International Institute for Sustainable Development has provided the following very helpful glossary of key concepts:

Carrying capacity is the maximum number of individuals of a defined species that a given environment can support over the long term. The notion of limits is fundamental to the concept of carrying capacity. However, our limited understanding of complex, non-linear systems leads to uncertainty in calculating carrying capacity in relation to humans. Some argue that the concept is meaningless as free market conditions and technological innovation can extend limits indefinitely.

The steady state economy is a human economy characterised by constant population, capital stocks and rate of material/energy throughput such that there is sustainable equilibrium between human activities and the environment. While these elements are constant, 'cultural capital' can change; thus a distinction is made between growth (quantitative) and development (qualitative).

Environmental utilisation space or ecospace is the capacity of the environment to support human activities by regenerating renewable resources and absorbing waste. The boundaries of environmental utilisation space

are determined by the patterns and level of economic activity. A distributional element can be added by allocating ecospace at a national or per capita level, and is thus useful in illustrating present inequities.

Ecological footprint is the area of land and water required to support a defined economy or population at a specified standard of living. Industrialised economies are considered to require far more land than they have, thus, through trade, impacting on resources in other countries. Also known as 'appropriated carrying capacity', this concept also incorporates the distributional aspects of sustainable production and consumption.

Ecological rucksack is the total weight of material flow 'carried by' an item of consumption in the course of its life cycle. Like the ecological footprint, the ecological rucksack concept deals with displaced environmental impacts but has a more technical focus. It is concerned with reducing material intensity and resource inefficiency.

Eco-efficiency is the more efficient use of materials and energy in order to reduce economic costs and environmental impacts. This is widely considered a pragmatic approach, particularly among business, but it has been noted that improved unit efficiency does not necessarily lead to lower consumption levels. Economic output may rise with constant or reduced resource inputs.

Material intensity per service unit (MIPS) is an indicator based on the material flow and the number of services or utilisations provided. Reducing the MIPS of a product is equivalent to increasing resource productivity.

Factor Four is the idea that resource productivity should be quadrupled so that wealth is doubled, and resource use is halved. The concept has been summed up as 'doing more with less'. It is argued that this would result in substantial macro-economic gains.

Factor Ten is the idea that per capita material flows caused by OECD countries should be reduced by a factor of ten. Globally, claim proponents, material turnover should be reduced by 50 per cent, but because OECD countries are responsible for material flows five times as high as developing countries, and world population is inevitably increasing, the OECD has to set long-term targets well beyond the more conservative Factor Four target.

Natural capital is an extension of the economic notion of capital (manufactured means of production) to environmental 'goods and services'. It refers to a stock (e.g. a forest) which produces a flow of goods (e.g. new trees) and services (e.g. carbon sequestration, erosion control, habitat). Natural capital can be divided into renewable and non-renewable; the level of flow of non-renewable resources (e.g. fossil fuels) is determined politically.

Natural resource accounting and green GDP are alternative systems of national accounting and performance measures, which incorporate ecological and human welfare considerations. They are a way of better understanding the implications of economic activity for environmental integrity and human well-being. However, placing a monetary value on pollution and resource extraction is controversial and presents methodological difficulties.

Environmental debt is the cost of restoring previous environmental damage as well as the cost of recurring restoration measures. Unless measures are taken to alleviate environmental degradation, environmental debt continues to rise and the burden is transferred to future generations. However, some environmental damage such as species extinction is not restorable, and therefore cannot be included in the environmental debt.

Industrial ecology uses the metaphor of metabolism to analyse production and consumption by industry, government, organisations and consumers, and the interactions between them. It involves tracking energy and material flows through industrial systems, e.g. a plant, region, or national or global economy.

Inter-generational equity is the principle of equity between people alive today and future generations. The implication is that unsustainable production and consumption by today's society will degrade the ecological, social, and economic basis for tomorrow's society, whereas sustainability involves ensuring that future generations will have the means to achieve a quality of life equal to or better than today's.

