



Club of Rome Presentation:
Concerted Strategies to meet the
Environmental, Economic and Development
Challenges of the 21st Century

Background paper 1

Strategic Challenges and Critical Issues:
Identifying the Root Causes of the Environmental, Economic
and Development Crisis

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This Background Paper focuses on the diagnosis of the challenges facing humanity in three key areas – Environment and Climate; World Development; and Economics and Finance. It demonstrates that the crises emerging in each of these areas have common roots. The elements of an integrated approach in response to these three connected crises are outlined in Background Paper 2, (GLF3,) including an outline of a number of Lines of Action. As these two Papers cover such an extensive range of issues and are therefore relatively long, they are complemented by a Policy Overview, (GLF4)

The background papers are based on the interim results after one year of research and consultation in the programme on A New Path of World Development. They reflect the broad views of the Club of Rome but do not engage its individual Members.

Introduction

Over the past forty years, the Club of Rome has been concerned to understand and to evaluate longer term challenges and opportunities and to take account of their inter-relationships, within a systemic view of the realities of today and of the prospects for future generations. In a new phase of its activities, approved at its 40th Anniversary assembly in Rome in June 2008, the Club has launched a three year, international programme of collaborative research and consultation to define the elements of “A New Path for World Development.”

The NPWD programme takes account of the complexity and interconnectedness of critical global challenges by focusing its analysis on five manageable “clusters” of interconnected issues within a coherent systems framework: Environment and Resources; Globalisation, Economics and Finance; International Development; Social Transformation; and Peace and Security. (*For further information see website: www.clubofrome.org.*)

As the first step in its new programme, the Club convened a small, high-level expert conference on “*Managing the Interconnected Challenges of Climate Change, Energy Security, Ecosystems and Water*” in Winterthur on 6th and 7th November 2008, drawing on its independent status, its worldwide networks and the expertise of its international and interdisciplinary membership.

The analysis and proposals developed at the Winterthur Conference were then used as inputs into a Policy Dialogue convened by GLOBE International and the Club of Rome in the Palace of Westminster, London, on 26th and 27th January. Adding an economic dimension, the Dialogue focused on the topic: “*Framing 2009’s Global Challenges in the Context of Global Economic Crisis: Developing a Response to the Interconnected Challenges of Climate Change, Energy Security, Ecosystems and Water.*” The Chairman’s Summary was presented to Prime Minister Gordon Brown

in his capacity as Chairman of the meeting of the G20 held on 2nd April.

It is within this context that the Club of Rome convened a high level conference in Vienna on 16th and 17th April, under the patronage of H. E. Dr. Heinz Fischer, Federal President of Austria on the topic: “*Concerted Strategies to meet the Environmental and Economic Challenges of the 21st Century.*”

Drawing on this preparatory work, the Club of Rome has the privilege to present its conclusions and proposals to the Annual Assembly of the G8 + 5 Legislators Forum in Rome on 12th June.

I. The Global Context: Strategic Challenges of the 21st Century.

1. In 1972, the report commissioned from MIT by the Club of Rome, “Limits to Growth”, outlined a number of scenarios for the longer-term future of humanity and the planet and suggested how effective policies and cooperative action could contain the threats to the future. Today, the issues raised by the Club are more urgent and threatening than they were some 40 years ago.

2. It is increasingly clear that, for a number of identifiable reasons, the current path of world development is generating such dangerous imbalances, inequities and environmental consequences that the prospects for peace and progress are now in question.

- In the opinion of scientists across the world, the threat of catastrophic climate change is real and only early and concerted action by the world community will avert the risk of massive impacts.
- Humanity is overusing the ecological capacities of the planet by around 35%: we are living not only off our biological revenue but off our capital. The ecosystems on which humanity depends are in decline, particularly

forests, oceans and productive land. Just as we will leave financial debts we will also leave vast biological deficits to be managed by future generations.

- The era of cheap oil is coming to an end. Competition for resources of all kinds, particularly energy, water and productive soils will increase.
- The needs of a growing world population, compounded by the rising consumption and waste of a growing middle class, will put added strain on the resources of the planet already under intense stress.
- Rising inequalities in income and wealth, coupled with poverty, hunger and exclusion, if not resolved, will trigger migration, unrest and conflict across the world.

3. We face an array of interconnected challenges on an unprecedented scale. If the current path of world development continues, then a “business as usual” scenario can be summarised as follows: if, after recovery from the present recession, the material consumption, resource use and emissions of the developed countries continue to increase as anticipated; if the poverty, deprivation and exclusion of the more than 2 billion people with less than \$2 per day are not ameliorated; if 2.3 billion additional people are to be added to world population by 2050; if an additional 2 billion people from emerging economies will join the middle class with the corresponding patterns of consumption and waste, then the ecological and environmental systems of the planet will break down under the increasing impacts of human activity. There will be little prospect for stability, progress and peace.

4. Humanity has the capacities to manage these challenges successfully – if concerted and early action is taken. But this will require a positive, motivating vision for the future, new ideas, effective leadership, new patterns of partnership and cooperation and a radical reordering of the economic system. This was the central message of “Limits to Growth” in 1972. Recognising that a radical change of direction is now urgent, the Club of Rome has launched a three year programme of international research and consultation which, in late 2010, will propose

the elements of A New Path for World Development.

5. The scale of these challenges is not only recognised by governments and civil society, but also increasingly by the business community. A recent global survey by PricewaterhouseCoopers concludes: “In the long term, half of CEO’s do not believe that governments and businesses will be able to mitigate the risks created by global trends. CEO’s see worldwide political and religious tensions increasing, the gap between rich and poor growing and a new set of countries emerging to challenge the group of eight industrial nations. Added to these challenges are the scarcity of key skills, climate change, the depletion of natural resources and the potential for over-regulation by government.”

6. It is in this context that we now face a financial crisis and a deepening recession. Two issues arise. Can we recover so as to return to the previous path of economic growth? And should we return to the previous path?

7. It seems clear now that the major, radical changes which have taken place in the world systems of finance, economics and production will not be easily reversed. As expressed by Mukesh Ambani, Chairman of Reliance Industries, India, “The last downturn was a cyclical downturn. This is a structural downturn. When you have cyclical events, things go up and come down. When you have a structural event, something fundamental changes. Our own view is that this is going to shake up fundamentals in a whole host of global economic areas.” The extent of the financial crash was made clear by Lawrence Lindsey, former Director of the US National Economic Council, on 11th March who pointed out that some \$23 Trillion in wealth had been destroyed through the declines in stock markets alone. Further, the productive system is now facing wrenching change throughout the world: “Auto production is down by two thirds compared to 2005 and, in China, 20 million migrant workers have so far lost their jobs.” (IHT 11/3/09). ILO estimated, in March 2009, that job losses in 2009 worldwide will approach 52 million. The depth of these structural changes is such that it is therefore unrealistic

to expect that we can return to the previous path of growth.

8. Also, we should not commit our efforts instinctively to achieve recovery to the previous path of world development as this path was headed into major dangers and would have proved in any case to be unsustainable, even in the short or in the medium term. In effect, the scale of the current financial and economic crises offers a unique opportunity to reorient our economies onto a path which is less environmentally devastating, more inclusive and equitable and which can deliver real improvement in human welfare on a substantial scale. Such a transformation is not an option but a necessity if we are to salvage the future.

