



Delhi Sustainable Development Summit 2003

The Message from WSSD:
translating resolve into action for a
sustainable future

From Rio to Johannesburg
increasing resolve—insufficient action

Background paper prepared for the
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From Rio to Johannesburg: increasing resolve—insufficient action

The UNCED (United Nations Conference on Environment and Development) held in 1992 came to be popularly known as the ‘Rio Earth Summit’, a name indicative of the magnitude of this event and the paradigm shift in the concept of development itself. Though the linkages between human settlement and the environment had been the subject of earlier Summits in Stockholm (1972), and explicitly given recognition in the Montreal Protocol (1985), the formation of the IPCC (Intergovernmental Panel on Climate Change) (1988) and the Brundtland Commission Report (1987), it was at Rio that environment inclusive development came to be adopted as a global agenda. The Rio declaration stated, *in order to achieve sustainable development environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it* (United Nations 1992). The representatives of 179 countries as well as business, scientific, and non-governmental groups engaged in formal and informal dialogue over the agenda for sustainable development. Indeed, as *The Economist* observed, ‘for two weeks, the Earth was Rio’.¹ The Earth Summit created the awareness that the individual (and seemingly disparate) concerns of the nations assembled were in fact different manifestations of a global problem. The conference led to conventions on biodiversity, climate change and desertification and endorsed the Rio Declaration and the Forest Principles. In addition, *Agenda 21*, a 40-chapter programme of action for sustainable development (see Box 1) at the local, national, and global levels was also adopted.

Ten years after Rio, in 2002 the United Nations held the World Summit on Sustainable Development (WSSD) in Johannesburg. The decade between Rio and its sequel saw a greatly changed world in terms of the emergence of ‘knowledge economies’ fuelled by human capital and unprecedented progress in information technology, as well as globalization itself—the increasing tendency of the world to operate as one large economy with its own internal division of labour (Stiglitz 2002). This period also saw a change in the focus of sustainable

Box 1 Sustainable development

Meeting the needs of the present ...

- Economic needs
- Environmental needs
- Social, cultural and health needs
- Political needs

... without compromising the ability of future generations to meet their needs

- Minimizing the use or waste of non-renewable resources
- Sustainable use of finite renewable resources
- Not overtaxing the capacity of ecosystems to absorb or break down wastes
- Protecting natural processes and climatic systems including not overtaxing the capacity of global systems to absorb or dilute wastes without adverse effects
- Political and institutional structures within nations and internationally, which support the achievement of the above.

Source Developments - The International Development Magazine (2002)

¹ *The Economist*, September 2002 Issue

development from being an ‘environment and development’ process (as in *Agenda 21*) to a process placing poverty alleviation at the core of the development debate. As declared in Johannesburg, ‘Recognizing that humankind is at a crossroads, we have united in a common resolve to make a determined effort to respond positively to the need to produce a practical and visible plan that should bring about poverty eradication and human development’.

The decade between Rio and Johannesburg thus saw a change in the focus of international attention towards sustainable development and perhaps a change in the concept of development itself. It has also been described as a ‘lost decade’ (Dasgupta 2002) in terms of progress towards the global sustainability agenda. A review of the decade should reveal what shaped such a change in perceptions and to what extent progress has been attained.

Sustainable development 1992–2002

The period 1992–2002 saw an unprecedented interest in sustainable development (Figure 1). Each major summit reaffirmed commitments to various aspects within the *Agenda 21* framework and identified new challenges and targets in the light of new evidence and frequently in

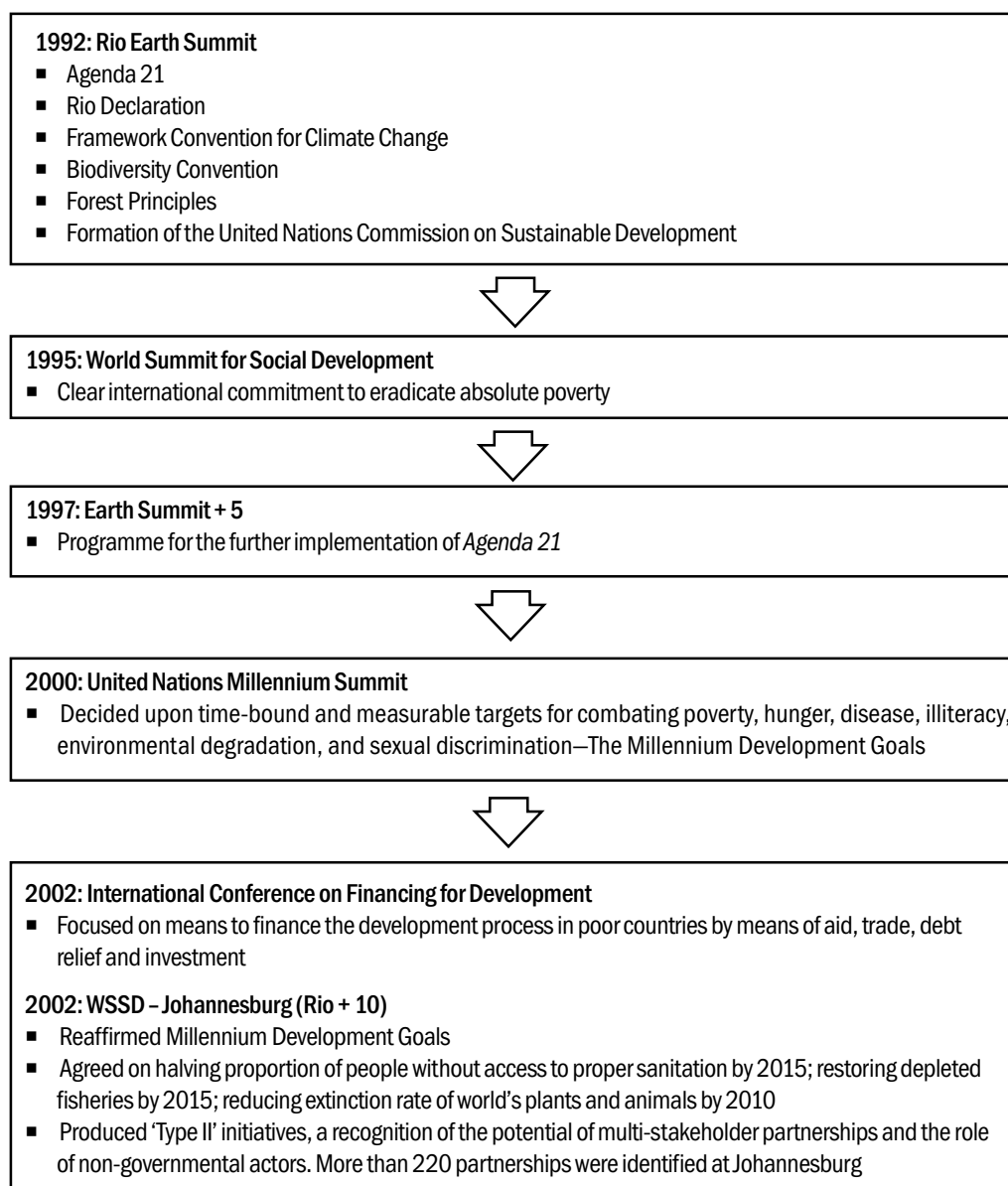


Figure 1 Sustainable development: major international summits (1992–2002)

response to the unrealized goals of a previous summit. The Earth Summit addressed almost every aspect of the environment and development. It is revealing to examine attainments *vis-à-vis* these goals to realize what necessitated the UN MDGs (Millennium Development Goals) in the year 2000. The following section looks at the sustainable development ‘score card’ as applicable to two strongly inter-linked spheres, the human well-being and the environment.

Human well-being: from development component to development core

Agenda 21 addressed issues of human well-being as part of an overall ‘environment and development’ process. Human well-being was to occur hand in hand with and within the framework of environmental betterment. Three years later, in 1995, the WSSD (World Summit on Social Development) while retaining the consciousness that *economic development, social development and environmental protection are interdependent and mutually reinforcing components of sustainable development* recognized that this paradigm was *the framework for our efforts to achieve a higher quality of life for all people*. This shift of emphasis within the development process from ‘plants rather than people’ to ‘people rather than plants’ (Nigel 2002) continued throughout the 1990s, culminating in the human development centric MDGs in September 2000 (Table 1).

The MDGs identified 8 quantifiable and precisely monitorable goals together with 18 quantified targets and 48 indicators of progress. There was a strong effort to set out a concrete sustainability agenda as opposed to agreements on development principles and the generation of consensus. This reflects the inadequate human development progress seen in the 1990s (Box 2) towards *Agenda 21* ideals within a general atmosphere of international agreement towards greatly enhancing human well-being.

