

**Statement of the Club of Rome to the  
World Summit on Sustainable Development 2002**

**No Limits to Knowledge, but Limits to Poverty:  
Towards a Sustainable Knowledge Society**

On the 30th Anniversary of the First Report  
to the Club of Rome: *The Limits to Growth*



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## The Club of Rome

In early 1968, 36 leading European businessmen and scientists met in Rome. Their aim was to work across national boundaries and across disciplines to arrive at a deeper understanding of the interactions between the complex network of political, cultural, socio-economic and ecological problems, they termed "global problematique". In recognition of the place they met first, they called themselves "The Club of Rome" from then on. In 1972 the first Report to the Club of Rome was published: "The Limits to Growth". Because of its provoking scenarios it found great, to a large extent critical response – 12 million copies in 25 languages were sold. It pointed out for the first time the necessity to transform ways of thinking about how we handle the limited natural resources of our planet, and ever since it has become a classical publication in this field. The circle of thinkers developed into a world-wide forum, representing today 85 members coming from more than 50 nations all around the world. The ideas which they generate continue to find respect amongst the international community until today.

The Club of Rome seeks to present to those who are making decisions in the fields of science and politics, in economics and in society, that there is an urgent need for action if we want to have control of our future. Being aware of the slow response of governments and their institutions, the Club sees a need for non-governmental catalysts to push forward the changes required.

Therefore the Club of Rome is involved in identifying the essential problems facing humankind and, linked to that, in developing problem-solving strategies in global, regional and local contexts. The Club commissions reports and acts as a focus for new ideas. It does not formulate political statements, but promotes dialogue and exchanges of opinion. Commissioned reports (30 reports have been published since "Limits to Growth") have dealt with issues such as international economy, education and training, intercultural dialogue, the media, the environment, the future of the oceans and food provision. At present the challenges how to improve governance and how to overcome poverty are in the focus of the Club's activities.

The Club is also active in organizing conferences, seminars and other events on a wide range of themes. 25 National Associations for the Club of Rome are disseminating the ideas of the Club of Rome in their countries and, with their contributions, are enriching the debates within the Club.

The number of active members of the Club is limited to 100, drawn from the fields of business, science and politics. The Club additionally enjoys the active support of honorary members such as Mikhail Gorbachev, Jacques Delors, Richard von Weizsäcker and the King of Spain.



The Club of Rome  
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## Foreword

It is now thirty years since the first report commissioned by the Club of Rome *The Limits to Growth*. Thirty years on, the challenges of sustainable development are all the more pressing and all the more complex. The tremendous technological progress of the last few decades has allowed continued industrial growth; but the gap between the rich and the poor has widened and the pressure on our planet's complex and delicate systems is greater than ever. Clearly, we cannot continue in this development path: It is simply not sustainable.



The World Summit on Sustainable Development (WSSD) in Johannesburg is a key opportunity for political leaders, civil society and the business community to agree on a new framework of solidarity and development for all people in the world that will respect the limits of natural resources. The new challenges concern social equity, cultural diversity, economic stability, ecological protection and the optimum use of the limited resources of the planet. This WSSD has to grasp the opportunity for a step change in implementation of a global culture of co-operation; to create the condition for a continuous and world-wide sustainable dialogue within and among societies.

In the current demographic transition, the world population will still grow to about 8-9 billion by 2050. The earth's ecosystem, of which mankind is part, has a limited capacity to absorb the impact of human activities, But even within human society, the poverty is already beyond any decent limits. Many initiatives have been taken during the last thirty years, but are by far not enough to change course. In the mean time mankind faces another limit: the limit of time. It is still a most difficult task to strike a balance – a golden mean – between humanity's ambitions of growth, social equity and limits on resource use. We must seek new frameworks for rational use of natural and financial resources, based on education, local values and sustainable practices, consistent with the global reality, and on access to knowledge for all human beings. We must build a society with no limits to knowledge.

The Club of Rome brings together a unique combination of politicians, businessmen and leading scientists and the younger generation participates

through specific think tanks. This construction allows an interdisciplinary dialogue with the general public. The Statement builds on the preparatory work of the newly created Brussels-EU Chapter, and has been extensively discussed by the Members, notably in a special meeting in Brussels in May 2002.