9. In facing the major crises of climate and environment, poverty and development and finance and economic growth, we have three possible options:

(i) We could delay action on climate and development and give priority to resolving the financial and economic crises. But the scale and urgency of the climate and development issues is such that action cannot be delayed. Whereas the financial and economic crises are to a degree reversible, the threats of catastrophic climate change and ecosystem breakdown are not. Realistically, it is highly likely at this stage that the need to stabilise the financial system and to arrest the decline in production and employment will dictate that financial issues will in fact be given priority. However, once the economic situation is stabilised, the opportunity should be seized to reconsider and reorient economic activity onto a more equitable, stable and sustainable path.

(ii) Alternatively, we could consider that the issues of economics and environment can be treated separately, in parallel. This is the classic response, driven by disciplinary, sectoral, institutional and ministerial divisions: finance ministers will deal with the financial crisis; environment ministers with climate; and development ministers

with development. This will not, however, provide a lasting solution in practice because these issues in the real world are essentially connected.

(iii) Or we could – and we must – recognise the systemic nature and interconnectedness of the problems we face and try to develop integrated approaches which recognise the critical importance of the links between them. This is a central purpose of the work of the Club of Rome.

10. The Chairman of GLOBE International, in his summary of the Joint GLOBE-Club of Rome Dialogue in London in January 2009, made the following key points, based on the broad consensus of the legislators, scientists and experts from across the world who participated:

- We face five parallel crises – financial, economic, climate, energy and ecosystems – all caused by the fundamental unsustainable use of resources, whether in the economy or in nature; combined with the real threat of peak oil
- The political response to the financial crisis and the outcome of the UN negotiations in Copenhagen will determine whether we continue on the path of unsustainable consumption and environmental degradation or begin the move to a new economic model with more efficient use of energy and resources, transformational investment in clean energy, and incorporating a real economic value for natural capital and ecosystem services.
- The political will for economic reforms, triggered by the financial crisis, represents a unique window for coordinated governmental action across the major economies; we may not get such an opportunity again
- As leaders consider public spending packages to stimulate our economies at the G20 Summit in April, we urge them not to deal with the financial crisis in isolation, but to take into account the underlying challenges of climate change, energy security, ecosystems decline and equitable

world development; otherwise, our efforts will ultimately fail

- We believe that climate, energy and ecosystems objectives are not only consistent with, but fundamental to, sustainable economic recovery

11. At this time of major transformation, the challenge to societies and enterprises is to embrace the need for change and innovation so as to revitalise their economies and provide an improved quality of life and stable employment within the constraints of the natural environment. If the massive stimulus programmes now being launched across the world simply reinforce established financial and economic activities, often energy intensive and polluting, they will be far less effective than if the resources are used to promote innovation and green growth and to put the world economy onto a sustainable path.

12. We have understood that “business as usual” is not a viable option in the field of climate change. We must now recognise that this is also true in respect of the destructive impacts of humanity on the natural world and also to the path of the global economy and world development. The strategic dilemma can be seen as follows.

13. As reported in the IHT on March 12th, Prime Minister Gordon Brown delivered a resounding message in his address to a joint session of Congress, “a message of faith in a future beyond protectionism, in a world economy that will double in size over the next two decades as billions of people move from being simply producers of their goods to being consumers of our goods, not least those produced by new green technologies. So we must educate our way out of the downturn, invest and invent our way out of the downturn and re-skill our way out of the downturn.”

14. The critical question is whether it is feasible that the world economy can in reality double in size over the coming two decades, recognising the ecological, environmental and social implications of such an expansion. If this is not possible, then we must find a new path of development. This is a feasible

objective. The direction and the “quality” of growth and of technological progress are not predetermined by market forces or by technological progress. They are social choices – a function of the values, culture and aspirations of each society. We have therefore the opportunity to choose among many alternative futures to improve the lives of both present and future generations. To achieve such a reorientation of growth we must have the vision and courage to conceive a new path of progress, to confront the problems of transition and to generate the public support needed to overcome the inevitable resistance to change.

II. Critical Issues which will determine the Future

1. Climate, Ecosystems, Energy, Oceans and Fresh Water.

15. Climate change is only one of the intensifying environmental challenges which threaten the future, driven by the scale and impacts of human activities through consumption, waste and pollution and the overuse of the biological resources of the planet – as anticipated by the Club of Rome some forty years ago. We confront a systemic crisis not only in regard to climate change but, more broadly, across the fields of climate, ecosystems, energy and water: a crisis of the sustainability of human welfare and progress on a fragile planet. It is important to note that such broad, global, systemic crises do not respond to ad hoc, partial, or national measures, as we have seen so clearly in the evolving response to the financial crisis.

16. In November 2008, The Club of Rome convened the high-level expert conference in Winterthur on the topic “Managing the Interconnected Challenges of Climate Change, Energy Security, Ecosystems and Water.” These issues constitute the first “cluster” of issues to be analysed in the Club of Rome Programme on A New Path for World Development. (See www.clubofrome.org. For a more extensive presentation of these issues, see the policy notes of the Winterthur and London Conferences.)

(a) Climate Change

17. Physical evidence and analysis from all over the world demonstrate that climate change is moving faster than anticipated while emissions continue to increase in spite of all efforts and negotiations to date. Concern is rising in the scientific and expert communities - which are aware of the evidence and have developed a deeper understanding of the science and the systems dynamics of climate change - that we are approaching a tipping point beyond which the positive feedbacks set in motion by human-originated emissions, (which stimulate further rises in temperature), will become more damaging than the impact of the emissions themselves and will overwhelm our ability to avert potentially catastrophic climate change.

18. In spite of inevitable uncertainties and disagreements, the case is clear that climate change does represent an existential threat to our civilisation and this within, at best, several decades. According to a growing body of scientific opinion, the current target of international negotiations, to contain greenhouse gas concentrations in the atmosphere to 450 parts per million is too high. In any case, it offers only a 50% probability of containing the global average temperature rise to 2°C, which implies double this rise in many regions of the world, for example, at the Greenland ice sheet - with major implications for sea level rise.

19. In the light of new evidence and improved understanding of the systems dynamics of climate change, scientific and expert opinion is increasingly convinced that the target must be no more than 350 ppm if we are to be assured that catastrophic climate change will be averted. (This would imply that, over a period of time, not only must emissions be cut drastically but also, CO₂ would have to be removed from the atmosphere.)

20. Policy makers must recognise that climate change will not be a gradual, linear process: sudden and dramatic changes are probable and have occurred in the past. Denial and delay will not only increase the costs of mitigation and abatement as shown by the Stern Review but will crucially

increase the risk of catastrophic climate change. Thus, the urgent imperative to limit the concentration of greenhouse gases in the atmosphere to a safe level is dictated by the absolute need to avert the risk of catastrophic climate change. Decisions on the costs and benefits of intervention must be seen in this perspective.

21. Through the scale of its impacts on the environment, humanity is, for the first time, putting at risk the prospects of future generations on a global scale: legislation and policies must therefore focus on the management of risk and the prevention of catastrophic outcomes, not only on the potential costs and benefits of alternative lines of action.

22. We have less time to act than we have assumed. Besides the extended process of negotiation, ratification, resource allocation and implementation, radical and urgent action must therefore be taken in parallel to mobilise the vast potential of knowledge, technology and resources which is available now so as to counter the emerging threats to human, national and international security.