Intra-generational equity is the principle of equity between different groups of people alive today. Similarly to inter-generational equity, intra-generational equity implies that consumption and production in one community should not undermine the ecological, social, and economic basis for other communities to maintain or improve their quality of life.

http://iisd.ca/susprod/principles.htm

[24] The New Economics Foundation, in a recent editorial, attacked the promise of technology saying: "Alongside the mistaken assumptions of old economics – with its touching faith in abstractions that bear no relation to real life – there are, absolutely knitted together with them, the mistaken assumptions of what we might called 'old technology'. Just as technology seems to lie behind the market bubbles, conventional economists cling to the idea that somehow technology is central to human progress, vitally important in all our lives, and infallible."

[25] www.factorten.co.uk/carnoules_extract.htm

[26] Don't Blame the Butterfly: Robert Matthews, New Scientist, 171 (2302), August 4 2001.

[27] Bruno Latour characterises this is as a significant shift in the way knowledge is created, which he describes as the difference between science and research: "Science is certainty; research is uncertainty… Science puts an end to the vagaries of human disputes; research creates controversies. Science produces objectivity by escaping from the shackles of ideology, passions, and emotions; research feeds on all of those to render objects of enquiry familiar."

[28] Anthony Giddens (1999): Risk. BBC Reith Lectures. BBC. April

[29] Ultimately, the conference attempted to tie development to the environment and, in particular, developed countries reaffirmed their commitment to providing 0.7 per cent of GDP as development assistance in return for developing countries taking on environmental commitments. This implicit compact has been broken by both sides, although the failure of OECD nations significantly to increase development assistance has caused the most anger. Meanwhile, public enthusiasm for international meetings has declined sharply and it seems inconceivable that the World Summit on Sustainable Development in Johannesburg in 2002 will be supported by a Swatch or similar fashion statement.

[30] Strong makes the following assessment of the success of the earth summit. On the positive side, the Earth Summit had "assembled in Rio an unprecedented number of world leaders, civil society representatives and media; had produced agreement on two historic conventions, the one on Climate Change and the other on Biodiversity; had adopted the Rio Declaration on Environment and Development; and had approved Agenda 21, an encyclopaedic document of forty chapters setting out the basic framework for a comprehensive programme of actions… And that wasn't all. The conference had also led to the mandating by the UN General Assembly of a process for negotiating a Convention to Combat Desertification, not an insignificant achievement. And it had provided strong support for extending the mandate of (and mobilizing finances for) the Global Environment Facility… On the minus side: the Declaration of Rio, Agenda 21, the Agreement on Financing, Technology and Institutional Measures, as well as the Framework Conventions on Climate Change and Biodiversity had all been diluted in the process of achieving consensus. On key issues like population, energy, forests, and production and consumption, Agenda 21 was weakened to the point that it had far too little real 'bite'. Also, the Conventions on Climate Change and Biodiversity were only frameworks, leaving the

tough, substantive issues to the future.

"I knew that I could use my closing speech to declare the conference a failure. This would make me a popular hero among environmentalists, but it would be an awesome responsibility to take on. And would it be right?

"Despite the deficiencies and disappointments, all in all I felt the balance sheet reflected a good deal more progress than most people had thought possible. It would have been unrealistic to expect that a single conference, even at the summit level, would 'save the world'. Rio was never seen as the end of the road, but rather as an important milestone. Rio provided the road map for the journey ahead."

Strong is now more pessimistic, however, believing that "The doomsday clock is ticking towards a day of reckoning if we fail to change our ways. The political will to stop it seems lacking. Late at night in the witching hours, or when I am weary, the questions intrude: Have we the collective political, moral and ethical will to do it? Do we have a chance? Someone asked me again recently: "Don't you ever get frustrated with this saving-the-world business?" Well I said, the patient's still alive. In bad shape, yes, but still alive."

[31] Policy will have a vital effect on countries' ability to cope with their changing demographic profiles. Developing countries whose enlarged youth cohort is soon to enter the workforce will benefit from a focus on education and training, combined with flexible labour markets which can adapt to, and profit from, baby boom generations. AIDS, however, threatens to have an impact on working-age populations in many developing countries, with GDP expected to decline in some areas as a consequence. Richer countries, on the other hand, will need to look at healthcare and pension policy reform if ageing populations are not to become an intolerable burden on public finances.