Table 1 The Millennium Development Goals to be achieved by 2015

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- 1 Halve extreme poverty and hunger
 - 2 Achieve universal primary education
 - 3 Empower women and promote equality between men and women
 - 4 Reduce under 5 mortality by two-thirds
 - 5 Reduce maternal mortality by three-quarters
 - 6 Reverse the spread of diseases, especially HIV/AIDS and malaria
 - 7 Ensure environmental sustainability
 - 8 Create a global partnership for development with targets for aid, trade and debt relief.
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The Millennium Development Goals: tracking progress

Poverty and hunger

The first of the MDGs seeks to address income poverty and malnutrition, halving over 1990–2015 the number of the income poor (income below 1 dollar per day) and the number of people suffering from hunger. The 1990s saw progress in poverty reduction with the proportion of income poor falling from 29% to 24% of developing countries. This was largely a ‘trickle down’ product of economic growth, particularly in China (growth at eight per cent per annum over 1990/2000 lifted 200 million people out of poverty) and South-East Asia (growth at 7–9% per annum made large dents in poverty) (Krugman 2001). Such indirect poverty reduction, however, marked considerable intra-regional differences within countries, as seen in the disparities between the prosperous coastal and deprived inland regions within China.

Box 2 Inadequate Progress

The Millennium Summit was held in September 2000. In early 2000, an assessment by the World Bank and the Food and Agriculture Organization revealed the following.

- More than 840 million people in the world were malnourished—799 million of them from the developing world and more than 153 million of them under the age of five.
- During 1992–2000, six million children under the age of five died every year as a result of hunger.
- Of the 6 billion people in today’s world, 1.2 billion lived (and still live) on less than 1 dollar per day.
- The richest five per cent of the world’s people have incomes 114 times that of the poorest five per cent.

Source World Hunger Statistics (2000)

Inter-regional disparities in growth are also a great cause for concern. Sub-Saharan Africa had (and has) strong growth constraints in terms of unstable political and economic regimes and a large burden of disease (particularly on account of HIV/AIDS). This region experienced absolute increases in the number of income poor during the 1990s.

An interesting analysis emerges if one considers the flow of development assistance and foreign investment across regions in relation to addressing poverty reduction. Our null hypothesis might be: is development assistance effectively targeted? In 1988/89, sub-Saharan Africa received 0.82% of the ODA (Official Development Assistance) flows from the OECD (Organization for Economic Cooperation and Development) countries, a figure that declined to 0.74% in 1998/99 (OECD DAC 2002). Given the poor status quo of sub-Saharan Africa *vis-à-vis* MDG 1 (Figure 2).

The question of poor ODA targeting is difficult to ignore, particularly since MDG 8 specifically seeks to address this through the creation of an effective global partnership for development.

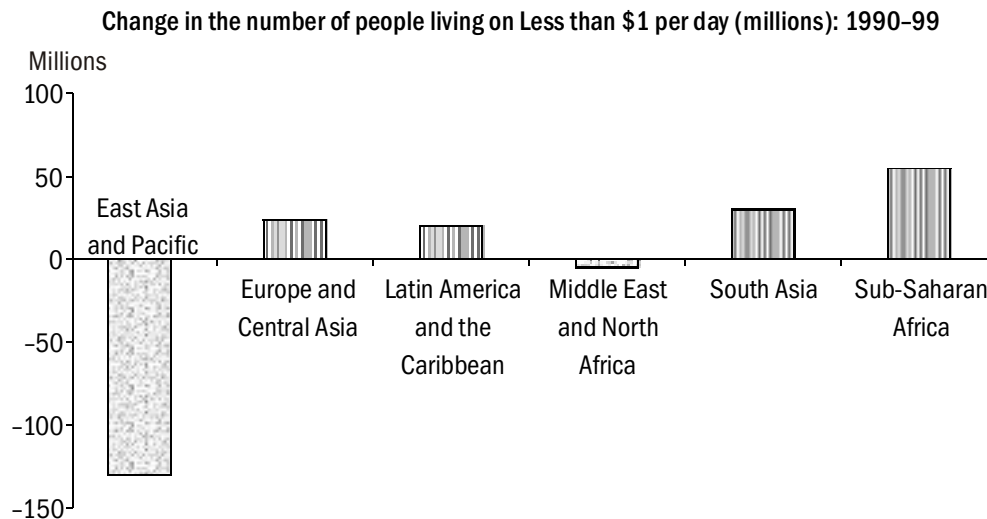


Figure 2 Poverty reduction achievement by region
 Source World Bank (2001)

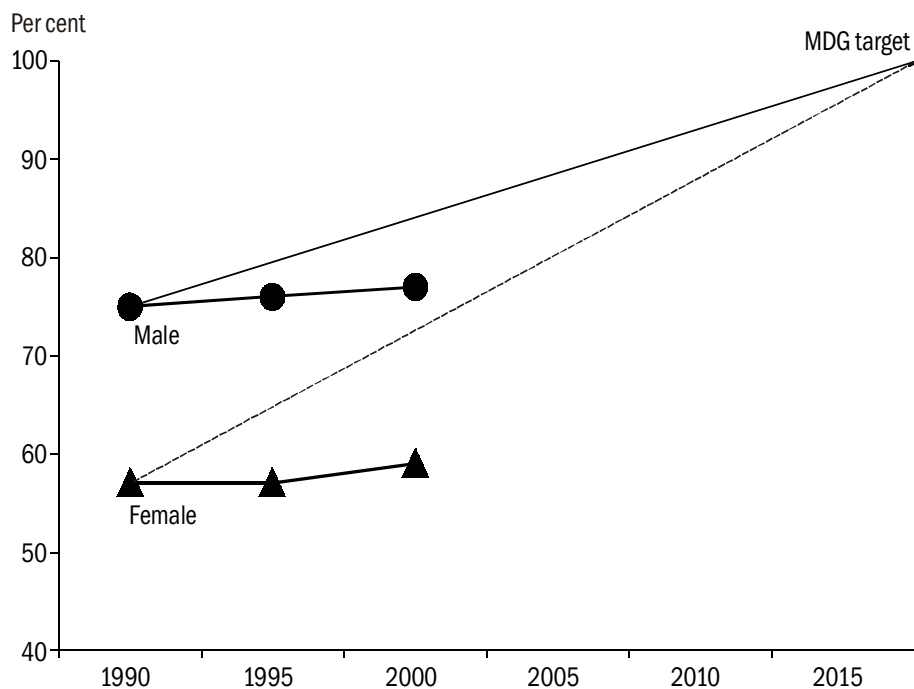
Education and empowerment

The second MDG seeks to ensure that boys and girls everywhere will be able to complete a full course of primary schooling. It also has strong linkages with the third MDG, both in explicit and implicit terms. Explicitly, the target of MDG 3 seeks to eliminate disparities in primary

and secondary education between the sexes. Implicitly, Amartya Sen has pointed out that education is the most potent means of attaining gender equality (Sen and Dreze 1999). Progress with regard to these goals shows sharp regional disparities. East Asia has shown high and rising primary school enrolment together with strong convergence in gender-wise enrolment rates (Figure 3). Latin America, the Middle East, and South Asia have seen considerable increases in enrolment but have shown no tendency for the gap in male–female enrolment to decrease. Sub-Saharan Africa has shown weak increases in enrolment rates and no tendency for the gender gap to converge. Africa must, however, create 80 million new primary education seats to accommodate its children—this is likely to be where ODA could deliver the largest possible returns.

An issue that hides behind enrolment statistics is the failure of children to complete courses of primary education. Approximately 79% of developing countries have created enough infrastructure to achieve universal primary education. However, only 27% of these countries retain 100% of their children through primary education (MDG 2002).

The opportunity cost of children’s time in poor countries is often identified as the greatest obstacle to primary education. This is particularly relevant in the case of girl children who are viewed as assets only to the extent they can contribute to household labour (Sen and Dreze 2001). Only the creation of economic opportunity on a large scale within target populations is likely to reduce the opportunity cost of child labour to the required degree.



Note The dotted and solid lines represent the average rates of progress necessary to attain the target.

