

Environment and Sustainability: International Issues and China

Arthur J. Hanson
CCICED Lead Expert

Executive Summary

At the start of a new phase for CCICED, and in light of the significant global environment and development events over this past year, it is useful to review international issues and progress in sustainable development and their implications for China. This is a task that covers both mainstream national and international decision-making and geopolitical considerations since the issues are now major concerns for international relations, globalization and for both ecological and human security.

Ten major issues arise from the review. They are noted below.

1. Our planet's environment continues to deteriorate at an alarming rate, and the solutions, in the form of equitable human development, strengthened knowledge, institutional capacity and governance, are being implemented far too slowly. There will be serious impacts on China's sustainable development achievements, domestically and internationally, if worldwide progress lags.

2. Plausible scenarios, based on philosophies that include security first, market-based solutions, development policy, and behavioral transformation for sustainability, suggest that nations and the international community have immense power to shape outcomes over the next 30 years. At present there are forces pulling in all directions among these four approaches. Unless a suitable balance is found, the various dimensions of sustainable development will not be achieved, even if wealth continues to increase globally.

3. The social dimensions of sustainable development, including poverty reduction, environmental justice, and human ingenuity applied through business, civil society and community action, will prevail in the coming years. How can governments, including China's, foster the leadership and enabling conditions to strengthen this approach within their own countries, regionally and globally?

4. Trade, foreign direct investment, and development assistance taken together have not provided adequate sources of development assistance required to achieve the ambitious goals of the Earth Summits in Rio and Johannesburg. The latest commitments are still inadequate. China is reasonably well favoured by comparison to many other countries, but will face huge demands as a consequence of its rapid economic growth and accumulated environmental debts. To what extent can China's substantial government budget commitments for sustainable development be supplemented by innovative financing mechanisms such as fee and incentive systems, substituting ecological service solutions in place of expensive infrastructure, and by technology sharing?

5.The WSSD has focused on partnership among business, government and civil society institutions in order to accelerate the pace of sustainable development and to spread the effort more broadly into society, for example, with small and medium-sized enterprises, and in rural and urban communities. These partnerships may prove hard to sustain, depending on everything from international relations, willingness to share experience, and the right enabling circumstances and openness of governments to new governance approaches. But China may be able to benefit tremendously from this partnership model, especially given the new emphasis on business and entrepreneurs participation within governance structures.

6.The multilateral environmental conventions (MEAs) agreed upon during the Rio Earth Summit, and in the decade before and after, will continue to be the most prominent elements of the global framework governing environment and development. Yet they are still not fully internalized within national laws and decision-making of most countries. Even more difficult is the role of global conventions in creating change at local levels. China has done more than many other nations, but implementation is still limited. How can the domestic process be accelerated? And can China exert its growing influence within negotiating sessions such as the Committee of Parties meetings to develop a more effective overall system for the MEAs to operate internationally?

7.The current lack of knowledge concerning important environmental issues and ecosystems, the slow transfer of technology, and the high costs for development of sustainable technologies are working against innovative sustainable development solutions. The problem is particularly acute for China, given the rapidity of development and possible option foreclosure. Expanded international cooperation and strengthened global knowledge networks are required to address science and technology. This is an area where China may need to invest even more than it currently does in order to derive full benefits from linkages with the world's scientific and technology communities.

8.Despite considerable evidence of China's proactive and positive positions in support of international environmental negotiations and remarkable progress domestically on environmental management, there is considerable and probably growing international concern about China's potential impact on the global environment and regional conditions. These perceptions likely can only be altered through a combination of more international cooperation to address specific problems, well-documented improvements, on-going international communication of successes, and consideration of international impacts arising from resource management and other decisions.

9.China's progress towards sustainable development is of interest to all parts of the world but particularly valuable to developing countries. In the years ahead China can be expected to serve as a major source of advice, services and technology for other countries. How can China prepare for such tasks within the region and in other areas such as Africa? To what extent should it be partnering with others in this process, for example via development agencies and through private sector and professional and international civil society organizations?

10.China appears to be well positioned to take a global leadership role in sustainable development, serving its own needs and for the ultimate benefit of the entire world.

The most important window of opportunity to address international environment and development concerns is the current decade, and the window will start to close if continued erosion of biodiversity, land and water degradation, ocean and atmospheric pollution reduces options. The period for demonstrating large-scale success has been defined by the world community as 2010 to 2020. This is a very short time from the present. The challenge is great. And much of the outcome will be determined mainly by progress by a relatively small number of the largest nations and groups of countries such as the European Union.