23. Climate change is not a problem for the future alone: the impacts are being felt today across the world, especially by the poor and deprived. They have not caused the problem but they do suffer the consequences. This raises profound ethical and humanitarian issues around the concept of climate justice. Through its impacts on rainfall patterns, extended water stress and ecosystems degradation, climate change will compound the consequences of population growth and of the emerging food and water crises in fragile environmental conditions, preventing the attainment of the Millennium Development Goals for hundreds of millions of people. Besides mitigation, strengthened and immediate efforts in support of adaptation are vital, but these must be part of a wider effort to improve human security, to eradicate poverty and to accelerate sustainable development.

(b) Ecosystems

24. Humanity is overusing the biological resources of the planet each year by around

35%, which is clearly unsustainable, and this excessive use is increasing. Ecological systems, both terrestrial and ocean, constitute vital carbon sinks, absorbing some 40% of human generated emissions. As these ecological systems, such as forests, degrade through rising temperature and water stress, they absorb less carbon, aggravating global warming. Also, the speed of temperature increase is of profound importance to the survival of ecosystems: a 0.1°C rise in one decade puts 15% of the affected species at risk.

25. Deforestation also has massive impacts on biodiversity. And it is responsible for around 20% of global carbon emissions, more than all the cars, boats and planes in the world, (The Economist). Around 13 million hectares of forest are destroyed each year.

(c) Energy

26. We are approaching the end of the era of cheap oil on which Western civilisation and economic activity are based: additional reserves are not being found at a rate sufficient to compensate for depletion. Projected growth in demand is unlikely to be matched by comparable growth in supply, for a variety of reasons - technical, geological and political. In addition, population growth and the rising aspirations of a growing world middle class are rapidly increasing demand for limited resources, raising profound issues of both energy security and national security as the competition for vital resources intensifies.

27. Energy consumption has risen 47% in the last 20 years, (USDOE). It is estimated that, based on current trends, world demand for oil could reach around 140 million barrels per day, (bpd) in 2030, while the IEA and USDEA view is that production of around 118 million bpd may be feasible. An industry view is that 100 million bpd is optimistic. The present level is around 85-90 million bpd.

28. One consequence of the financial and economic crisis has been a falling-off of investment in all sectors of energy, including new and renewable. Once world economic activity recovers therefore, the price of

energy will again rise and the poor across the world will be increasingly excluded from access to the energy resources which are vital to survival and development, unless special measures are implemented. This will put added pressure on biological sources of fuel, further aggravating the pressures on fragile land, forests and ecosystems.

29. A further consideration is that policies to improve energy security may well be inconsistent with the energy policies which are essential to move towards low carbon economies. This has been demonstrated by the debates on biofuels and tar sands. Thus, energy security and climate change must be considered together.

(d) Oceans and Fresh Water

30. The number of dead zones in the oceans has doubled every ten years since 1960 as a result of nitrogen runoff from fertilizers and other pollutants, (Science.) Sea temperatures have risen on average 0.5°C over the past 40 years while the acidity of oceans has risen 30% since the Industrial Revolution and is now reaching dangerous levels. Fish provide protein to hundreds of millions of people but stocks have declined to an alarming and in some cases, irreversible extent.

31. Fresh water is under stress all over the world. Climate change will aggravate the problems in several ways: for example, changes in rainfall patterns, droughts and floods will impact on food and human security; temperature rise will eventually reduce water run-off from glaciers and will increase water stress in many regions. And rising sea level will contaminate aquifers in coastal regions.

32. Global water consumption is doubling every 20 years, an unsustainable rate. (The Economist). IPCC expects by 2020 an increase of about 75-250 million people suffering from climate-induced water shortages in Africa alone, with a potential falloff in rain fed agriculture of up to 50%. In South America, the water resources of Lima depend over 80% on the glaciers of the Andes which have lost a third of their volume between 1970 and 1997 and may disappear in the coming decades. (DIE).

2. Development Challenges

33. Humanity has made remarkable progress to achieve a better world and to improve living standards and opportunities for many. Additional hundreds of millions of people are joining the middle class and the number of people living in abject poverty – until recently – was in decline. The world's average life expectancy is increasing (from 48 years in 1955 to an anticipated 73 for those to be born in 2025, WHO) and illiteracy has fallen from around 37% in 1970 to around 18% today, (UNESCO). And we are living in a time of explosive growth of knowledge and of the capability to disseminate it cheaply and effectively.

34. But we live in a world of contradictions: over 1 billion people live on \$1 per day or less, the benchmark of absolute poverty; around 1.5-2 billion people live on an income of \$1-\$2 per day (The Economist) – in a \$66 Trillion (ppp) economy! And we live in a world of rising inequality: 2% of the world's richest people own some 50% of the world's wealth while the poorest 50% own around 1%. And the economic and social progress which is unprecedented in human history has been achieved at enormous cost to the environment as outlined above.

35. Looking ahead, the single most important fact is that an anticipated 2.3 billion additional people will come to live on this small and fragile planet over the coming forty years. Almost all this increase will take place in developing countries where the stresses on biodiversity, ecosystems, water and resources are already intense. And perhaps an additional 2 Billion people will aspire to the living standards of the present middle class by 2050. Enormous efforts will be needed if these trends in population increase and rising living standards are not to have devastating and irreversible impacts on the ecosystems and environment of the planet.

36. We are already now facing a food crisis which is not only local, national or regional as in the past but is truly global. In the view of the World Food Programme, "We are facing a silent tsunami." In December 2008, around 930 million people were

suffering from hunger – that is before the impacts of the financial and economic crises affected the flows of investment into developing countries. The Institute of International Finance reckons that net private-capital inflows into emerging economies fell from \$929 billion in 2007 to \$466 billion in 2008. And 2009 will see only \$165 billion flow to emerging economies. This shows a clear and immediate connection between the financial crisis and the prospects for development.

37. The US Center for Global Development in a recent study concluded that the climate change impacts on food production arising from changing rainfall patterns, desertification, sea level rise and extreme weather events could result in a fall in food production in Africa of 28% and of 38% in India by 2050, over a period when the Indian population is expected to increase by 400 million. The underlying causes of the food crisis demonstrate the profound importance of the linkages between the critical issues of climate change, energy, ecosystems and water and their connections to population, poverty, finance, credit, investment and trade.

38. A recent report presents the ethical issues well: "Present climate change is caused mainly by greenhouse gas emissions from industrialised countries ...average CO₂ emissions from fossil fuel burning in the period 1950 to 2003 were 5.2 tons per person per year in the USA, 0.4 tons in China and less than 0.2 tons in India. However, developing countries are disproportionately affected by the consequences of climate change. Due to high exposure to climate risks and limited adaptive capacity, they are projected to feel the bulk of the impacts. Unmitigated climate change will further increase global inequalities."

39. As Pamela Cox, Vice President of the World Bank made clear in reference to Latin America: "The region is only producing about 6% of global greenhouse gas emissions and just over 10% if we include deforestation. However, it is already suffering huge economic losses due to climate change. It is cruel and ironic that those people who are least responsible for causing the problem,

particularly the extreme poor, are also the most vulnerable and the ones with least resources to adapt.”

III. Rethinking the Path of Human Progress

1. Root Causes of the Economic, Environmental and Development Crises

40. The massive and sudden financial crisis, now coupled with a deep economic recession, has destroyed confidence in long-established policies, power relationships and institutional arrangements. An international debate is now raging to identify the causes of and responsibility for the crises and also to establish the conclusions to be drawn for the future. For those who reject the capitalist model, the crises demonstrate its predicted failure. For those committed to free market capitalism, the system must be reformed and adapted to function better. The radical divergence of opinions can be indicated as follows.