Figure 3 Net primary enrolment rates (1990–2000)

Source World Bank (2001)

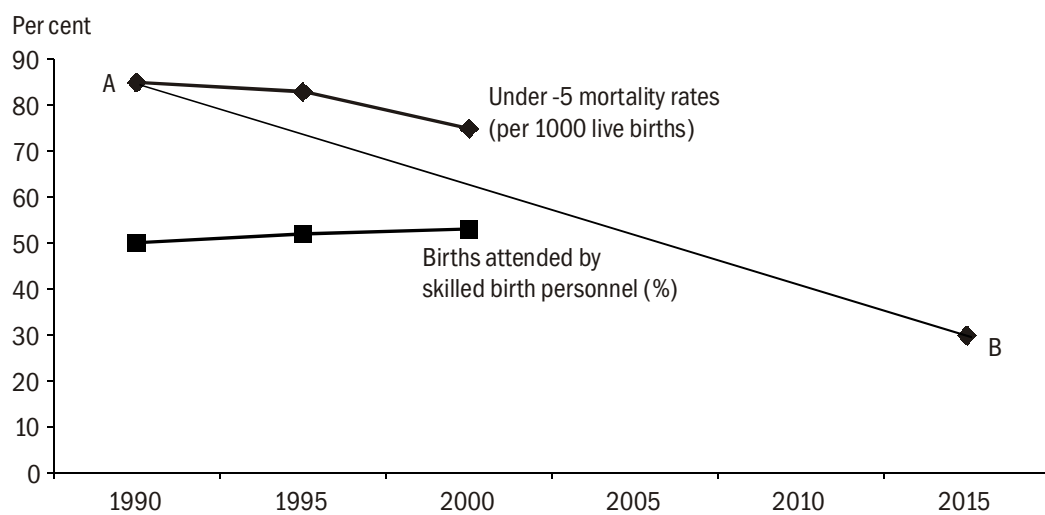
Health

The fourth, fifth, and sixth MDGs are related to possibly the most vital aspect of human well-being—health. Goals 4 and 5, namely the reduction of the under-5 mortality rate by two-thirds and maternal mortality by three-fourths, have strong interlinkages. The deaths of infants and children are influenced by maternal nutrition, access to medical care (especially

vaccination) and skilled birth attendants (Figure 4). Environmental health conditions in terms of water contamination and indoor air pollution are also strong influences.

The reduction of maternal and child mortality must necessarily proceed on three fronts.

- 1 Reduction of the number of pregnancies: the strong negative relationship between female empowerment (especially literacy) and the number of pregnancies is a key link here.
- 2 Prevention of complications during pregnancy and childbirth: less than 50% of births worldwide are attended by skilled personnel; this proportion is actually on the decline in sub-Saharan Africa, though increasing in all other developing regions.
- 3 Prevention of deaths when complications arise—Burkina Faso in sub-Saharan Africa has a mere three doctors per 100 000 people. (UNDP 2002)



Note The line joining 'A' and 'B' indicates the average rate of progress required to attain the MDG target represented by point 'B'.

Figure 4 The battle against maternal and child mortality
Source World Bank (2001)

The incidence of infectious diseases such as HIV/AIDS, malaria, and tuberculosis has increased during the 1990s to a degree sufficient to necessitate individual reduction targets for each of these under MDG 6. HIV/AIDS in particular affects young adults to a disproportionate extent and greatly undermines development, malaria affects an estimated 300 million people per year, 90% of them being in sub-Saharan Africa.

Progress towards the MDG health goals will require the creation of health infrastructure, human capital and awareness on an unprecedented scale, mostly in the poorest regions of the world, which lack the resources to invest in the required amount. This is another area of high return for ODA and will absorb large expansions in the latter without diminishing returns.

Partnerships for development

The creation of 'a global partnership for development' is the last of the MDGs and in terms of its impact of human well-being and the environment possibly the most potent tool that may be harnessed to attain global development goals. In the most fundamental sense, improving human well-being within the developing economies requires economic growth to present greater income opportunities and financial resources to invest in essential social overhead capital related to health and education. The vicious circle of poverty hypothesis, i.e., 'poor countries are poor because they are poor' applies especially to the attainment of development.

This requires attention to economic efficiency and the problem of growth itself, coupled with active redistribution policy. Given the current resources (financial, technical, and institutional) of the world's most disadvantaged economies, growth itself faces serious barriers. The resources for redistribution and attending to the issues of equity enhancement and the environment must necessarily be provided through development partnerships for these countries to improve their lot.

At the Earth Summit in 1992, the cost of attainment of *Agenda 21* objectives for the developing countries was estimated to be 561.5 billion dollars over 1993–2000 (*Agenda 21* 1992). Approximately 141.9 billion dollars of this was to be obtained in the form of ODA, leading to the well-known target of 0.7% of GDP to be provided by the developed world. Actual ODA provisions *vis-à-vis* this target have been rather inadequate (Table 2). Significantly, the absolute quantity of ODA has fallen between 1992 and 2000. The members of the G-8, namely Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States, contribute an average of a mere 0.37% of their GDP.

Table 2 Development assistance: contributions from the top 15 donors

Country	1992		2000	
	Total (Million \$ of 2000)	As share of GNP (%)	Total (Million \$ of 2000)	As share of GNP (%)
Denmark	1621	1.02	1664	1.06
Netherlands	3207	0.86	3135	0.84
Sweden	2865	1.03	1799	0.80
Norway	1483	1.16	1264	0.80
Belgium	1014	0.39	820	0.36
Switzerland	1327	0.46	890	0.34
France	9634	0.63	4105	0.32
UK	3778	0.31	4501	0.32
Japan	12 990	0.30	13 508	0.28
Germany	8834	0.39	5030	0.27
Australia	1182	0.35	987	0.27
Canada	2930	0.46	1744	0.25
Spain	1769	0.26	1195	0.22
Italy	4802	0.34	1376	0.13
USA	13 640	0.20	9955	0.10
All Countries	73 055	0.33	53 737	0.22

Source World Bank (2002)

While the assistance provided by ODA is rather inadequate compared to the actual financial requirements of most countries, its importance, nevertheless, in smaller and poorer countries such as those of sub-Saharan Africa (which greatly lack domestic resources) is considerable. A closer examination of the ODA trends indicates that very little ODA actually reaches the poorest countries. In 1999 and 2000, for instance, only 0.1% of the average GNP of 22 members of DAC actually found way to the low-income countries with a mere 0.05% flowing to the least-developed countries. Indeed, over the past decade, many least-developed economies suffered cuts in ODA flows of nearly 25% over the period and seven African countries lost more than half their ODA support (OECD 2001). The problem was further compounded due to a decline in interest by donor countries in assistance for environmental

protection and basic social services. When taken together, these two accounted for less than 12% of all the ODA commitments in 1999. With the decline in ODA, greater importance is often directed to alternative sources of financing such as FDI (foreign direct investment), which have increased greatly in the last decade. But here, too, the picture is quite skewed. The entire African continent received barely one per cent of global flows between 1990–2000.

In 1999, the sub-Saharan African countries received nearly 65% of their net external finance from ODA. A vital issue related to ODA is the question of debt repayment; developing countries paid back 13 dollars for every 1 dollar they received in grants in 1999, up from 9 dollars in 1996. Repayments on development assistance have exceeded new financial flows into even the most disadvantaged regions (Figure 5).

In March 2002, the UN held a major conference addressing the issue of finance for development in Monterrey, Mexico. Over 50 heads of government and state were involved and committed to increase development aid by 12 billion dollars per annum over current levels; this, however is one-fourth of what is deemed minimally necessary to meet the MDGs.

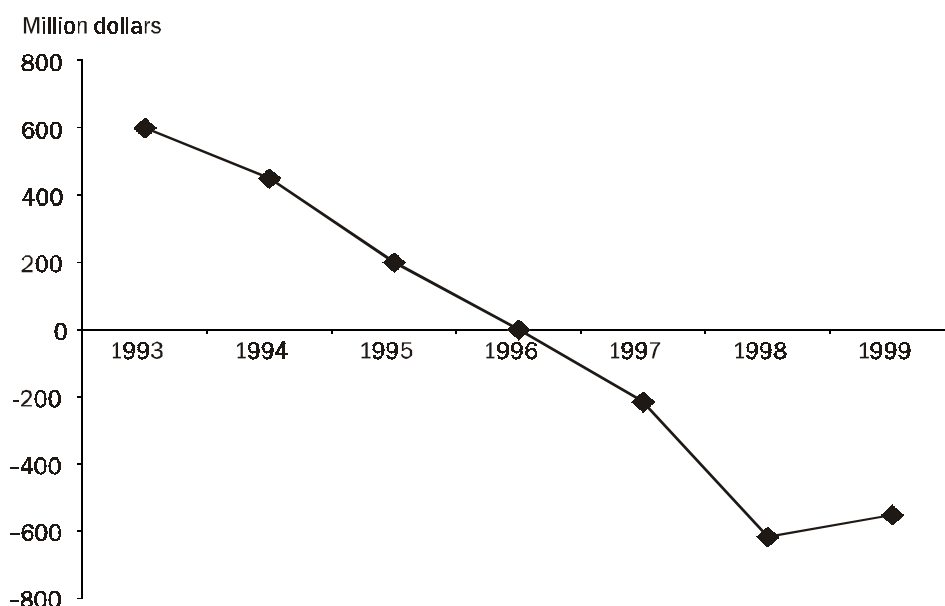


Figure 5 Net transfers from the IMF to sub-Saharan Africa
Source IMF (2000)

Human development: barriers to the Agenda

The human development ‘scorecard’ that emerges post-Rio is rather grim. Investigations into the reasons for such non-achievement have received almost as much consensus as the development goals themselves—a lack of financial, technical, and social resources in the developing world. Lack of resources leads to poor development and the latter in turn leads to poor resources—Ragnar Nurkse’s vicious circle of poverty revisited.