Environment and Sustainability: International Issues and China

**Arthur J. Hanson
International Institute for Sustainable Development**

**China Council for International Cooperation on Environment and Development
Annual General Meeting
23-25 November 2002**

Purpose and Scope

This paper summarizes some international perspectives on key issues that may be particularly significant for China, domestically or in its international relations. The World Summit on Sustainable Development (WSSD) outcomes and the preparations and major published reviews leading up to it is an obvious source, but by no means the only one. The Doha World Trade Organization (WTO) meeting, the Monterrey Conference on development financing, and various on-going negotiations such as those related to the Convention on Biological Diversity and the Kyoto Protocol are helping to shape a global agenda for environment and sustainability concerns. Other sources of power and influence, ranging from those acting against terrorism to the many scientific, business and civil society sustainable development initiatives have significant implications for China.

It is impossible to document the full extent of issues in a short overview. The intent is to draw out several main themes in a fashion that may prove helpful in shaping future CCICED advice and work, especially on environment, development and governance—this year’s Annual General Meeting theme. The paper may be revised in light of discussions that will take place during the AGM. This paper, and the accompanying issues paper prepared by Chinese members, should help to benchmark our starting point in Phase 3. Hopefully, in looking back half a decade from now, significant progress will be made in addressing some of the issues, both globally and as they affect China.

The paper’s scope includes: the state of the planet; elements of trade and globalization, and use of the global commons; transboundary environmental impacts from China; national issues within China of broad international concern such as desertification, forest protection and sustainable water management, international fisheries, and urban development; plus and technology development relevant to sustainable development. The time frame is primarily now to 2030, with a focus on issues and directions highly relevant to decisions and action over the next five to ten years.

Ten overarching issues are identified along with their implications for China.

Global Report Cards: Environmental Conditions and Sustainable Development

A remarkable set of studies and progress reports is now available on the state of our planet, and on key issues surrounding our use and abuse of it.

Box 1. Global sustainability reports.

- **GEO 3 “State of the Planet and Sustainability Policies”**
- **IUCN Sustainability of Nations**
- **UNDP Human Development Report**
- **World Resources Report 2002-2004 Decisions for the Earth: Balance, Voice and Power and World Resources 2000-2001 People and Ecosystems: the Fraying Web of Life**
- **Specialized Reports e.g. UNCTAD World Investment Report; Disaster Report of Red Cross; UNICEF State of Children, etc.**
- **World Development Report 2003 *Sustainable Development in a Dynamic World***

There are at least five areas of convergence arising from these global overviews:

- *Human development is recognized as the central issue for ensuring sustainability on the planet.* Poverty and social factors such as education and health need to be

addressed as key elements for environmental sustainability, and good environmental conditions are recognized as essential elements for social and economic well-being. While Africa has become a focus for urgent need, sustainability conditions in Asia are perhaps the greatest long-term concern, given the concentration of population, economic growth potential, range of cultures, ecological conditions and other factors. National poverty reduction strategies and their link to environment have become a matter of concern for international development agencies.

- *Increasing urgency for action to reverse the rapid environmental deterioration detected worldwide over the past decade.* Projections are for worsening situations, with convergent economic, social, and environmental crises, This decade provides the opportunity to create change that will determine sustainability outcomes for 2030 and beyond. Choices are in our hands via improved policies, changed behavior and international cooperation in order to bring about effective action and governance. Equally plausible global and regional outcomes can be identified—ranging from steadily increasing long-term degradation and inequity to pathways of sustainability that will provide well for future needs.
- *Globalization implications for environment and development are real but action at the international level is not robust enough despite various global conventions.* Tension between developing nations and richer countries are increasing on most globalization issues, including trade and environment, transfer of financial resources and sustainable technologies, human and environmental security. Several areas of progress exist, including biosafety, perhaps climate change and food security. Action on perverse subsidies, investment protocols for sustainability and other financial and economic mechanisms needed to address macroeconomic aspects of globalization are not uniformly in place, calling into question some aspects of market approaches.
- *Knowledge, institutional capacity and governance are major barriers to sustainable development progress virtually everywhere.* Not enough progress is being made on linking the outcomes of global consensus concerning environment and development with local and national follow-up action. These issues are as important in OECD countries as they are for developing regions, but the situations in developing countries are expected to be the most critical in determining longer-term sustainable development progress globally. Development of better mechanisms to produce and equitably share essential knowledge are needed in order to provide accurate “State of Environment”, “Sustainability Progress Reports” and other performance information. A shift towards participatory models of governance, and new models of public-private-community partnerships are being called for everywhere.
- *Certain ecological and resource issues are likely to become ever more significant to human well-being.* Prime issues include supply and demand of freshwater; desertification and other forms of land degradation; long-range transport of atmospheric pollutants such as persistent organic pollutants (POPs); ecological decline