41. First, the Economist: “Over the past century and a half, capitalism has proved its worth for billions of people. The parts of the world where it has flourished have prospered; the parts where it has shriveled have suffered. Capitalism has always engendered crises, and always will. The world should use the latest one, devastating though it is, to learn how to manage it better.”

42. An extreme contrast comes from Boaventura de Sousa Santos, Director of the Social Studies Center at the University of Coimbra, Portugal: “Latin America remains a key piece in the economic strategy of the transnational companies and the governments of the North. One must remember that the capitalist system always needs new spaces for generating economic profits...In effect, neoliberal restructuring tries to replace existing concepts of development and democracy with concepts of control and security due to its incapacity for generating solid popular support. This is a consequence of deepening social exclusion, misery and inequality under neoliberal capitalism...”

43. It is important to recognize that different societies manage their economies in very different ways and that the models of business management are also widely diverse. In Japan for example, longer-term prospects and profitability are given priority over short term results, and employees, suppliers and customers are viewed as partners in a common enterprise, together with shareholders. Thus the pursuit of short term profits and the concentration on increasing shareholder value are not the central priorities of business activity.

44. It is the “Anglo-Saxon” model of free market capitalism which lies at the heart of the present crises. And this model, together with the values on which it is based, has been disseminated throughout the world, in large part through the education of élites from emerging economies and by the strong pressures of the international financial institutions. The analysis which follows is focused primarily therefore on the values, concepts and consequences of the Anglo-Saxon model which has dominated global economic thinking for almost thirty years.

45. In this perspective, some of the underlying causes of the crises we face can be summarised as follows:

- (i) Excessive belief in the “magic of the marketplace”.**
- (ii) Determination to cut back the role of government.**
- (iii) A damaging concept of economic growth.**
- (iv) Counterproductive values and assumptions.**

(i) Excessive belief in the “magic of the marketplace”.

46. It had long been understood that a prosperous and stable society requires a proper balance between the role of the market to stimulate innovation and the effective use of resources and the role of government as the custodian of the common interest. Governments should provide a clear and predictable framework of law, of supervision and of regulation within which the market could operate so as to achieve a balance between private rights and benefits and the prosperity of the community. With

the arrival of Prime Minister Thatcher and in 1980 of President Reagan, a new ideology dominated international economic thinking. This confidently asserted that, through liberalization, privatization and deregulation, market prices should be released from the interference and control of government and the energies of the market would then assure the optimum use of resources to achieve social welfare.

47. Encapsulated in the phrase “greed is good”, this strong and confident market dogma encouraged individuals to pursue their own benefit regardless of the social implications. This philosophy is now discredited. It is painfully clear that it has failed on critical points both morally and in practice. It has failed to assure a fair distribution of benefits, of wealth and income within countries and between countries. It has failed to provide a sound and stable basis for economic progress and world development. And it has failed to recognize the fundamental need to preserve a decent and healthy environment.

48. According to a review by Incomes Data Services in the UK, the earnings of the FTSE 100 Chief Executives rose 167% between 2000 and 2008 while the median national average pay rise over the same period for the country’s 28 million workers was 32.2%. The Financial times made the diverging fortunes of rich and poor even more stark: “Merrill Lynch recently paid its employees \$4 billion in publicly subsidized bonuses amid a \$15 billion quarterly loss. This government-financed bonus pool at one single firm was on its own nearly equal to the entire US bilateral aid budget to Sub-Saharan Africa, roughly \$5 billion in 2008. And it roughly matched the sum of all OECD countries’ support to agriculture in all developing countries.” (4th February 2009).

49. In some countries, these excesses have triggered a profound shift in public attitudes to business, for example in the USA. According to a recent MARIS poll, “Among the American public, 76% believe that America’s moral compass is pointed in the wrong direction... More than 90% believe that career advancement, personal financial gain, increasing profits or gaining competitive advantage are the primary

factors in business decisions. Only 31% believe that the “public good” is a strong motivating factor... However, three quarters of Americans think that business can be both successful and ethical.”

50. The principal consequences of this excessive free market approach are:

1. A focus on material consumption.

Humans have come to be defined principally as consumers and growth in material consumption is equated with progress. How this has occurred is well put by Richard Tomkins: “In the early postwar years, the idea of consumer choice was relatively undeveloped. There was not enough manufacturing capacity to meet consumer demand so manufacturers or governments decided what products should be available and consumers were grateful for what they could get....As economic growth accelerated, incomes rose but productivity rose faster still until finally, in the 1950s, manufacturing capacity outstripped consumption turning the relationship between manufacturers and consumers on its head....The baby boomers were the first generation to be born into an era where consumers were placed on a pedestal and companies set out to satisfy their every whim...they define themselves by making their selection from the ever-increasing proliferation of goods and services on offer: whatever they want, the market will provide.”

Where consumers fail to consume sufficiently, governments and companies strive to stimulate a desired rate of economic growth through fiscal and monetary policies and advertising to create demand. In this way, economic growth, instead of being an instrument to achieve the higher goals of humanity, becomes an end in itself, the goal and purpose of human activity: societies become addicted to growth in material consumption. However, as the Club of Rome emphasised some forty

years ago, it will not be possible to sustain exponential growth in consumption of a growing world population, together with the associated waste and pollution, indefinitely on a finite planet.

The current economic recession, which started in the financial sector has now extended and is deepening in the productive sector of the economy. The crisis has extended from Wall Street to Main Street. The excessive consumption which was fueling the growth of the world economy, driven by borrowing and stimulated by advertising and incentives, has now declined dramatically, leaving manufacturing capacities underutilized across the world with a consequent rise in unemployment. It is not clear, that, when recovery comes as it will, the structure and scale of demand will again reach the previous levels to match potential output. This implies that a vast overhang of excess production capacity and labour will have to be absorbed, over many years. And it underlines the fundamental importance of accelerating investment and innovation in new economic activities to generate employment and to lay the foundations for a new energy-efficient economy.

A headline from the Economist for an article on the fiscal policies adopted by China to stimulate economic growth may serve as the last word: "Behave like a Westerner: buy something you can't afford."

2. Reliance on market prices.

Central to the free market dogma is the firm belief that market prices, if freed from the interference of government, will assure the optimum use of resources to achieve social and economic objectives. However, this has proved not to be the case. As supervision and regulation have been weakened, markets have failed to reduce poverty and have indeed aggravated disparities in income and wealth within societies and across the

world. By failing to take account in market prices of "externalities" – factors which, however important, are difficult to quantify and do not fit easily into economic calculus, such as the value of natural capital or public goods – markets have also failed to limit the impacts of human activities on the environment. As Lord Nicholas Stern pointed out, the climate change crisis represents the largest market failure in history.

3. Dominance of economics and finance.

Overconfidence in the magic of the market place and the effective role of prices has led to the dominance of the economic and financial aspects of policy in national policy making. Critically important issues, such as climate change, environmental degradation, resource security, social stability and the eradication of poverty are pushed aside by powerful economic forces and interests. This dominance of financial analysis and considerations in the formulation of policy must be corrected if societies are to take proper account of the issues which are critical to longer term survival and to move towards sustainable development.