The strong interlinkages and positive synergies possible among education, health, and income poverty have been almost universally acknowledged and subjected to wide empirical study. Investment in the former two areas generally sets in motion a virtuous circle leading to the betterment of all three. However, investment in education in particular is characterized by extremely long gestation periods – which leads to it being a lesser priority within poor communities. Investing in children with regard to education and health is also a low priority for similar reasons. The poor are far more concerned with issues of immediate survival than future betterment (Sen and Dreze 2001).

The magnitude and nature of investment required in the education and health sectors as well as their ‘public good’ nature make these ideal areas for government investment. Most developing country governments during the 1990s were unable to channel sufficient resources into these areas. Other needs will also increase—to combat HIV/AIDS alone is likely to cost the developing world 10 billion dollars per annum in order to meet MDG targets (UNDP 2001).

One of the most fundamental ways to combat income poverty (which is the root cause of health and education deprivation – Sen 1981) is the creation of income opportunities for people through economic growth. Unfortunately, structural constraints at the global and national levels prevented the most disadvantaged developing economies from participating in such growth processes. Within these economies, unstable politico-economic regimes led to unfavourable conditions for both domestic and foreign investment, this was coupled with a global trade regime with strong biases in favour of the developed world. The creation of a partnership for development to assist such countries in terms of both resources (technical and financial) and the construction of appropriate institutional and policy mechanisms has, unfortunately, not proceeded beyond the stage of consensus thus far.

The environment: much awareness to little avail

Agenda 21 recognized the environment to be a large, multidimensional system and sought to address the complexities of how the environment and human beings interact.

Every possible area of anthropogenic impact upon the environment was granted due attention at the Earth Summit.

Climate change

The issue

In 1996, the IPCC concluded that ‘a discernible human influence’ was evident on a changing global climate (IPCC 1995); by 2001, the IPCC was far more categorical ‘most of the observed global warming over the past 50 years is likely to have been due to the increase in GHG (greenhouse gas) concentrations’ (IPCC 2001).

How the Earth Summit addressed the issue

At Rio, 170 nations agreed to voluntary reductions of GHG emissions to 1990 levels. By 1995 negotiations were under way for the creation of binding reductions in industrial nations to 6%–8% below 1990 levels, leading to the Kyoto Protocol in 1997. Meanwhile, the IPCC stated that climate stabilization would require emissions reductions to the magnitude of 60%–80% from current levels.

Events since Rio

Carbon emissions increased globally by 9% between 1992 and 2001. In the US they increased by 18%. The Kyoto Protocol requires that enough ‘Annex 1’ countries (developed economies) so as to account for 55% of 1990 carbon emissions ratify the protocol. The current status is a mere 38.5%. The non-ratification by the US (36.1% of global carbon emissions) and Australia (2.1%) have greatly undermined the Kyoto process. The former has decided to rely on voluntary, efficiency-driven measures to control emissions, which may well result in increased US emissions by 2010. Canada (3.3%) has recently ratified (17 December 2002). If Russia (17.4% of emissions) ratifies (which it aims to do), the Protocol will come into force.

Biodiversity

The issue

The World Conservation Union reported in 1995 that 13% of fish, 11% of mammals, 10% of amphibians, 8% of reptiles, and 4% of birds were in immediate danger of extinction. Habitat disruption was cited as the leading cause of such declines in population.

How the Earth summit addressed the issue

Over 1990/2000, over 182 countries became parties to the CBD (Convention on Biological Diversity) signed at Rio. These countries promised to abide by broad guidelines for biodiversity protection and to develop national strategies for doing so. National governments also made separate promises over the decade to protect important habitats, especially forests.

Events since Rio

The two richest sources of biodiversity – forests and coral reefs – both suffered increased damage in the 1990s. The global forested area fell by 2.2% between 1990 and 2000 (WRI 2002), a figure, which includes habitat poor plantation forests. The percentage of coral reefs regarded as seriously degraded rose from 10% in 1992 to 27% in 2000. Meanwhile only 38% of the parties to the CBD have submitted national conservation strategies (Worldwatch Institute 2002).

Unsustainable consumption patterns

The issue

The global consumption of metals, minerals, wood, plastic, and other materials increased four fold between 1960 and 1995. The ‘ecological footprint’ – the conceptual tool used as an approximate measure of the environmental impact of the consumption of materials, food, and fuel – showed that 3 Earths would be needed to sustain the entire world at the American level of consumption (WRI 2002).

How the Earth Summit addressed the issue

Agenda 21 recognized that ‘the major cause of the continued deterioration of the global environment is an unsustainable pattern of consumption and production’. This was held to be particularly true of the industrialized nations. The document advocated the use of technologies that would reduce the amount of energy and resources used per unit output, the widespread use of recycling, capture, and use of factory wastes, etc.

Events since Rio

Recycling has increased for household disposables in many countries, but has stagnated at a level of 30%–50% in the industrialized countries. Declines in the materials and energy intensity of GDP (gross domestic product) have shown encouraging trends, but total material and energy use and the extraction of virgin resources continues to climb (WRI 2002). Consumption levels continue to be very high in the developed world. In 2002, the OECD countries consumed 10 000 kWh of electricity per capita relative to an average of 610 kWh per capita in the developing world (CEA 2002). Convergence in consumption patterns, which is likely to occur in the wake of economic development, will have serious consequences if alternative development pathways are not adopted.

The Earth's freshwater systems

The issue

The early 1990s saw 20 countries with a total population of approximately 262 million being identified as suffering from freshwater scarcity (an availability of less than 1000 m³ of renewable water per capita per annum). Policy-makers questioned the heavy dependence on dams, irrigation canals, and other 'macro' water supply schemes, which tended to disconnect rivers from their floodplains and wetlands and slow water velocity in riverine systems, converting them to a chain of reservoirs, and leading to increased water loss (WRI 2002). Meanwhile the concept of integrated water management, combining attention to securing supplies with increasing water efficiency, meeting basic human needs for water and giving water its proper cultural, environmental, and economic value developed.

How the Earth Summit addressed the issue

Agenda 21 called for the adoption of integrated water management and for greater attention to the water needs of the poor.

Events since Rio

Advances in providing access to clean water and sanitation have been considerable in absolute terms but have barely kept pace with population growth; more than 1.1 billion people still lack access to clean drinking water. At least 1.5 billion people rely on groundwater as their only source of drinking water. Overexploitation and pollution in many regions of the world are threatening groundwater supplies, but comprehensive data on the quality and quantity of this resource are not available at the global level.

Water is also being widely mismanaged, aquifers in major agricultural regions have been overused to such an extent that as much as 10% of the world grain supply is now at risk (WRI 2002). Sixty per cent of the largest 227 rivers of the world are strongly or moderately fragmented by dams, diversions, and canals. In all, strongly or moderately fragmented systems account for nearly 90% of the total water volume flowing through these rivers. Water planning still rarely takes into account the environmental, economic and cultural values of water, leading to waste and degradation on a large scale.

Environmental progress: the barriers to the Agenda

Five years after Rio, a review of progress was conducted at the 'Rio+5' summit with a view to proceed 'from agenda to action' (United Nations 1997). The assessment of progress since Rio frankly acknowledged that 'significant environmental problems remain deeply embedded in the socio-economic fabric of countries in all regions'. Some progress has been made in terms of institutional development, international consensus-building, and public participation. Fortunately, the trends indicated above seem to indicate that not much has been achieved to date with regard to addressing the cause of the environment beyond the creation of consensus and awareness. Among the 27 'Rio Principles' adopted at the Earth Summit was recognition of the approach that 'the polluter should, in principle, bear the cost of pollution'. However, because of inherent difficulties in valuing environmental damage and in many cases a reluctance to do so, environmental costs largely remain outside the framework of economics and accountancy. Such costs are often combined with direct financial support for activities that harm the environment such as fossil fuel use, road construction, the excessive use of water, and excessive pesticide use in agriculture. The effective subsidy towards environmentally harmful measures has been evaluated at almost 2 trillion dollars a year (Myers and Kent 2001). In particular, governments have provided fossil fuel use subsidies to the tune of 80 billion dollars

per annum since the FCCC (Framework Convention on Climate Change) was signed in 1992 (IISD 2002).