Population Change and Economic Growth: David Bloom, David Canning and Jaypee Sevilla, RAND Corporation, 2001 (in press).

[32] Human Development Report 2000.

[33] The only recorded incident of an outright war over water was 4,500 years ago between two Mesopotamian city-states, Lagash and Umma, in the region we now call southern Iraq. Conversely, between the years 805 and 1984, countries signed more than 3,600 water-related treaties, many showing great creativity in dealing with this critical resource. An analysis of 1,831 international water-related events over the last 50 years reveals that two-thirds of these encounters were of a cooperative nature. Nations agreed, for example, to implement joint scientific or technological work, and signed 157 water treaties.

But others argue that when it comes to water, the past will not be a reliable guide to the future. A renewable but not infinite resource, fresh water is becoming increasingly scarce: The amount available to the world today is almost the same as it was when the Mesopotamians traded blows, even as global demand has steadily increased. Just since 1950, the renewable supply per person has fallen 58 per cent as world population has swelled from 2.5 billion to 6 billion. Moreover, unlike oil and most other strategic resources, fresh water has no substitute in most of its uses. It is essential for growing food, manufacturing goods, and safeguarding human health. And while history suggests that cooperation over water has been the norm, it has not been the rule. One-fourth of water-related interactions during the past half-century were hostile. Although the vast majority of these hostilities involved no more than verbal antagonism, rival countries went beyond name-calling on 37 recorded occasions and fired shots, blew up a dam, or undertook some other form of military action.

Sandra L Postel and Aaron T Wolf (2001): Dehydrating Conflict.. Foreign Policy. September/October.

[34] HDR 2000

[35] As a recent OECD study argued, knowledge can help developing countries skip stages of development: economist Paul Romer argues that it is "ideas, not objects, that poor countries lack," while the historian and economist David Landes suggests that, from the 16th century onwards (and especially following the expulsion of the Jewish community), intellectual isolation led to the economic stagnation of Spain, Portugal and even Sicily. For developing countries, openness allows the quick adoption of ideas generated elsewhere and helps economies to 'leapfrog' to a more advanced stage of development.

David E Bloom and River Path Associates, OECD, March 2000.

[36] Conservation strategies aimed at encouraging the sustainability of resources offer great opportunities to the poor. Forward-looking tourism in many parts of the developing world is increasingly focusing on involving, rather than excluding, local people, in a belated acknowledgement of their importance to environmental sustainability. "Imaginative tourism businesses," as a 1999 Department for International Development booklet argued, "are increasingly facing up to the challenge of the 'triple bottom line'. This accepts that economic, environmental and social factors must all be attended to simultaneously."

Changing the Nature of Tourism: DFID/River Path Associates, 1999.

[37] The UN Environment Programme's Global Environment Outlook 2000 outlined the recent history of MEAs, showing how greater layers of complexity were added from one generation of agreements to the next. In the early 1900s, MEAs took the form of "environmental agreements, such as those covering fish or birds… aimed more at regulating their exploitation or maintaining their economic usefulness than at protection for its own sake". Increasing knowledge led to "a gradual transition from such utilitarian approaches to a more general protection of endangered species" in the mid-1900s onwards.

In the 1970s, MEAs expanded from one or two issues to cover all aspects of environmental protection, but agreements continued to "emphasize conservation rather than addressing the totality of society's interaction with the environment". Complexity and scope increased further in the 1990s, with a growing focus on sustainability and "the global character of environmental law and its integration with development". As well as increased complexity, this broader focus brings increased controversy: "because holistic, multi-sector agreements involve so many different and cross-cutting areas of law, policy and politics, they can engender more conflict and problems than sectoral MEAs."

[38] The Collapse of the Kyoto Protocol: David G Victor, Princeton University Press, 2001.

[39] Issue = for example environment. Component = for example climate change negotiations. Classification of expertise follows FCO language skills rating: survival, functional, operational, and extensive.

[40] Michael Gibbons (1998): Speech delivered at World Conference on Higher Education. UNESCO, Paris. 5-9 October. Available at http://www.unesco.org/education/wche/pdf/ng_acu.pdf