It highlights again the need for a holistic approach to reorient technological, economic and social developments for the benefit of all members of the human family. I recommend it to your attention.

Prince El Hassan bin Talal  
*President of the Club of Rome*



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## 1. Thirty Years Nearer the Limits

In 1972, the report on *The Limits to Growth* launched a global debate on mankind's future and that of our planet. It was followed by *Mankind at the Turning Point* in 1974, and *No Limits to Learning* in 1978. In thirty years, over thirty reports have been published in almost all domains of world affairs, ranging from governance, to poverty, to the oceans as planetary resources, to cultural and social cohesion.

In 1972 the world population was 3.2 billion. In 2002, it is over 6 billion, and may only begin to stabilise near 8-9 billion in the middle of this century. The **World Summit on Sustainable Development (WSSD) must not only review progress and disappointments of the past 10 years, but must now create a stronger momentum in practical measures for real progress in the next decade.**

**Our current model of industrial development is not sustainable.** The current pace and type of growth is leading to economic polarisation and environmental degradation. The paradox of industrial growth is that to create enough wealth to eliminate poverty, it has increased inequalities. Voracious growth in use of natural resources is destroying the ecosystem on which it is based. The objectives of continued industrial growth are incompatible with the limits of the natural system of the planet. Our planet is already too small to provide the material standards of the industrialised world to 6 billion people. Rapidly growing resource-use, social tensions, growing inequity, economic migration and terrorism inflict an increasing economic and environmental burden on world society. The wealthiest 20% of the world's population consume 86% of the natural resources while half of all people live in poverty. In addition, loss of cultural diversity is increasing political and economic instability. As shown in some of the scenarios of "*Limits to Growth*", confirmed in recent UN reports, **the natural capital of the environment and of natural resources is more threatened than ever by continued population and economic growth.** It is now more than urgent to change current trends.

>> The present socio-economic model and concept of growth must be profoundly redesigned. The continuing demographic transition amplifies the need for a global ethical commitments, as well as for a new socio-economic model. //

## 2. The Limits of Poverty and Inequity

**Social sustainability can only be achieved by reducing poverty, world-wide.** Poverty is now a major threat to stability and an obstacle to further social and economic development everywhere. It can only be reduced by sustaining a higher rate of economic growth in most of the developing world, but with a substantial higher level of resource productivity. This will require a new "ethics of solidarity" at the WSSD, **with clear "growth targets" for developing countries to restore social equity, in partnership with developed countries.**

Growing disparities in income are the result of exclusion from global markets rather than of polarising effects within them. **Greater integration of more people (and countries) into world trade is therefore the most effective, but still insufficient, measure against growing inequality.** The decision at Doha in November 2001 to launch a further round of trade liberalisation, with a partnership for development and fuller participation by all has to be actively pursued. There still is too much hypocrisy in the policy of in the "North" in pressing for open of markets in a globalising economy while protecting their own markets from competition from the "South".

**Information and communication technologies are doubly essential - for faster growth in developing countries and more eco-efficient growth everywhere. Reducing the "Digital Divide" must therefore become a world-wide priority.** Without determined action, uneven growth of the networked knowledge economy will increase inequity, its visibility and its social consequences. Frustrated young people see the huge difference between the lifestyles in the US and Europe and their own, with migration to these wealthy regions as their only alternative to continued poverty.

**The transition to a knowledge society is likely to enable more people to actively participate in creative work.** A knowledge infrastructure can provide an opportunity for local entrepreneurship and wealth-creation, without which the other services could never be affordable or sustainable. **Development policies must therefore accelerate and widen**



**the deployment of electronic communications infrastructures, with universal and affordable access, and must enable entrepreneurial, social and cultural use of them.** Deployment of infrastructures must be part of a partnership for co-financing development.