in marine and coastal environments including fisheries; pervasive impacts of climate change; and “alien invasive species.” A focus on ecosystems, valuation and protection of ecological services is gradually taking hold. Environmental security is emerging as a new basis for dialogue on a range of issues including natural resource disasters, war and civil disturbances, migration and refugees.

ISSUE 1. Our planet’s environment continues to deteriorate at an alarming rate, and the solutions, in the form of equitable human development, strengthened knowledge, institutional capacity and governance, are being implemented far too slowly. There will be serious impacts on China’s sustainable development achievements, domestically and internationally, if worldwide progress lags.

Scenarios: Understanding Consequences and Seeking Opportunities

We cannot know the future, but there is strong interest in creating scenarios that describe alternative visions of our planet’s future under various governance assumptions. These scenarios help to define potential consequences for environment and sustainability and to locate opportunities for achieving desired outcomes. In UNEP’s GEO 3 and other publications, including the 2002 UNDP China Human Development Report *Making Green Development a Choice*, the Stockholm Environment Institute (SEI) has described a series of “equally plausible” global and national scenarios. These are briefly described below.

At one extreme is a grim future of inequity in use of resources, and of lost opportunity for sustainable development—“Security First.” At the other is a great transition to “Sustainability” with appropriate participatory institutions, and supported by more equitable sharing and behavioral change. In between are “Market First” in which globalization and liberalization of trade are dominant forces, and “Policy First” where there is a guided effort to address social and economic concerns as well as stimulating economic development primarily through policies. These scenarios may well play themselves out simultaneously, but each emphasizes different philosophies, tools and actions.

These scenarios provide a “big picture” look at the future that identifies many issues and places the burden of choice back in the hands of the international community, national governments, the private sector and civil society. In a way, events of the past year have sharpened the focus on how these scenarios could play out. The tragedy of 9-11 has been a stimulus for “Security First”. The on-going debate concerning globalization and trade liberalization, a central theme of “Market First” has permeated discussions at all major gatherings of world leaders, and particularly has become identified with the WTO. The “Sustainability” scenario reflects the debate at the World Summit on Sustainable Development (WSSD) in Johannesburg. And the “Policy First” approach reflects the

rational response of governments and international bodies attempting to balance priorities through a mix of policy incentives and improved regulatory frameworks.

The important conclusion arising from these scenarios is that sustainable development cannot be separated from significant geopolitical events. It is in the mainstream of issues affecting life and societies. And that, while great progress can be made in certain sectors and regions, the objective of achieving sustainable development globally will be a long-term and difficult process. Therefore an important perspective is “bending the curve” over this current generation (the time period 2000 to 2030) so that pathways and solutions become apparent for most problems, including issues such as climate change, biodiversity loss, food security, etc.

ISSUE 2. Plausible scenarios, based on philosophies that include security first, market-based solutions, development policy, and behavioral transformation for sustainability, suggest that nations and the international community have immense power to shape outcomes over the next 30 years. At present there are forces pulling in all directions among these four approaches. Unless a suitable balance is found, the various dimensions of sustainable development will not be achieved, even if wealth continues to increase globally.

Poverty reduction is now acknowledged as the most critical concern for sustainability. This focus has become sharper, but at the same time, goals for sustainable consumption remain very unclear. Thus the gulf between developing countries and richer nations may grow since most of the world’s resources continue to be consumed by the richest 20% of the world’s population.

If there is a strong positive message from the scenarios it is that opportunities associated with new technologies and their applications for achieving sustainability are far reaching. This message is becoming a major part of the emerging knowledge-based economy. There is widespread agreement that innovation rather than incremental improvement is necessary for virtually all major environment and development problems. Business is leading the way with process redesign to eliminate pollution, efforts to reduce material and energy throughput, and sector-wide efforts such as “responsible care.”