A further consequence of the dominance of financial and economic considerations is that, at a time when public institutions must become more innovative, coherent and adaptable to manage the rapidly evolving systemic challenges and risks of the modern world, their programmes remain dominated by budgetary considerations, aggravating the procedural and bureaucratic constraints which stifle innovation and renewal.

(ii) Determination to cut back the role of government.

51. The Thatcher/Reagan market ideology was based not on one but on two powerful ideas: to release the energy of the private sector and, in parallel, to diminish the

role of government in the state. The sustained effort to discredit government was best expressed by President Reagan: "The most frightening words in the English language are: "I'm from the government and I'm here to help." Through liberalization, privatization and deregulation, the influence of government was to be cut back wherever possible. The current economic and financial crises are, in large part, the consequence of the weakening of supervision and effective regulation within key countries. Supervisory and regulatory agencies of government in many fields, such as the Federal Reserve, the SEC and the EPA in the United States, have proved either unmotivated for ideological reasons or unable, due to limitations of budget and staff, to fulfill their responsibilities with the damaging results which we see today.

52. This commitment to diminish the role of government has had its parallel in a sustained effort to reduce the scope and effectiveness of international cooperation. As a result, the capabilities and effectiveness of the main international organisations have been diminished over the past thirty years. But on these institutions depend the management of global issues, the proper functioning of the world economy and improvement in the prospects and living standards of the billions in the developing countries. Thus financial and economic forces and transnational corporations and banks can operate on a global scale without a corresponding international capacity and framework of regulation and supervision.

53. For some thirty years, attitudes to international cooperation and to the role of international cooperation and governance have been heavily influenced by the skeptical views of a limited number of powerful Western countries. They confidently advocated the market dominated approach to development enshrined in the Washington Consensus. The credibility of international action and of international law has suffered in consequence.

54. The pressures of reality, in particular the global and systemic nature of the crises we face, have now demonstrated unambiguously, even to the most powerful countries, that international cooperation and

action are essential to the resolution of truly global problems. A strengthened framework of international cooperation is by no means an alternative to effective national policy and action. The challenge to international governance is to define a new balance and relationship between international cooperation and national action to meet the challenges of the dynamic, interdependent world of the 21st Century.

55. The world is visibly entering a period of transformation in the structure of power and influence which have been established since the Second World War, and in the underlying concepts, relationships and mechanisms which drive the world economy. This opens up many opportunities for new ideas and approaches to global governance and to the management of critical global issues. This transformation emerged clearly at the Davos meeting of the World Economic Forum in January 2009. Premier Wen Jiabao and Prime Minister Putin argued that the two rising powers must play a bigger role in a new economic order. "Mr. Wen made scathing comments about the inappropriate macroeconomic policies of some unnamed countries and about the unsustainable model of development characterized by prolonged low savings and high consumption. He also attacked financial institutions and their blind pursuit of profit and their lack of self discipline." (FT 29/1/09).

56. The excessive belief in the efficiency of market prices coupled with the calculated diminution of the capabilities of government have together led not only to the current crises with their massive human and economic consequences but also to deep imbalances and vulnerabilities in the world economy and in the environmental, ecological and development systems.

(iii) A damaging concept of economic growth.

57. From the above brief review, it can be concluded that the models and strategies which drive the present path of economic growth are deeply flawed. This lies at the roots of the financial, economic, environmental and development crises which

today destroy the lives of millions and threaten the prospects of future generations. The key weaknesses can be summarised as follows:

1. The failure to take proper account of externalities. The discipline of economics is strong and confident in its methodology and judgments as to what can be properly included in an economic analysis and how the analysis should be formulated and carried out. Issues for which data is weak and cannot be readily quantified or where market prices do not exist are generally not included in the analysis. In consequence, issues of the most profound importance have been neglected. For example, the ecosystems services and the natural capital on which humanity depends have no simple market price and have been largely ignored. This is also the case in regard to the impacts of economic activity, waste and pollution on health and to the real value of the energy and material resources on which economic activity depends. In these circumstances, what are considered to be social or environmental externalities may prove to be profoundly more important than the issues actually included in an economic analysis but as they have no market price, they can be ignored.

Another dimension is the failure to take account of efficiency in the use of increasingly scarce resources. As phrased by Dr. Schmidt-Bleek, "Already natural thresholds for ecological security have been exceeded in respect especially of greenhouse gas emissions, the extinction of species and the depletion of renewable resources such as water, forests and fish. For these reasons, the most fundamental requirement for moving towards a sustainable human economy is to "de-materialise" human economic activities and reduce as far as possible the environmental impacts of

resource use." (*Declaration of the Lindau Group, 31/10/08.*)

2. The failure to account for public goods. Clean water and air, ecosystems services, unpolluted oceans rivers and atmosphere are all public goods on which we together depend. But these have no simple market price and are not generally included in economic analysis. Thus emissions can be pumped into the atmosphere and pollution into rivers and lakes at no cost to the individual polluter. Enormous efforts are being made to correct this anomaly, for example through a tax on carbon emissions, and strengthened national and international regulation.

3. The failure to account for the interests of future generations. For conceptual and methodological reasons, classical economic analysis puts a higher value on early rather than longer-term benefits, favoring projects and investments which offer early returns and discounting future costs and benefits. However, as time goes by, massive longer term costs can accumulate, driven by issues which have been neglected such as the accumulation of greenhouse gases in the atmosphere, overuse of the biological resources of the planet or the rising levels of inequality and exclusion.

Thus, future generations will be required not only to pay down massive financial debts and to restore neglected infrastructure but also to pay for the restoration of a functioning environment, presuming that the damage and losses have not become irreversible and to invest in the development of an equitable and peaceful world.

4. The failure to achieve social inclusion and fairness. Poverty, deprivation and exclusion continue to exist in spite of the accumulating wealth of a growing world economy. In effect, the established model of

growth, if uncorrected, has proved to aggravate social and economic disparities and divisions. Poor, deprived and unemployed people do not participate effectively in the market. Models and strategies for economic progress must therefore be adapted and complemented by public action to reduce inequity and poverty throughout the world.

5. The failure to recognize the systemic nature of global and domestic problems. The critical issues confronting the world today are interconnected and systemic in their nature. They cannot be resolved by ad hoc, partial and sectoral measures. But the rigorous methodology of economic analysis which has been largely derived from a different tradition, finds it difficult to adapt to the new interdisciplinary, systemic approaches which are now vital to understand and act on the critical issues of the modern world. It is therefore of first importance that the teaching of economics should adapt to produce a generation of new-style economists familiar with and open to the behaviour and properties of systems and committed to take proper account of social and environmental dimensions in analysis and in the formulation of policy.

(iv) Counterproductive values and assumptions.

58. Concepts, strategies and behaviour are, of course, driven by the fundamental values, culture, assumptions and aspirations of individuals, groups and societies. The beliefs, values and behaviour which have brought the world to the present crisis will have to change if a new more equitable and environmentally sustainable path for human progress is to be found. Roger Cohen defines the crisis in values most directly: "...there is a surfacing of shame about the extent of our spend-spend-spend excesses. The check on this spending spree stands at \$2.6 trillion in American personal debt – a staggering sum...As Bill Clinton might have said, "It's the culture stupid." The culture that said that the most patriotic act was to

shop, that sent the best and the brightest to Wall Street to concoct toxic securities, that said there was no need to balance individual rights and community needs...Goodbye to all that."