**Development aid from the developed countries must certainly be increased.**

We welcome the commitments in Monterrey, but more is needed: Aid must also be untied from donor-procurement, and made more accessible to small-scale, local initiatives for education and entrepreneurship. It will only be effective when recipient countries have economic and social policies consistent with sustainable development, and when it is used in “capacity building”: To create educational and institutional infrastructures and to empower people in developing countries to access, assimilate and use new knowledge and technologies. **Indigenous knowledge systems** also represent a unique resource of developing countries and must be integrated in a future world-wide networked knowledge society.

**Sustainable development is compatible with an increase of world GDP by a factor of 10 by 2050, if GDP growth is de-coupled from resource use and the rate of use of critical resource is limited to today’s level.** This could allow growth rates of 7-8% p.a. for the poorest countries, sufficient to substantially reduce poverty and inequality, alongside growth of 3% p.a. for the EU and North America, sufficient to sustain high levels of employment. In this framework, we must go beyond the “Millennium targets” for 2015:

- to raise adult literacy rates above 90% by 2030, including “digital literacy”, both verbal and visual;
- to create a world-wide science- and technology-based university and research infrastructure stimulating local entrepreneurship;
- to ensure access to knowledge and education services in over 90% of communities by 2030, to enable people to manage their own local resources;
- to develop affordable technologies which are simple to use, diverse in their applications, and reflect cultural and linguistic differences.

>> The eradication of poverty must be the highest priority. It is not acceptable that more than half the world population is deprived of food and fresh water, shelter and simple health care. Access to information, education and knowledge has to be ensured. Communication and information infrastructure, and greater investment in education in local communities are essential to reducing the ‘digital divide’ and to participation in the future knowledge society. Development aid has to focus these long-term objectives. //

### 3. Towards a Sustainable Knowledge Society

**Science and technology development is crucial.** Sustainable development will only become a reality through innovation and innovative distribution mechanisms. Technologies must be made to work for human development, everywhere. Everyone will need access to knowledge and technology. We must all invest more in education and training, and in creating and assimilating new knowledge.

**The emergence of a networked knowledge society in the next twenty to thirty years is a major paradigm-shift from the industrial model of the nineteenth and twentieth century. It can be part of the solution to our problems, or part of the problem. The hope that the dynamics of information and communication technology development within globalising markets alone will contribute to general wealth and reduce poverty is too simplistic. With the right frameworks, it can empower and integrate billions of people, even in the poorest countries; offer new access to education, information and knowledge even in the most remote regions; help to eradicate poverty and build sustainable communities.** Without them, it may simply add to the enormous investments and environmental burden of centralised industrialisation.



As our societies become more complex and interdependent, all dimensions of sustainable development must be pursued together.

<< Science and technology have to respond to real needs and accessible and shared by all people. The emergence of a knowledge society is the major paradigm shift for the next half century. A holistic methodology and approach is imperative to empower a stepwise construction of sustainable societies with constant elevation of the quality of life for all. //

## 4. No Limits to Diversity and Creativity

To avoid a catastrophic “clash of civilisations” in a multi-cultural world, **both cultural identity and diversity must be accepted as legitimate goals in themselves, alongside respect for fundamental human rights and identification with a common set of human values.** Loss of cultural diversity increases political and economic instability.



**We need culturally diverse, tolerant and vibrant societies in which individuals have the opportunity actively to practice and participate and to pursue and fulfil their primary need for a sense of identity and a sense of belonging.** We need a world of “**multiple modernities**”, without ideologies but within communities, in which different cultures peacefully co-exist: a world of “**learning communities**” in which no culture imposes its values on others, and where “**indigenising modernity**” and „**learning from each other**“ are values in themselves.



The networked knowledge society has to integrate the richness of indigenous knowledge, value and integrate an eco-centric and anthropocentric concept of a sustainable world society.



**Goals must be set:** To maintain the diversity of languages actively spoken today; to increase indigenous and independent cultural creativity; to increase cultural employment; to reduce the risk of manipulation and monopolisation of information; and to ensure affordable access to high-quality cultural activities for all. The media must be recognised as a common good for educational and cultural objectives, rather than left as the exclusive domain of business for commercial purposes. Above all, we must create a culture of participation, rather than one of consumption.



**The specificity of cultural services within the trade policy context needs to be better defined during the current Doha-round negotiations.** Cultural services, like environmental “services”, have a broad social function. We must develop a global framework that recognises this fact and puts cultural diversity on a par with economic growth, social equity and environmental health.