The business commitment to “the journey towards sustainability” is a major success story of this past decade. But it is still highly selective and there are numerous inconsistencies. For example, even as energy companies transform themselves, there is active resistance on the part of some to accepting the Kyoto Protocol. And even some of the most progressive automobile manufacturers aggressively market larger vehicles that push fuel consumption figures upward. Generally, small and medium-sized firms (SMEs) have a particularly difficult time addressing environment and sustainability matters. Biotechnology, still in its infancy as an industry, is contentious—a sustainability innovation to some, ecological nightmare to others. Questions have been raised about the role of both science and technology on this issue and others. Thus, even as science

promises more in the solution to environmental and resource-based problems, public distrust grows—threatening to halt some research felt to be of compelling significance, for example in meeting world food needs. Such issues merge with trade and economy concerns when international markets are affected, for example through certification processes and citizen campaigns. Potential barriers to genetically-modified foods entering Europe and China are examples.

What kind of economy can we expect to emerge over the coming decade? Traditionally, some elements of the environmental community have argued for a steady state rather than a growing economy. However, this view now seems sidelined in favour of a qualitatively different growth. Hence the World Bank now focuses on five types of capital and how increases in one can happen without negative impacts on others—in other words, how to achieve positive synergies.

The 1990s represented the decade of the information economy, especially for rich countries. It is highly likely that the future will see the return to a biologically-based economy, but one that is far different than the natural resource exploitation of the past. The new biological economy will link the information economy with new genetically-based technologies, act on concepts such as *The Natural Step* for business, support the use of biological sources for carbon credits, develop advanced approaches for the conservation and sustainable use of biodiversity, and address negative impacts such as bioterrorism and bioresource depletion.

There is a broadening perspective on human and ecological security focusing on acute conflict, population growth and migration, human and ecosystem health, and poverty as key drivers of action for environment and development. The Millennium Development Goals of the United Nations, now accepted by nations as the basis for at least the minimally achievable set of development goals over the next 13 years, covers five key topics expressed as WEHAB: Water, Energy, Health, Agriculture and Biodiversity. We know the goals can be met. Yet performance on each of these issues over the past decade has been inadequate and regionally variable, casting serious doubts on what is likely to happen the future.

The issue is how to draw upon the best of human ingenuity (as suggested by T. Homer-Dixon, 2000 in his book *The Ingenuity Gap. How Can We Solve the Problems of the Future?*). There is a need to remove barriers and to harness the considerable desire of people and societies in all parts of the world to move beyond present-day conflicts, corruption, disorganization, single-minded action and inequity. Thus governance, social and environmental justice, equity and investment emerge as key performance concerns and issues. These are topics that are applicable for all countries—rich and poor. But the greatest concerns right now are for Africa and the very poorest nations.

As solutions to growing environment and development concerns start to emerge, will they be found internationally via multilateralism, regional and bilateral approaches within a sharply divided world, or will it be within a global community—the world operating more

or less as a single community? The latter approach is the one so far exemplified by consensus-based processes such as the Rio Earth Summit and the WSSD. But this approach is under fire. The day of the grand accords is felt by some to be coming to an end. Pragmatic solutions derived through lesser means is an alternative even though they may be exclusionary solutions. There is also the issue of unilateral action, sometimes accompanied by military, financial or other means to achieve an “ordered” response.

Box 2. Sustainable development as a moral imperative.

Sustainable development is more than economics, more than development, and more than environment. It is a crusade based on the moral imperative of saving our planet and making it safe, secure, and prosperous for all. It is based on economic justice, social justice, and ecological justice. The time for action is now.

- James Wolfenson, World Bank, 26 August 2002 at the WSSD

Leadership and coordination continue to be key issues—whatever the scenario. Rarely do environmental agencies have the standing or the funding to provide sufficient direction and action. This is true at all levels from local to national and global. There is a definite feeling that the limited achievements of such organizations have been outpaced by those dedicated to economic matters. It is not simply a matter of providing additional funding, or even a somewhat expanded mandate. The broader issue is who should lead and coordinate sustainable development? Globally, the mechanisms devised so far have been considered inadequate (e.g. the Commission for Sustainable Development within the UN and the concept of a World Environment Organization). Within countries and in business the situation is also difficult. Inherently cross-sectoral, environment and development problems require persistent and, at times, very bold action by CEOs, Presidents and Prime Ministers. Most of the striking success stories can be traced to such leadership.

ISSUE 3. The social dimensions of sustainable development, including poverty reduction, environmental justice, and human ingenuity applied through business, civil society and community action, will prevail in the coming years. How can governments, including China’s, foster the leadership and enabling conditions to strengthen this approach within their own countries, regionally and globally?