The internalization of environmental costs is an unassailable concept on paper but unfortunately fraught with difficulty in practice. Environmental taxation is frequently unpopular since it may lead to a higher tax burden and/or lead to higher prices for manufactured commodities. Revenue neutral shifting of taxes to account for environmental costs has sadly not been attempted thus far (IISD 2002). Environmental legislation must also be applicable across the board, both intra and internationally—this would otherwise place the protagonist at a significant disadvantage. The situation with regard to the ratification of the Kyoto Protocol amply illustrates how difficult the ‘across the board’ implementation of any principle (even with a broad degree of consensus) is to realize.

Rio also adopted the precautionary principle, that is, ‘Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.’ This has since been incorporated in several regional environmental agreements such as the European North Sea Conference (1995) and the Hague Declaration on Principles of Environmental Law (1996). Explicit attention to the precautionary principle has largely been confined to Europe and that too mostly in normative terms. A rare attempt at use of the principle occurred in 1995 when France decided to conduct nuclear tests in French Polynesia, a private person residing in the area asked the European Commission to prohibit the tests on the grounds that France was violating the precautionary principle. However, the non-binding ‘consensus’ nature of the latter left the commission unable to prohibit the tests (Douma 1996).

One fundamental issue regarding environmental betterment is that the latter does not find any mention in the standard GDP benchmark of a country’s wealth. The fact that environmental ‘goods’ are not incorporated in current measures of development achievement contributes to over-consumption, resource depletion, and environmental degradation.

The Rio–Johannesburg Decade: new forces, actors, and paradigms

The period between the Earth Summit and the WSSD saw the occurrence of at least two universally pervasive phenomena—globalization in terms of a significantly greater integration of commodity and service flows across countries, and a tremendous spurt in technological attainment, particularly in the realm of information and communication technologies. These forces are now a reality that must be factored into any strategy to attain development goals. Appropriate institutional mechanisms must be employed in order to make changes in the global macro environment work for the disadvantaged.

Globalization

Globalization has been described as ‘a process integrating not just economies, but culture, technology and governance’ (UNDP 1999). Unfortunately, globalization tends to integrate those components of the less developed world that already possess a fair degree of institutional harmonization with the developed world – increasing the prosperity of the prosperous (Sen and Dreze 2001). Globalization that has occurred between Rio and Johannesburg has seen several new developments (UNDP 1999):

- 1 The great expansion of globally linked financial and capital markets
- 2 The increased use of new tools such as the Internet, media networks, and telephone networks
- 3 New actors such as the World Trade Organisation

- 4 Stronger systems of multilateral agreement on trade, services, and intellectual property reducing the scope for national policy.

This institutional framework has unfortunately served to marginalize the disadvantaged in the global economy. Employment, for instance, is readily available, highly paid and has an increasingly integrated global market for the highly educated or skilled; conditions for unskilled labour are poor and getting poorer as the globalized economy places a higher and higher premium on skills.

Speaking of greater linkages in global finance, one of the most prominent aspects of globalization has been the occurrence of significant transnational flows of private finance in the form of FDI (foreign direct investment). FDI flows to developing economies increased from 36 billion dollars in 1992 to 160 billion dollars in 1999 (OECD 2001). In view of dwindling ODA levels, FDI is potentially a vital source of development finance, especially since it generally brings with it transference of technology and human capital. The transnational corporations, which are the principal agents of FDI, also generally contribute to improved market access for developing economies. FDI flows tend to travel to countries with a favourable investment environment and sound policy institutions. Ten relatively prosperous countries accounted for nearly 80% of all FDI inflows received by developing countries during 1990/2000 (OECD 2001). China alone has accounted for 45% of all FDI in Asia since 1990.

In view of favourable investment climates being a necessary condition for FDI and the potential of the latter as a tool for development, it has been suggested that ODA may be used to 'herald' FDI, i.e., to buttress or develop the institutions and policies in developing countries that create a favourable environment for both domestic and foreign investment and growth.

Moving from financial to commodity flows, the structure of world trade also perpetuates inequalities between the North and the South. Many of the poorest economies in the world are highly integrated with trade (30% of GDP for sub-Saharan Africa) but rely on primary commodity exports with low prices and great price variability. WTO agreements such as the agreements on SPS (sanitary and phytosanitary measures) and TBT (technical barriers to trade) have served to further weaken the exports of primary and value-added items from the developing world. Concern has also arisen as to the use of the agreement on TRIPS (Trade-related aspects of Intellectual Property Rights) to harm the primary commodity trade from the South.

Technology

There have been rapid advances in technology in the past decade. This has given rise to

- 1 greater participation and communication worldwide, greatly increasing the power of many people to participate in decisions that affect their lives;
- 2 increased access to knowledge, in terms of the rapid low-cost access to information about almost all areas of human activity that is obtainable through information technology; distance learning programmes and long-distance medical diagnosis are just two of the emergent possibilities;
- 3 new medicines—more than 300 biotechnological innovations in pharmaceutical products are currently on the market or seeking approval. Much can be done to develop vaccines for HIV/AIDS and other diseases endemic in poor countries;
- 4 biotechnology in food, transgenic crops hold forth the promise of higher yields, pest and drought-resistant properties; and
- 5 new employment and export opportunities, the global trade regime under the auspices of the WTO holds the promise of large economic gains for developing nations via the comparative advantage principle.

The opportunities presented by technology certainly hold great promise, but technology is created in response to market pressures and not the needs of the poor. Research and development, trained personnel, and finance are concentrated in developed nations. As a consequence, research neglects opportunities to develop technology for poor people. In 1998, global spending on health research was 70 billion dollars, but just 300 million dollars (0.43%) was dedicated to the development of vaccines for HIV/AIDS and 100 million dollars to malaria research (UNDP 2001). The diffusion of technologies is also highly skewed; OECD countries contain 80% of the world's Internet users (with merely 19% of the global population) (UNDP 2001).

If technology is to be a force for development both the focus of technology development and the appropriate diffusion of technology must be facilitated. The *Human Development Report 2001* suggested the creation of dedicated funds for R&D by multilateral organizations in order to create incentives and markets for developing-country-oriented technology development. Local capacity towards the adaptation and adoption of technologies must also be created within the target-disadvantaged groups in order to ensure the application of technology to areas of maximum marginal benefit and the sustainability of technology applicability. An issue of great importance is the question of technology affordability. Differential pricing must be followed in order to ensure access across income groups—an identical product should ideally be sold in sub-Saharan Africa at a minute fraction of its price in Canada. Unfortunately, uniform pricing was more the norm during 1990–2000—exacerbating and contributing to inequities in technology access and adoption.

Not surprisingly, the 'globalization decade' (Stiglitz 2002) has seen global inequality worsen: in 1999, the richest 20% of the world population had 86% of world GDP, while the poorest 20% had just 1% of world GDP (UNDP 1999).

Governance: harnessing new paradigms

If globalization and technological advance are to present opportunities towards attaining development goals, these forces must be harnessed and directed towards such ends with deliberation. Governance – at the global, national and local levels – must be altered and strengthened as an instrument of direction. Governance in this context is to be interpreted not just as mere government, but also as a framework of rules, institutions, and established practices that set limits to and give incentives for the behaviour of individuals, organizations, and firms. Global governance during the 1990s was in particular characterized by

- 1 imbalance in focus, it was dominated by the largest economies, i.e., the G-7;
- 2 the absence of mechanisms for making ethical standards and human rights binding for corporations and individuals and not just governments;
- 3 the presence of institutional mechanisms to address financial stability and the extension of markets but not to combat growing inequality and persistent global poverty.

In addition to global systems, fundamental changes must occur in governance within nations before global forces can be made to serve development needs. Labour market policies in developing countries have, in general, been rigid, protecting elite labour and not investing in a broad-based manner in worker's skills and – most fundamentally – education. Informal work must be made remunerative and productive. The resources within nations themselves must also be enhanced to allow for new investment—tax revenues must be increased from such sources as income and land (such revenues are very poor in the developing world). The curtailment of military spending within nations is also imperative.

New actors for development

While not as all pervasive as global linkages and technological progress, two significant new forces have emerged in the development arena since Rio.

- 1 The rise of civil society as an agent of development, particularly NGOs (non-governmental organizations); globally policy makers are becoming increasingly cognizant and dependent on the knowledge and experience NGOs can bring to the table (*see* Box 3).
This has also been reflected in the creation of ‘Local Agenda 21’ programmes, which now amount to almost 6000 initiatives in 100 countries across the globe. These micro-level sustainable development initiatives are bound to eventually add up to a substantial whole.
- 2 The emergence of CSR (corporate social responsibility); businesses worldwide are now increasingly paying attention to what is termed the ‘triple bottom line’ of economic, social, and environmental performance. One hundred of the world’s largest corporations, with a cumulative economic product equal to that of the developing world, implemented CSR schemes during the 1990s, in response to increasingly environmentally aware consumers (IISD 2002). CSR practices of companies range from recycling and the greening of factory premises to the preferential employment and treatment of minority and disadvantaged groups within the population, all of which have strong synergies and implications for sustainability.