59. Associated with this distorted value system, a number of implicit assumptions have become enshrined in the public consciousness, at every level. It is widely assumed for example that:

- living standards and personal wealth will continue to rise in Western countries indefinitely, based on never-ending economic growth.
- rising economic growth will somehow resolve the problems of abject poverty and deprivation within nations and in the world community as a whole and also, the poor and excluded will wait patiently until this occurs.
- the paths of economic growth and of technological progress are objectively determined and cannot therefore be changed: whereas they are in fact driven by social values and choice.
- the anticipated increase in world population of around 2.3 billion people in the next forty years will somehow be safely absorbed.
- the degradation of ecosystems and deepening environmental threats can be mastered in due course as societies become more wealthy.
- global warming will prove to be a slow and linear process which can be resolved when it becomes politically and economically feasible for governments to take effective action.
- the price mechanism and technological innovation will ensure that energy and resources will continue to be available.
- local and national problems, which are politically more immediate, should be given priority over the international issues which now threaten the future of humanity as a whole in an interdependent world.

60. All these assumptions will have to change if humanity is to surmount the risks and threats ahead. And in this perspective, the role of education and public information

of every kind and at every level is critically important. The financial, economic and climate crises are already having significant impacts on behaviour and attitudes in many countries, particularly in regard to personal consumption and the acceptance of the huge inequalities in wealth and income as being normal. If this evolution in values becomes permanent – which is by no means sure – it will help greatly to reorient social and economic progress onto a new path.

61. From this brief analysis, one key question emerges. What in fact constitutes economic growth if so many critical aspects are not properly included in its measurement? The financial crisis has demonstrated clearly that the appearance of growth over many years may be a mirage, a bubble without substance, if it is based on the soaring accumulation of domestic and international debt. The apparent gains in wealth have now evaporated.

62. In effect the fundamental question is: “Is the growth in GDP real if it ignores environmental degradation, the growing threats of climate change, rising levels of pollution and their effects on health, the destruction of natural capital, the depletion of non-renewable resources, the depreciation of infrastructure and the aggravation of poverty and exclusion?”

63. In this perspective, efforts are in progress across the world to reconsider the calculation of growth and particularly of GDP, to include such aspects which are vital to humanity but not properly included in the economic calculus on which strategies and policies are largely based.

2. Rethinking Globalisation and World Development

64. In November 2007, H. E. Dr. Horst Köhler, Federal President of Germany and former Managing Director of the IMF, invited the Club of Rome convened an international conference in Schloss Bellevue, Berlin, on the topic **“Policy Challenges in the Next Phase of Globalisation.”** President Köhler phrased the issue, in summary, as follows:

65. “Globalisation has indeed provided many benefits but we cannot allow the

process to be driven by the interests of the strong: it must work to the benefit of all or it can tear this world apart.... We need a policy to achieve order and development for the whole planet. It is, simply stated: one world or no world. We cannot continue indefinitely on the present path. Humanity is using the resources of the planet as if we had another one in reserve. It has unfortunately taken many years for the message of the Club of Rome to be recognized. We do need international cooperation in research, technology and policy to protect the environment and the climate. But we need more than this, a transformation in our lifestyles. Would it not be good to know that our restraint can provide more for the disadvantaged and for future generations?”

66. Millions have undoubtedly benefited from globalization, but millions in both developing and developed countries have not. Benefit for many has come at a cost for others while many are altogether excluded from the process. The perception in large parts of society and public opinion that the benefits of globalization are not fairly shared, drives a strong backlash against globalization in many countries. This is reinforced by evident and growing disparities in wealth and income. Newsweek reported on 12/11/2007 that “The often grotesque proportions of income inequality are giving pause to even some of the most ardent believers in the international trading system” quoting former federal Reserve chairman Alan Greenspan: “The issue of the presumed justice of the rewards of capitalism has created angst in all people involved in market economies.”

67. A further reason for the deep concern about globalization is the apprehension that, if the present consumer-driven patterns of economic growth continue unchanged and are further extended to vast numbers of additional consumers, the environmental, ecological and social consequences will be disastrous.

68. While globalisation has stimulated a sustained period of growth of the world economy through the global integration of the movement of goods, capital and jobs, the financial and economic crises have starkly demonstrated the downside of this rising

level of interdependence. As the Economist phrased the issues: "The downturn has been sharpest in countries that opened up most to world trade....Can one be too dependent on trade? How far should one liberalise banking? Is there a trade-off between taking advantage of good times and providing shock absorbers for bad ones?" (21/2/09).

69. The profound debate now in progress on globalisation reflects the diverse values, concepts, opinions and aspirations of the similar debate on national economic strategy outlined above. The intensity of this debate can be seen from an analysis by Walden Bello of the Philippines. He characterises as a move towards what he terms Global Social Democracy, GSD, a proposal made by Gordon Brown when Chancellor that there is a need for "alliance capitalism" between market and state institutions which would "secure the benefits of the market while taming its excesses" and which "captures the full benefits of global markets and capital flows, minimizes the risk of disruption, maximises opportunity for all and lifts up the most vulnerable."

70. He then continues: "Even before the full unfolding of the financial crisis, partisans of GSD had already been positioning it as an alternative to neoliberal globalisation...but GSD shares neoliberalism's bias for globalisation... promising to promote it better than the neoliberals. This amounts to saying...that an inherently socially and ecologically destructive process can be made palatable and acceptable. GSD assumes that people really want to be part of a functionally integrated global economy where the barriers between national and international have disappeared. But would they not in fact prefer to be part of economies that are subject to local control and are buffered from the vagaries of the international economy?"

71. The critique of globalisation is now extending into the area of mainstream business and economics. Writing in the Financial Times, Gideon Rachman presents the issue thus: "The 2009 meeting of the World Economic Forum is taking place at a time when the "globalisation consensus" is under strain as never before. The international financial crisis has undermined

one of the central ideas behind that consensus – the idea that international economic integration provides a path to steadily rising prosperity. Instead, at the moment, the globalisation of the economy appears to have done the opposite – spreading a dangerous economic virus around the world and creating the threat of another global depression."

72. The strong market-oriented philosophy of the past thirty years has impacted in similar ways at the international level as at the national level. The same concepts, methodology and assumptions have driven globalisation and have undoubtedly stimulated trade, financial flows and investment, leading to a period of sustained economic growth at a faster rate overall in emerging economies than in developed economies. But this neoliberal approach has also generated fundamental problems at the international level:

- The reduction of barriers through liberalization, deregulation and privatization which has freed the forces of the market has created dangerous vulnerabilities. It has left national economies victims of forces beyond their control. It has aggravated the instability of the integrated, global economic system, generating the synchronized slowdown in both rich and poor countries together and increasing the scale of the global recession. The idea that developed and the emerging economies were "de-linking" has proved false.
- It has led to an over-dependence on export led growth, ignoring the needs of those not engaged in industries which are connected to world trade and investment. The combination of expert and elite focus on the role of foreign direct investment, combined with the aim of "export at all costs" has led to the neglect of investment in agriculture and poverty reduction. Spending on farming as a share of public spending in developing countries fell by half between 1980 and 2004 (The Economist.) In parallel, assistance to poor countries

to improve farming practices and to build up agricultural infrastructure such as transport networks, irrigation systems, dams and extension services fell from around 18.7% of ODA in 1979 to 5.2% in 2006,(OECD).