Benchmarks: Doha, Monterrey and Johannesburg

Three key challenges are emerging in the global environment and development dialogue:

- World problems are growing more complex and difficult to address, frequently with convergence among political, socio-economic and environmental crises.
- Economic change is outstripping capacity of environmental institutions to respond, with the result that both environment and economy are negatively affected.

- The political gulf between rich and poor is widening, making solutions to both poverty reduction and environmental improvement more difficult.

The search for solutions to these problems has introduced even more complexity, including more international environment and development agreements. But, from the perspective of many frustrated governmental and non-governmental bodies and other interests, there have been many obstacles to progress: limited commitment of funding, lack of accountability in the form of binding timetables for action, and failure to remove important barriers and to set in place precursors for action, including appropriate institutional change. Over the past year the three major global meetings to address these concerns were the WTO Ministerial Meeting in Doha, the high-level meeting to enhance development financing held in Monterrey, Mexico, and, of course the WSSD.

Doha: This meeting has set the stage to incorporate sustainable development within the next round of global trade negotiations, and to address market access for developing countries. The Doha negotiations brought home the realization that environment and development are matters to be dealt with in many parts of WTO—not only the Trade and Environment and the Trade and Development Committees. Agriculture and fisheries subsidies are prime examples. But the bridge between rich and poor nations is still not built, to the detriment of all. Thus trade, as the engine for globalization, continues to fuel discontent in all corners of the globe. This issue was not resolved at the WSSD, nor is it likely to be over the next several years.

Box 3. WTO perspectives on trade and sustainable development.

The WTO's contribution to sustainable development goes beyond raising incomes and helping to alleviate poverty. Market restrictions and distorted prices result in scarce resources being overutilized. The removal of certain trade restrictive measures and distortions can benefit both trade and the environment. Take the case of the environmental impact of fisheries subsidies – an issue long discussed in the WTO. Negotiations are now taking place under the Doha Development Agenda with a view to clarifying and improving WTO disciplines on fisheries subsidies. Agriculture, energy and fisheries are all sectors where greater market disciplines could have positive effects on the environment.

However, as important as they are, correcting pricing distortions alone will not solve all environmental problems. Lowering tariffs will not stop a deteriorating ecosystem or rainforests from disappearing. Trade is an ally of sustainable development but it cannot substitute for policy failings or gaps in other areas. The solution to environmental and other challenges lies in sound domestic policies and in reaching enforceable global agreements and standards. At Doha, governments committed themselves to negotiations on the relationship between Multilateral Environmental Agreements and the WTO. This will ensure there are no contradictions between the two and will enhance the mutual supportiveness of trade and the environment.

- from a speech at the WSSD by the Director General of the WTO

Monterrey: This important meeting committed to a doubling of development assistance and better debt solutions, with a financial commitment to the UN Millennium Goals and to improving assistance to Africa. However it is a commitment with challenges and

conditionality, calling for national improvements via better governance, safety nets, and altered macroeconomic policies. Importantly, the Monterrey meeting agreed to address international systemic issues. Unfortunately, the opportunity to directly address environment and development funding gaps was not taken. By comparison to the overall needs for development funding, the gains from Monterrey appear modest.

The reality is that most development funding must still be found within countries and through other sources, including private sector foreign direct investment, and from remittances of citizens living abroad. It is possible that for richer countries, the flow of development assistance will decline due to the targeting of the poorest nations and the focus on Africa. While this may be proper, there needs to be recognition of the serious capacity-building, policy and institutional development that should accompany all stages of economic development, especially when there are high levels of foreign direct investment. Whether Monterrey weakened or strengthened this balance is hard to determine.

Box 4. Financial assistance for the Rio Conventions

The Development Advisory Committee (DAC) of OECD examined Official Development Assistance annual aid flows of 23 DAC members between 1998-2000 in support of three UNCED Conventions (Climate Change, Biological Diversity and Desertification). The study demonstrated an annual commitment for all three of about USD 4 billion per year—2.7 billion for climate change, 1 billion for biodiversity, and 700 million for desertification.

- DAC Working Party on Statistics – Contribution to WSSD

WSSD: For the first time at the global summits, a genuine recognition and shift to a poverty and development focus took place. In addition, there was a broader recognition of partnership arrangements, but only modest gains in terms of specific implementation goals and timetable. The general disappointment in official negotiations, called into question the comprehensive summit approach, but the energy and enthusiasm present at events outside of the official negotiations raised the issue of whether real progress on sustainability is indeed primarily outside of governments and international bodies.