Box 3 From darkness to light: how an NGO’s efforts brought power to a village

Thulapally in Kerala, bounded by river *Pampa* on one side and dense Sabarimalai forests on the other, till recently was cut off from the world. Agriculture was the mainstay of the local economy and all requirements for fuel needs were accomplished through available fuel-wood. It was through the efforts of a local NGO – Malanadu Development Society – that a 12-km stretch of road was constructed along with two major causeways across the rivers, which facilitated development of the village. The community, however, still required electricity. On the request of the villagers, the NGO took charge of electrifying the village. Survey of the village revealed possibility of electricity generation through micro-hydel project. After several rounds of discussions with the local people, a local committee was set up for the implementation of the project. Financial resources came largely from the UNDP. The community too contributed to the project in the form of labour and other materials required (coconut posts for instance contributed by villagers were used as lamp posts) for the construction activity. The efforts of everyone finally culminated in power generation in the village within 50 days. Overnight the life of the people underwent transformation with 146 houses connected besides 10 shops and 5 institutions. Each house was allowed four fluorescent lamps and 25 houses were provided with television sets. The electricity in the village was to be supplied for about six hours for Rs 50 per household. At present, the management of the project is entirely in the hands of the local community with technical upkeep done by a trained youth.

Source MoEF (2002)

Though the appearance of new positive agents towards sustainability is encouraging and new global paradigms offer new opportunities, addressing a problem of the magnitude of ‘development’ itself will need a reinvention of the global institutional matrix in order to make the forces of globalization and technological change (as directed by governance at all levels) bring about a global convergence towards prosperity. The guiding principles must be

- 1 global ethics, justice, and respect for the human rights of all people;
- 2 human well-being must be the end, with open markets and economic growth as the means, of the development process;
- 3 the accountability of all actors, including supranational bodies; and finally
- 4 respect for the diverse conditions and problems of each country, especially in the least developed regions of the world.

A lost decade?

The 10 years between the Earth Summit and the WSSD saw the creation of much awareness, the activation of new forces towards sustainable development and the incorporation of the latter into mainstream policy in at least an implicit manner all over the world. Perhaps the greatest achievement of the decade between the summits has been a steady movement of multilateral agreement towards sustainability from the almost entirely normative (as in *Agenda 21*) to the entirely concrete (as in the MDGs). Limited progress was seen in human development, which essentially saw the problem of poverty being ‘redistributed’ to regions such as sub-Saharan Africa and South Asia and (relative to the magnitude of change needed) fairly inconsequential achievement in the enhancement of human well-being. With regard to the environment, trends remain fairly dismal; the emergence of global solutions to global environmental problems such as the Kyoto Protocol and the Montreal Protocol were probably the most encouraging trend within the decade.

In August 2002, 65 000 delegates from governments, international institutions, NGOs, and businesses assembled at the Sandton Convention Centre in Johannesburg for the WSSD—the sequel to the Earth Summit. The Johannesburg Summit, as it came to be called, sought to reinvigorate the sustainability agenda and create a commitment towards the greater attainment of tangible results. To what extent this was achieved is debatable, as may be seen in the following section of this paper seeking to evaluate the WSSD.

The World Summit on Sustainable Development

Expectations from Johannesburg

The preparatory committee meetings for the WSSD process admitted the failure of implementing many provisions of *Agenda 21* and other specific targets agreed at Rio. Rio+10 was thus expected to add new life to the implementation of *Agenda 21* and other outcomes of the Rio Summit. According to Nitin Desai, Under-Secretary-General, United Nations, *The purpose of the Summit is to reinvigorate political commitment, to full implementation of commitments made at the Earth Summit in 1992. Accelerating implementation of Agenda 21 through concrete actions and measures and active partnerships between government, business, and civil society is going to be the criterion by which the success of the summit is rightfully measures.* The Summit was envisaged to break the inertia of the existing system by actively engaging businesses and civil society along with governments. The run-up, however, reflected a sense of complacency of the global community. Finer consultations for more than a year, finally, produced a draft Plan of Implementation, to be transmitted to Johannesburg for further negotiations. The WSSD was thus perceived to produce a ‘Johannesburg Programme of Action’ or a Global Pact setting out targets with measurable benchmarks. Outcomes from the WSSD were expected to reflect the three Ps— political will, practical results, and partnerships (Pachauri and Vasudeva 2002). Political will is essential for bringing about major changes in the ways policies and programmes are designed and implemented. Practical results are required to address urgent environmental and developmental problems. And partnerships (between North and South, resource-rich and resource-poor countries, between governments and stakeholders, etc.) are required for implementation of initiatives.

The Johannesburg Summit was thus expected to be not just another environmental conference but a conference about challenges and opportunities in the new millennium.

Outcomes at Johannesburg

Two weeks of negotiations, during much of which there was a strong feeling of uncertainty about the emergence of an agreement, culminated in the Johannesburg Declaration on

Sustainable Development. The Declaration highlighted present challenges and the need for commitment to sustainable development; the Johannesburg Plan of Implementation, a concrete programme of action; and voluntary (not subject to negotiation) partnerships or initiatives to implement *Agenda 21*.

Achievements of the Summit

Johannesburg Declaration on Sustainable Development

- Highlighted interdependency of the three inseparable pillars of sustainable development, namely economic well-being, social equity, and environmental protection.
- Recognized the importance of multilateralism calling for ‘enhanced accountable international and multilateral institutions’. In this attempt, the Summit provided a unique opportunity to articulate and mobilize collective action for sustainable development.
- Recognized the new dimension of challenges posed by globalization that has caused skewed distribution of costs and benefits with developing countries in particular facing special difficulties in meeting these challenges.

Plan of implementation

Millennium Declaration goals and targets reaffirmed

Some of the key commitments reiterated at Johannesburg included

- halving, by 2015, the proportion of people whose income is less than 1 dollar a day and those who suffer from hunger;
- halving, by 2015, the proportion of people who are unable to reach or afford safe drinking water;
- developing programmes and initiatives to reduce, by 2015, mortality rates for infants and children under-5 by two-thirds, maternal mortality rates by three-quarters of those prevailing in 2000;
- ensuring that all children complete a full course of primary schooling by 2015 with girls and boys having equal access to all levels of education; and
- achieving by 2020 improvement in the lives of at least 100 million slum dwellers as proposed in the ‘Cities without slums’ initiative.

Consent on additional goals

Moving beyond the millennium objectives, the Summit agreed on halving the proportion of the people without access to proper sanitation by 2015; restoring depleted fisheries by 2015; and significantly reducing the extinction rate of the world’s plants and animals by 2010.

Formulation of the World Solidarity Fund

The G77 proposal to set up a World Solidarity Fund for poverty eradication was approved though the text made it clear that the contributions to the fund would be voluntary in nature. In addition to governments, individuals, and the private sector were also invited to contribute.

Opportunities missed: ‘All talk and no action?’

While the Summit produced some positive outcomes, there remained gaps that disappointed many. The deliberations revealed widening split between developed and developing countries. Some of the issues where the Summit showed little progress were as follows.

Lack in strong targets and timetables

- While a resolution was made on diversifying the energy supply by developing advanced, cleaner, and more efficient affordable and cost-effective energy technologies for fossil fuels,

renewable, and hydro there were no concrete targets formulated for renewables. In fact, the text on renewable energy target was replaced with, *with the sense of urgency, substantially increase the global share of renewable energy sources, with the objective of increasing contributions to total energy supply, recognizing the role of national and voluntary regional targets as well as initiatives where they exist.*

- Consensus exists on the fact that increasing the share of renewables can reduce the overwhelming problems of pollution associated with fossil fuels and risks associated with nuclear energy. Moreover, a stronger role for renewables can help meet critical energy needs, particularly in rural areas, and enhance energy independence. Photovoltaic systems, for instance, have already been established as economically and environmentally efficient ways for providing electric power to areas not connected to electricity grids, especially in rural areas. According to the IEA fact sheet (IEA 2002a), renewables (combustible renewables and waste, hydro, geothermal, solar, wind, tide, and wave energy) accounted for 13.8% of the 9959 MTOE (million tonnes of oil equivalent) of the world total primary energy supply in 2000. Also, the non-OECD countries used much more renewable energy (22.4% of their primary energy demand) than that by the OECD countries (6.2%). In light of the benefits that remain in store from the renewable use, increasing investments in this sector through strong policy commitments appear certainly an important step which could have been facilitated by defining targets for renewable energy at WSSD.
- There was no commitment on delivering energy supply to people worldwide who do not have access to modern energy services. About 1.64 billion or about 27% of world’s population does not have electricity (IEA 2002b). Amongst them, about 99% lived in the developing countries, and four out of five in rural areas. Figure 6 shows the regionwise electrification rates. It clearly depicts huge gaps that have to be bridged especially for the sub-Saharan and South Asian regions. The World Energy Outlook Reference Scenario projections (IEA 2002b) further predicts that about 17% of the world population will still not have electricity in 2030 despite assumptions on more widespread prosperity and advanced technology. This was certainly an area where WSSD could have made a perceptible difference.
- There were no concrete attempts to promote sustainable production and consumption patterns except development of a 10-year work programme to accelerate shift towards sustainable development. The text adopted at the Summit in fact put very little pressure on