- The process of globalisation has been accompanied by rising levels of inequality as, according to Robert Reich, former US Labor Secretary, “the top 10 or 20 percent is pulling away from the rest because of education, job skills and connections.” The integration of China and India into the global trading system has effectively added more than a billion workers to the world’s labour force, thus placing downward pressure on real wages. At the same time, intensifying competition, rapid adoption of new technologies and freer capital flows are diminishing labour’s bargaining power. According to ADB, the rich-poor divide in China, as measured by the Gini coefficient, now resembles Latin America and is thought to be above that of the United States. And, while the rapid growth of international information-based activities in Bangalore has attracted world attention, according to a World Bank survey, some 45% of Indian children are malnourished.
- Globalisation on a “Washington Consensus” basis has also led to instability and to the generation of enormous financial imbalances which have caused periodic financial crises in the global economy. The current account deficit of the USA which exceeded \$700 billion per year, the accumulation of around \$4 Trillion in assets by the Asian economies, \$2 trillion by China alone, and the flows of financial resources from oil consuming nations to oil producers which attained \$1.7 Trillion in 2007 indicate the scale of the imbalances and vulnerabilities in the international financial system. Many commentators, including Paul Volcker three years ago, have

stressed that the trends in the world financial system were clearly unsustainable: the depth of the banking and credit crisis has been greatly worsened by these fundamental imbalances and vulnerabilities.

- The deep and rapid changes accompanying globalisation have put immense stress on the social structures, relationships and cultural foundations of many societies, leading to identity crisis, polarization and radicalization of those who reject the norms and values of the modern capitalist world. The exclusion of hundreds of millions of people from the processes and benefits of globalisation has provoked a backlash, a broadly-based countermovement around the rejection of globalisation, or, in the phrase of Walden Bello of the Philippines, the call for “deglobalisation”, not only in developing countries but in developed countries also where protectionist feelings are growing.
- Just as the institutions and responsibilities of government have been curtailed in many nations, so a sustained effort has been made over the past thirty years to diminish the role of international institutions and of the international supervision and regulation of the vast financial flows across the world. This has allowed transnational corporations and financial institutions to operate worldwide without effective supervision or regulation of their activities. The global financial crisis which originated in East Asia in the late Nineties triggered an urgent call for a “new institutional architecture” to improve the governance of the world economy. Once the crisis was contained, the pressure for change dissipated, with the results that we see today.

73. In considering the future path of globalisation, another set of factors related to energy, resources and the environment must

be taken into account. The international structure of investment and production, the organisation of international supply chains and the flow of resources across the world are a function of the cost of energy and of other factors of production. As the era of cheap oil is nearing its end and as a price will be put on the emission of CO₂ into the atmosphere, the costs of transporting goods across the world will rise. In addition, the security aspects of the provision of energy and other vital resources will become of first importance as competition for vital but scarce resources intensifies.

74. For these and other reasons, the distribution of investment, production and employment between developing and industrialised countries and the related patterns of trade are likely to be very different as the world emerges from the current crises: another demonstration of the real links of environmental, economic and development factors in the real world.

Global governance

75. The massive financial crisis which has now emerged will undoubtedly lead to significant change in the global governance of the world economy but at an immense financial and human cost which could have been averted if action had been taken a decade ago following the East Asian financial crisis. As new institutional arrangements are considered it will be important to take account in their design of key factors in the modern world: a new balance of power and influence; the enormous scale of the flows of resources in the international financial system; the complexity and opaqueness of the world of finance; the speed of change; and the need, as at the national level, to take proper account of the systemic links between the issues of economics and finance, climate and environment and equitable world development.

76. As noted above, humanity has the vast capabilities needed to resolve the threats to the future: whether it will achieve this depends substantially on its ability to agree on and implement the essential action in good time through an effective framework of international institutions within which the

action of governments, business and civil society can be mutually reinforcing.

77. The challenge of establishing a sound framework of international governance and effective cooperation to meet the issues of the 21st Century and to guide the processes of globalisation onto the most constructive path will not be met by marginal adjustment to the existing framework. The existing institutional framework was conceived for a simpler age some 60 years ago. Its redesign will be critical to success and should be the focus of intensive and urgent international attention. Accountability, legitimacy, flexibility, resilience, coherence, anticipation and innovation will be vital factors in the successful management of the systemic issues of an interdependent, rapidly changing world. We are far from this today.

78. Just as new strategies are needed to reorient economic growth at the national level, so major transformations will be needed at the international level to assure equitable, stable and sustainable development. "The world needs a rebalancing of trade to end US deficits and Asia manufacturing surpluses. But the burden of rebalancing is falling increasingly on developing countries – commodity exporters and those reliant on income from workers overseas and labour-intensive manufactures. ...Credit demands from the West are sucking money out of even the most developed East Asian economies ...and forcing less developed ones to pay double-digit rates to borrow in international markets. These borrowing costs are unsustainable and threaten a developing world crisis that will provide another hit to western banks and further curtail trade." (Philip Bowring, IHT, 11/3/09. This view was echoed by the former Japanese vice-minister of finance, Dr. Sakakibura, "The US has to live within its means and China and Japan cannot continue to export to the rest of the world as they have done. The world will look completely different once this crisis is over." (FT 28/1/09)

79. The reorientation of the global economy which is coming must be seen in the context of the major transformation of international relations now in progress. The

latest forecast of the US National Intelligence Council broke new ground with its *Global Trends 2025*. "By 2025, the international system will be a global multipolar one with gaps in national power continuing to narrow between developing and developed countries. The international system as constructed following the Second World War will be almost unrecognizable...owing to the rise of emerging powers, a globalizing economy, an historic transfer of relative wealth and economic power from west to east, and the growing influence of non-state actors..."

80. As Roger Altman, former US Deputy Treasury Secretary, put it clearly, "The financial and economic crash of 2008, the worst in over 75 years, is a major geopolitical setback for the US and Europe...Over the medium term, they will have neither the resources nor the economic credibility to play the role in global affairs that they otherwise would have played."

3. Redefining Growth: New Models and Strategies for Sustainable Economic and Social Progress

81. The previous sections have diagnosed the conceptual, ethical and practical inadequacies in the current models and strategies for economic growth and globalisation. And they have suggested the disastrous consequences if these continue unchanged. Background Paper 2 suggests how an integrated approach can be developed to the economic, environmental and development crises so as to achieve low-carbon, sustainable growth and employment within the wider purposes of equitable world development. This section briefly outlines some of the key issues.

82. In his remarkable book, "The Bridge at the End of the World", Gus Speth defines the challenge as "to bring the reigning paradigm of neoclassical economics into line with environmental realities and needs." At the Club of Rome Berlin Conference on the Challenges of Globalisation in November 2007, Ambassador Anders Wijkman posed the issues as: "the present economic model is no longer relevant as it is almost totally separate from the natural world and

overwhelmed by externalities. A revolution in economic thinking is needed if we are to surmount the economic and environmental crises we face."

83. He then listed a number of key issues to be resolved. "First, the economic framework must be re-thought to internalize externalities. This is an issue more profound than trying to ensure that prices reflect true costs and implies the need to re-think business models. Second, how we measure wealth must be reconsidered. We need an honest balance sheet which reflects our plundering of natural resources and assigns a real price to ecosystem services. Third, science and education are not conceived to understand the essential inter-relationships and should seek to promote a holistic understanding of issues. Fourth, a crash programme of research and development on energy is urgently needed. Finally, the institutions of global governance are inadequate to meet the new challenges and must be strengthened and reformed."