>> The future world society must be based on local communities embedded in their cultural heritage and participating in the knowledge society. Respect for fundamental human rights, expressed by a common set universal values, has to be recognised and adhered to by all. The networked knowledge society must integrate the richness of indigenous knowledge and practice. ‘Indigenising modernity’ is a new challenge for all. //

## 5. Efficiency and Steering Mechanisms; an Answer to Resource Limits

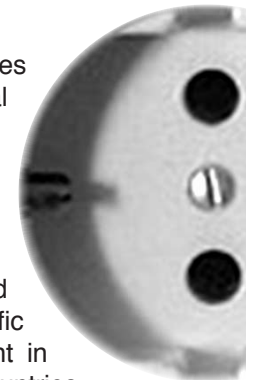
**The natural capital of the global environment is more threatened than ever by continued population growth and the dramatic increase in industrial activity. We are nearer than ever to limits to growth in resource use.** In 30 years, some limits have been pushed back by technology development: We are not currently exhausting some mineral resources and fossil fuels as fast as was feared, **but the impact of their use on the environment is becoming critical.** Economic growth is still tightly linked to growth in resource use, and now contributes more than population growth itself.

If industrial growth were sufficient to eradicate poverty in developing countries, resource use would increase beyond environmentally sustainable levels. It would overwhelm the capacity of the biosphere with waste and pollution. **Production and consumption must therefore become much more efficient. We must shift to more rational use of resources, to use renewable resources and cycles of production and consumption in which wastes are re-used. We must also add much more value to the resources we do use through a “shift from material goods to services”.**

**In developing countries, the emphasis must shift from mining their natural resources to empowering their human capital, with a different concept of “growth”.**

**Energy demand** can be reduced considerably in industrial countries by more rational energy use. In developing countries, rational energy-use must also be ensured with simple and appropriate technologies. These may need to be more labour intensive and must enable local communities to manage their energy use.

**Energy supply** has to shift from “carbon” to renewable and clean sources (reducing greenhouse-gas emissions) and to de-centralised supply where feasible. This shift is possible with credible future scientific and technological developments. However, substantial investment in research is still needed. This must be assured by the developed countries, but the results rapidly disseminated throughout the world. Decentralised production of the energy, by local small units, opens new perspectives for rural populations throughout the world.



**Information and communication technology is vital to environmentally sustainable production, logistics, consumption, and for a mosaic of environmentally sustainable lifestyles.** Without availability of these technologies to the vast majority of people in the networked knowledge society, environmental sustainability will not be possible. However, neither will a knowledge society automatically be sustainable. Only the right frameworks can ensure this.

**Population pressure will continue to grow, but more slowly.** By 2030, there will be about 8 billion people. We face major challenges in food and fresh water availability, which can only be addressed through intelligent use of information and bio-technologies, and closed cycles of food production from animals, plants, fungi, algae and bacteria; and more efficient synergies between them. Water supply and quality can only be assured through better management.

**By 2030, most people will live in cities.** To make these sustainable and to ensure enjoy better health, access to education, services and social exchanges, we need to re-think how buildings and cities are used. The building stock needs to be designed with higher energy efficiency and less car-dependent society. Cities must be planned and designed to minimise travel: **Land-use planning must encourage compact, mixed use, accessible development. We need to challenge the prevailing paradigm of work in dedicated office buildings, often remote from other urban and social functions.**

**To meet these challenges, we must use all the “steering mechanisms” to get the frameworks of development right:**

**Taxation systems** must discourage resource-use, reward enterprise and value-creation, and give incentives for the substitution of material goods by immaterial services. **A major shift to taxation of material resources, energy, land and transport facilities is needed.**

Market forces alone cannot be relied upon to preserve the “natural capital” of the planet, and to generate adequate substitutes for exhaustible resources. We need to use taxation to protect the “Global Commons”. **Maximum sustainable levels of use of critical resources and of pollution must be limited in global economic systems. “Externality” costs must be internalised.** Greenhouse gas emission limitation and “emissions trading” is only a start. **The Kyoto Protocol must be fully implemented, and in respect of the precautionary principle, extended to all anthropogenic substances affecting the climate and ocean circulation.**

**Perverse subsidies must be phased out.** The use of Government aid for specific purposes will remain a legitimate tool of good governance, but the enormous

subsidies and trade-protection measures in the agriculture, coal and steel sectors are not only damaging to the dynamic of change in the industrialised countries, but they inflict huge damage on developing countries. Hidden subsidies to road transport, and the absence of coherent taxation of aviation fuel, are major obstacles to the development of more efficient and more sustainable life-styles and business practices.