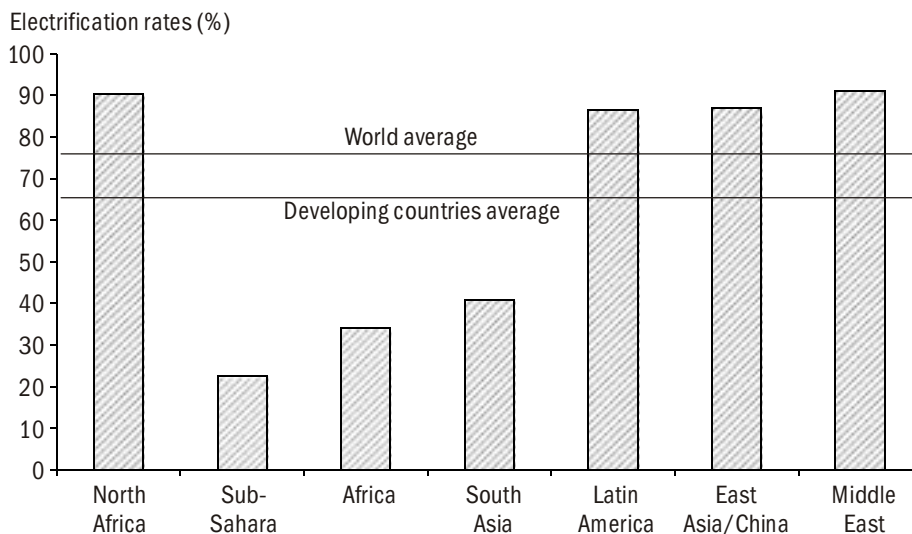


Figure 6 Electrification rates by region (2000)
Source IEA (2002b)

the developed countries to alter their environmentally harmful lifestyles. *The State of the World 2002* narrates an interesting example of wasteful consumption in wealthy nations. According to the report, while 80% of the world’s people do not have access to enough paper (derived from felling trees) to meet their basic requirement for literacy and communication, there are others who consume paper at an astonishing rate. An American, for example, uses 19 times more paper than an average person in a developing country, with most of it serving as trash: less than half of the paper used in the US gets recycled (Worldwatch Institute 2002).

- Furthermore, there was also no commitment on raising aid levels. The text adopted was rather weaker than the one agreed ten years ago at Rio. It merely reiterated Monterrey’s appeal to *developed countries that have not done so to make concrete efforts towards internationally agreed levels of ODA*. Figure 7 depicts development assistance contribution of the top 15 donor countries in the past decade.

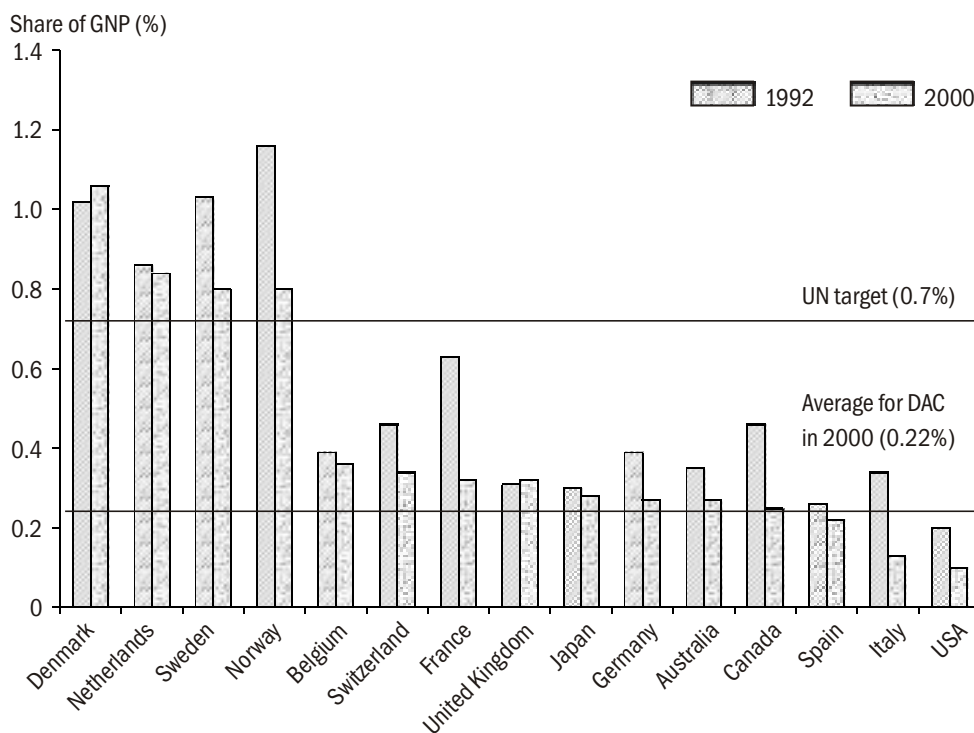


Figure 7 Development assistance contribution by top 15 donors
Source World Bank (2002)

Lack of agreement on reform of subsidies

- While the Rio summit called for removal or reduction of subsidies that did not conform to sustainable development objectives the negotiators at Johannesburg were unable to agree on subsidy reforms or integration of social and environmental costs into economic activities. No agreement was reached on targets and time frames for phasing out of subsidies with delegates opting for text that proposed, *to reduce market distortions through the use of improved market signals, including restructuring taxation and phasing out harmful subsidies, where they exist*. There were also no commitments on reducing the massive subsidies to fossil fuel industry, which contributes a major share to global energy mix. Box 4 depicts an interesting case on subsidy on kerosene and use of solar lanterns.
- It is well known that elimination of trade-distorting subsidies, especially in agriculture, can bring far more benefits than ODA for several developing countries. According to World

Bank estimates, if 7.5% of the 360 billion dollars in global annual agricultural subsidies and 300 billion dollars in global annual energy subsidies were redirected the world would generate additional 50 billion dollar per year needed to fulfill the MDGs (IUCN 2002).

- IEA analysis undertaken for a sample of countries also reveals that removal of energy subsidies can produce environmental benefits by reducing primary energy consumption by 13%, increasing GDP through higher economic efficiency by almost 1% and lowering CO₂ emissions by 16% (IEA 1999).

Little progress on the Kyoto Protocol

There was also silence on the need for all countries to ratify the Kyoto Protocol. In this regard, the Plan of Implementation stated, *States that have ratified the Kyoto Protocol strongly urge the States that have not done so to ratify the Kyoto Protocol in a timely manner.*

Box 4 Subsidy on kerosene versus solar lanterns

The huge subsidy given on kerosene for rural lighting, amounting to Rs 32 760 million annually, is a considerable drain on the country's economy. Promoting a switch to alternative lighting options from kerosene can constitute significant savings. One such option is promoting the use of the environmental-friendly solar lanterns. The kerosene consumption replaced by the use of solar lanterns will result in an estimated savings of Rs 26 758 million annually on subsidy to kerosene. The savings on the subsidy for kerosene can be used to subsidize solar lanterns to the extent of 50%. The balance 50% would be the contribution of the consumers towards the cost of the solar lanterns. This could be facilitated through the provision of credit facilities. The annual cost to the consumers of this credit can be designed to be no more than their actual expenditure on kerosene purchased and can be repayable in three years. It is estimated that in this manner, about 20% of the targeted households can be covered annually. Hence in a period of five years, all the households using kerosene as the primary fuel for lighting can be covered. The avoided expenditure on kerosene would be more than sufficient to cover the repair and maintenance cost of the lanterns disseminated. This step will also facilitate setting up of rural enterprises based on provision of repair and maintenance facilities for the solar lighting system.

Source TERI 2002

Box 5 Implementation Plan passed: drama on corporate accountability

One of the few achievements of WSSD was that consensus was reached after heated debates on the commitment to promote corporate responsibility and accountability through full development and effective implementation of inter-governmental agreements.

The text of the Plan of Implementation eventually adopted by the main committee read: 'Actively promote corporate responsibility and accountability, based on the Rio Principles, including through the full development and effective implementation of inter-governmental agreements and measures, international initiatives and public-private partnerships, and appropriate national regulations, and support continuous improvement in corporate practices in all countries.'

Source <http://www.twinside.org.sg/title/5186a.htm>

Rio principles: advance from Rio or retreat?