84. Most recently, President Sarkozy has initiated an International Commission, chaired by Nobel Laureates Amartya Sen and Joseph Stiglitz, with the aim to "render economic data more comprehensive, more intelligible to the public and more relevant for policy makers by taking into account such factors as environmental degradation and quality of life." In announcing this Commission, President Sarkozy recognized that "the threat of catastrophic climate change should also force policymakers to recalibrate the broader environmental impact of economic growth." (FT 28/1/09).

85. We must move from a concept which equates growth with an exponential increase in material consumption to a concept of progress based on improving the quality of life and real welfare. And we must move from a concept which accepts that growth inevitably implies vast increases in the wealth of a few combined with exclusion and stagnation of the livelihoods of the many to a concept which favors fairness and inclusion.

86. It is essential and urgent for the reasons outlined earlier in this Note, that the present strategies and policies for economic growth be radically changed. Such radical

change in the content and direction of economic progress is essential if we are to avert the threats of catastrophic climate change and ecosystems collapse, to manage equitably and peacefully the intensifying competition for vital resources, and to create a sound and equitable basis for longer term world development. To achieve such radical change will require:

- a new vision and ethical framework to give new meaning to the concept of economic and social progress;
- a new balance and partnership between the public and private sectors and civil society;
- new models and methodology to analyse and guide decisions on the choices and risks ahead;
- coherent new strategies and policies to achieve economic, environmental and development objectives;
- revitalized institutions to anticipate and act effectively on the systemic issues of the modern world.
- Revised curricula and methodology for education to produce the skills and open-minded, interdisciplinary thinking which are now essential to understand, anticipate and manage the systemic, connected issues of the modern world.

87. Jean Pierre Cotis, a member of the Sen-Stiglitz Commission and the head of INSEE, the Statistics Agency of France, considers that the task is to narrow the gaps between objective measures of economic production and subjective measures of well being. "GDP was originally intended as a measure of production and economic activity. It was never meant to measure well being. That is beyond the statistician's remit."

88. In 2008, the Club of Rome, together with the European Commission and OECD, convened a conference in Brussels on the topic "Beyond GDP" to explore these issues. And work is in progress throughout the world to develop new concepts in various formulations such as "Green GDP", "Green Growth" and most recently, UNEP's proposed "Global Green New Deal".

89. However, to redefine the models and strategies for economic growth has

implications far beyond the methodology of the calculus of GDP, although this must be substantially revised. Additional systems of indicators will be needed to value dimensions of progress beyond the economic, such as natural capital and ecosystems services or human well being. The UNDP Human Development Index is one valuable approach which ensures that the human dimensions of development are the focus of development policies. Another positive approach has proved to be the Social Indicators developed at OECD in the Seventies which have added social dimensions to economic analysis.

The way towards sustainable growth

90. To achieve sustainable growth requires that the failures of the present models of growth outlined earlier must be corrected.

- The analysis of choices, risks and opportunities which prepares decisions on policy and implementation must take proper account of externalities, such as the value of natural capital, the real cost of resources etc. This requires not simply an adjustment to existing techniques and methodology so as to integrate such externalities into existing economic models but a serious reconsideration of the whole approach.
- Through the introduction of pricing, regulation, incentives and disincentives, the real value of public goods must be integrated into policy analysis.
- The interests of future generations and the longer-term consequences of policies must be integrated into the consideration of policy options.
- The human and social issues of fairness in the distribution of costs and benefits, of income and opportunity must be properly reflected in the consideration and execution of policy. This applies both within societies and at the international level.

91. Besides a revision of the methodology of economic analysis and the addition of complementary indicators, changes will be needed in the processes of analysis and decision-making to make them more participatory and to ensure that opinions, concerns and aspirations from society at large are properly respected and considered and more effectively integrated into the formulation of policy. The dominance of economic thinking must be corrected so that the environmental, social and human dimensions of policy can be given proper attention. And, such rethinking must not only be introduced in the public sector but also in the private sector, in both finance and manufacturing.

92. Companies will have to focus more on longer term performance and on the broader interests of all the partners in the productive process. They will have to take proper account of the efficiency with which they use energy and resources and of the environmental impacts of their activities at every stage. A strong movement is under way to integrate the concepts of Corporate Social Responsibility into mainstream business strategy. And many companies across the world are committed to reduction of emissions, to efficiency in the use of energy and resources, to the minimizing of environmental impacts, and to social and community responsibility. It is clear that these attitudes and policies are not negative to growth and profitability but are indeed "good for the bottom line."

93. Another key challenge to the corporate community is that, under the new economic and social conditions which are emerging in a transformed economy and with changing public attitudes, companies will have to reconsider whether the strategic objectives of permanent expansion and increasing market share will prove a viable and socially acceptable basis for corporate success in the longer term.

94. New thinking and new policies are emerging across the world and there are many examples where energy efficiency, environmental responsibility and social concern have improved economic performance and public recognition. A new path of economic progress can be found

which responds to the environmental, economic and development imperatives of today and tomorrow. The "creative destruction" now in progress as economies transform to meet the new conditions has immediate costs for individuals, corporations and societies but it also creates enormous opportunities for innovation and for the creation of whole new industries.

95. One important, practical example is the commitment of the Government of China to a gradual reorientation of the Chinese economy onto a path which should be less environmentally damaging, more socially equitable and more regionally balanced.

96. This programme, known as the "all around Xiao Kang Programme," is a key priority in the 11th Five Year Plan. As a first step, a framework of 40 indicators is being defined to make it possible to assess progress toward a "harmonious society". A series of policies to achieve this transformation is aimed at innovation and education to create the foundations of a new approach to the "scientific development" of the economy which will create employment and output in new high value-added areas with greatly reduced impact on the environment.

97. As new values, new concepts and methodologies emerge, the main themes of a new strategy for economic progress will take shape. Among these will be:

- Restructuring of the economy onto a low-carbon and environmentally sustainable basis.
- Improved efficiency in the use of resources and energy.
- Greater fairness and inclusion in the benefits of progress and in the emerging opportunities for the improvement of welfare, both within countries and on a global scale.
- The reduction or elimination of perverse subsidies which aggravate the environmental and development problems which must be urgently resolved.
- A sustained focus on the generation of employment as the central means to reduce poverty, hunger and exclusion.

- A renewed focus on the social and human resource dimensions of development, and on education and capacity building.

98. If these and other such forward looking policies can be implemented then the world could be at beginning of a new transformation, based on values, concepts goals and relationships adapted to the challenges of the 21st Century.

99. From the cursory analysis above, it is clear that the three major crises confronting humanity, the financial and economic crisis, the development crisis and the environmental and climate crisis have common roots: excessive confidence in the role of the market; the rejection and weakening of the role of government; weaknesses in the underlying concepts and strategies for economic growth and globalisation; and, most profoundly, the

values and assumptions which drive attitudes and behaviour.

100. It follows that the three critical issues of environment, economics and international development are essentially interconnected. They cannot be resolved separately. They must be understood and managed together. As President Obama said on 21st February, "We cannot successfully address any of our problems without addressing all of them." And the fundamental values, attitudes and concepts which are driving the present path of world development must change so as to establish the foundations of a new coherent, integrated strategy to manage the systemic issues of the 21st Century.

A detailed documentation of this briefing session will be available on www.clubofrome.org/G8plus5