The efficiency of resource-use has to be increased immediately and dramatically. The necessary technological innovations are within our reach. Development of systems for rational energy-use and for renewable energy supply has to become a higher priority. A policy of decentralised energy supply and distribution, as part of a policy of rational energy use, is of strategic importance for all countries, notably for remote areas and developing countries. It can stimulate local entrepreneurship and enable access to information and education networks. Taxation of resource and environment use must be profoundly modified. Implementation of the Kyoto protocol must be pursued, and counter-productive and perverse subsidies have to be eliminated with the highest degree of urgency. //

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## 6. Governance in a Finite World

Governance is at the core of all challenges we are facing. Wherever we look we find political structures with insufficient performance. This applies especially to regions in the world characterised by violence and warfare, where precious resources of human, cultural, social and natural capital are destroyed. Therefore, strengthening global regimes of conflict management is of crucial importance. The phenomenon of terrorist violence demonstrates again the necessity of a common security and stability on our planet.

**The new “global deal” in Johannesburg must not be a “trade-off” between prosperity, equity and the environment.** Governance frameworks must be redesigned such that everyone can benefit from growth. In Johannesburg, we need a partnership for sustainable development in a new framework of solidarity and cultural diversity, based on continued technology development and innovation, with fair benefits for all. We need a new **“ethic of human solidarity”** to emerge in all global governance frameworks. This requires civil and political leadership and responsibility. Governments in the “South” must deliver the conditions indispensable for their socio-economic development. In the “North” the business community and the civil society must as well contribute to this equitable development.

**Global institutions must be strengthened to ensure the stability of the world economic system and to manage the “Global Commons”** (atmosphere, oceans, the Antarctic etc.). For this, we need a stronger and better informed global public-policy network, and new frameworks for co-financing for development.

Our economic system enables the working population to finance the education of the young and the care of the old. **Sustainable development therefore requires stability.** However, the global networked economy -with new strong linkages- has tremendous potential for chaotic volatility. New ways must be found to control dominant interests, to de-couple subsystems, manage shocks and fluctuations and invest more in knowledge and skills. We must strengthen the system's ability to respond to shocks – either by damping them or by diffusing them. **Governments and the Bretton-Woods organisations must have economic stability and sustainable development as top-level objectives, and must be brought into more coherent and synergetic action.** They must also move towards a more widely-based measurement of development than GDP alone.

We must also create frameworks, which support “green entrepreneurship”. **Corporate Social Responsibility (CSR) must become a ubiquitous requirement.** By 2010 « triplebottom line » reporting, including on natural, social and human capital development, should be normal practice for all publicly-quoted companies. We must also find the frameworks for new partnerships between global corporations and local communities.

**The United Nations should have a stronger, top-level Council on Sustainable Development,** which can ensure the coherence of activities within the UN family of organisations, in partnership between governments, business and civil society. **In addition, actions on education and cultural diversity must be strengthened, with cofinancing mechanisms to improve dramatically the degree of literacy of young and adult persons and to provide training of skills necessary for assimilation of scientific and technological progress in developing countries by 2030.** Education and training programmes must get much greater financial support and in the next decades.



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We need a new “ethic of human solidarity” in all global governance frameworks. Global institutions must ensure the stability of the world economic system and effective management of the “Global Commons”. The Bretton-Woods organisations must have economic stability and sustainable development as top-level objectives, and in business, Corporate Social Responsibility (CSR) must become a ubiquitous requirement. The United Nations should have a stronger, top-level Council on Sustainable Development, and international actions in education and culture must be strengthened. //