The plan of implementation reflects no significant movement forward from commitments made at Rio. Indeed, it took several steps backwards. The Precautionary Principle, for instance, which deals with decision making under uncertainty, was referred to as 'precautionary approach', a restatement of legal status quo or a retreat from the spirit of the principle. Also, the placement and language of Rio Principle 7 of 'common but differentiated responsibilities' was debated by delegates.

Type II agreements: a positive step or a negative outcome?

The Summit produced ‘Type II’ initiatives, a recognition of the potential of multi-stakeholder partnerships and the role of non-governmental actors. More than 220 partnerships representing 235 million dollars in resources were identified at Johannesburg to compliment the government commitments. While the feature brought some hope with the perceptible presence of business community and NGOs, it also came with some scepticism. The list of accords certainly seemed an impressive step in the direction of implementation of sustainable development. There, however, remained concerns regarding their actual contribution. While some delegates feared that these could be used as a substitute for government commitments and in fact cause negative political effect, taking pressure off the governments to negotiate agreements, there were others who considered it as a positive development.

Current status of partnership initiative

Developing and implementing partnership initiatives as a complement to the negotiated outcome of the WSSD is an ongoing process. There have been about 251 partnerships for sustainable development so far (United Nations 2002). Table 3 provides the number of partnerships agreed under different heads.

Among the agreed initiatives about 60% have a global scope and the remaining 40% a regional focus with the bulk of them focused on protecting and managing the natural resource base of economic and social development (Table 3).

Of the total 251 proposals submitted thus far, about 35% are by the governments as the leading partners; 39% are led by IGOs (intergovernmental organizations) (15% specifically led by IGOs in addition to 24% led by UN agencies/funds and programmes); 26% are led by major groups (NGOs, research partners, local authorities, universities and business) and very few initiated by the private sector. Roughly 63.9% of the 251 partnerships have received funding (either to carry out initial phases or entire project) but not all submissions provided figures of funds involved/necessary to carry out the projects.

Table 3 Current status of partnerships (as on 16 January 2002)

Area under which partnership initiative developed	Number of partnerships
Changing unsustainable patterns of production and consumption	9
Protecting and managing natural resource base of economic and social development	90
Health and sustainable development	13
Sustainable tourism	4
Sustainable development of small Island developing states	17
Sustainable development initiatives for Africa	25
Means of implementation	51
Local authorities and urbanization	15
Activities/ processes undertaken to initiate partnerships	29

Source United Nations (2002)

The WSSD: translating resolve into action

The Summit that brought the world’s governments together for re-igniting interest and reconciling aspirations expressed at Rio in 1992 certainly received mixed opinions. While some perceived it as a historic milestone, others considered it as a forgettable non-event with earlier accords repacked with not-so-different set of commitments. The true success of such a summit lies in concretizing commitments, accepting responsibility, and taking concrete action.

There is no denying that the prime responsibility for action rests with the national government but a summit of the reach of WSSD must reinvigorate the spirit of responsibility at a higher level. The responsibilities of the affluent nations towards providing assistance to the poorer nations in their efforts towards sustainable development were well recognized both at Rio (which endorsed the principle of common, but differentiated responsibility) and at Johannesburg. The North was considered to have a far greater responsibility in protecting global commons owing not only to the disproportionately large resources it commands but also because of its disproportionate contribution to the global environmental problems. Both the International Conference on Financing for Development at Monterrey and the WSSD reiterated promises of financial assistance made by the developed world. While the Johannesburg Summit did stir the developed world into action, with European Union members promising to increase their collective ODA to 0.39% of gross national income by 2006 and US announcing its plans to raise core development assistance to 0.15% from earlier 0.1% of GDP 2006, these seem to be small steps in the direction of attaining the desired goals.

Type II partnerships that emerged at Johannesburg also offered a ray of hope for providing assistance in arriving at the desired goals. It is, however, too soon to predict their credibility and reach.

The final word on what the developing world should learn from the WSSD seems to be 'self-reliance'. The global development partnership does not appear in its present (post Johannesburg) incarnation to be a fundamental engine of progress towards the goals identified a decade ago at Rio and later at the Millennium Summit. Developing countries should tap indigenous forces and address issues of local governance without placing too much hope on aid promises.

References

CEA (Central Electricity Authority). 2002

The 16th Electric Power Survey

New Delhi: CEA, Government of India

Cross Nigel. 2002

Sustainable development

Developments 18(2): 9-14

Dasgupta C. 2002

From Rio to Johannesburg: a lost decade

The Hindu Business Line, 26 August 2002

Douma W T. 1996

The precautionary principle

Úlfjótur, 49(3/4): 417-430

IMF (The International Monetary Fund)

Global Development Finance 2000

Washington, DC: IMF

MoEF (Ministry of Environment and Forests). 2002

Towards Sustainability: learning from past, innovating for the future, stories from India

New Delhi: MoEF, Government of India

IEA (International Energy Agency). 1999

World Energy Outlook, Looking at energy subsidies: Getting the prices right

Paris: IEA

IEA (International Energy Agency). 2002a

Renewables in global energy Supply: an IEA fact sheet, November 2002

Accessed from www.iea.org on 25 January 2003

IEA (International Energy Agency). 2002b

World Energy Outlook 2002

Paris: IEA

IISD (International Institute for Sustainable Development). 2002

From Rio to Johannesburg , Ten + Ten

<http://www.iisd.org/briefcase/>

Last accessed on 27 January 2003

IPCC (Intergovernmental Panel on Climate Change). 1995

IPCC Second Assessment Report

Geneva: IPCC

IPCC (Intergovernmental Panel on Climate Change). 2001

Climate Change 2001: Synthesis Report, edited by RT Watson and the core writing team

Geneva: IPCC [Stand-alone edition]

IUCN. 2002

IUCN Assessment of the State of WSSD negotiations

[http://www.iucn.org/wssd/joburg_programme/media_events/0209/pr1sepjuanita .pdf](http://www.iucn.org/wssd/joburg_programme/media_events/0209/pr1sepjuanita.pdf) Accessed on 1 September 2002

Krugman P. 2001

The return of depression economics

New York : Penguin

Myers N and Kent J. 2001.

Perverse Subsidies: How Tax Dollars Can Undercut the Environment and the Economy.

Washington, DC: Island Press

MDG. 2002

Millennium Development Goals web site

<www.developmentgoals.org>

Accessed on 27 January 2003

OECD. 2001

Official Development Assistance And Foreign Direct Investment: Improving The Synergies

Paris: Organisation for Economic Co-operation and Development

OECD DAC (Development Assistance Committee)

<<http://www.oecd.org/dac/>>

Accessed on 27 January 2003

Sen A K. 1981

Poverty and famines: a study in entitlements and deprivation

New Delhi: Oxford University Press

Sen A K and Dreze J. 1999

Indian Development – Selected Regional Perspectives

New Delhi: Oxford University Press

Sen A K and Dreze J. 2001

India; Development and participation

New Delhi: Oxford University Press

Stiglitz J. 2002

Globalization and its discontents

New York: Penguin

TERI (Tata Energy Research Institute). 2002

Defining an Integrated Energy Strategy for India: ensuring security, sufficiency, and sustainability

New Delhi: TERI

Pachauri R K and Vasudeva G. 2002

Johannesburg and beyond: towards concrete action

New Delhi: Tata Energy Research Institute

United Nations. 1992

Agenda 21

<<http://www.un.org/esa/sustdev/agenda21text.htm>>

Accessed on 30 January 2003

United Nations. 1997

The Rio + 5 Forum

<<http://www.ecouncil.ac.cr/rio5/>>

Accessed on 30 January 2003

UN. 2002

<http://www.johannesburgsummit.org/html/sustainable_dev/partnership_background.html>

Accessed on 23 January, 2003

UNDP (United Nations Development Programme). 1999

Human Development Report 1999

New York : UNDP

UNDP. 2001

Human Development Report 2001

United Nations Development Programme

New York : Oxford University Press

UNDP. 2002

Human Development Report 2002

United Nations Development Programme

New York : Oxford University Press

World Bank. 2001

Attacking poverty

World Development Report 2000/2001

New York: Oxford University Press

World Bank. 2002

World Development Indicators 2001

Washington, DC: The World Bank

Worldwatch Institute. 2002

<www.worldwatch.org/worldsummit/briefs/>

Accessed on 27 January 2003

World Resources Institute

<<http://earthtrends.wri.org/>>

Last accessed on 27 January 2003

World Hunger Statistics. 2000

<<http://www.bread.org/hungerbasics/domestic.html>>

Accessed on 27 January 2003

WRI (World Resources Institute). 2002

WRI expresses disappointment over many WSSD outcomes

<http://newsroom.wri.org/newsrelease_text.cfm>

Accessed on 4 September 2002