Overall then—is sustainable development moving beyond concept into practice globally? The answer is: “yes, but”, especially when the three hypotheses at the start of this section are considered.

Box 5. The Earth Negotiations Bulletin perspective on WSSD outcomes.

Now that the Summit is over, the mixed reactions are not surprising. Despite the Secretariat's smooth organization and servicing, most knew at the start that this Summit was never going to produce the abundance of new manifestos and agreements that Rio did. Stocktaking is much more mundane, particularly because no one needed a meeting to know that the condition of the world's poor and the environment do not get high marks. But if measured against the UNGA's stated objectives, the WSSD produced both advances and setbacks.

And beyond the confines of the negotiating halls where real sustainable development activities were constantly showcased, it was evident that "sustainable development" is more than a concept and is making a difference. Like Stockholm and Rio, however, the effects of this Summit cannot be fully measured in the immediate aftermath. Their impact on the international process and on national, local and individual levels will only become more visible with time.

- Earth Negotiations Bulletin WSSD Summary Issue

ISSUE 4. Trade, foreign direct investment, and development assistance taken together have not provided adequate sources of development assistance required to achieve the ambitious goals of the Earth Summits in Rio and Johannesburg. The latest commitments are still inadequate. China is reasonably well favoured by comparison to many other countries, but will face huge demands as a consequence of its rapid economic growth and accumulated environmental debts. To what extent can the already substantial government budget commitments for sustainable development be supplemented by innovative financing mechanisms such as fee and incentive systems, substituting ecological service solutions in place of expensive infrastructure, and by technology sharing?

WSSD—Examination of Progress and Outcomes

The 1992 Rio Earth Summit has provided the framework for most successes concerning sustainable development since that time. Many would argue that some of the most significant success stories from rich countries have come from the European Union. However it is only since 1999 that sustainable development has become an overarching objective of all EU policies, and only since 2001 that a first set of priorities has been established under the EU Sustainable Development Strategy.

Progress within OECD nations has been summarized in *Working Together towards Sustainable Development. The OECD Experience* (July 2002, OECD). This document highlights 5 major issues for policy attention to overcome key barriers:

- Reform of government decision-making processes to allow more integrated approaches
- Greater use of market-based instruments, combined effectively with regulations
- Harnessing of science and technology and boosting its contribution to sustainable development
- Ensuring that trade, investment, environment and social policies are coherent and mutually supportive, and the opening of world markets

- Introducing policy changes at a pace and in a manner that allows for adequate adaptation to any adverse social effects

The OECD recognizes the need for partnerships as an essential ingredient for sustainable development progress. It is perhaps one of the most vital outcomes of the Rio Earth Summit that much more broadly-conceived partnerships, often linking civil society, business and government, began to be formed.

Over the past decade within Asia, there has been very significant uptake of sustainable development as a guiding concept. But, as a thoughtful analysis prepared for the Asian Development Bank (*D.V. Smith and K.F. Jalal 2000. Sustainable Development in Asia*) revealed, actually achieving this objective has, for the most part, not been successful. Their proposed solutions centre on transforming consumption, production and distribution of benefits and costs through a policy focus on:

- Political economy of markets and their imperfections and of access to land, capital and information
- Quality of governance and its impact on who bears the costs and who reaps the benefits of political decisions; and
- Civil society and how social values are communicated and transformed into public policy through processes of public participation.

They conclude that the “The market’s invisible hand often needs a strong visible hand reflecting social norms and standards.”

With the assistance of several well-experienced observers, the International Institute for Sustainable Development (IISD) produced a short list of the major successes and failures since Rio. Entitled *Ten Plus Ten* the list can be found at <http://iisd.org>. Failures include:

- The breakdown of the Rio bargain between rich and poor countries
- A widening wealth gap
- Continuing overconsumption especially within developed countries
- Damage done to developing countries by attaching strings to aid packages, for example via the Washington Consensus
- Inability to align economic signals with environmental needs, for example, through removal of environmentally perverse subsidies
- Rise in armed conflicts
- Oceans and fisheries in jeopardy
- Growing scarcity of freshwater
- Devastation caused by AIDS, especially in Africa
- Unchecked biodiversity/species loss

A very penetrating analysis of sustainable development issues and strategies was prepared by the International Institute for Environment and Development (IIED) in the months

leading up to the WSSD. This work, released as a series of papers and a major workbook (*Sustainable Development Strategies A Resource Book* Earthscan, July 2002), is highly recommended as a source.

The expectations for WSSD were modest and the outcomes, not surprisingly, were equally modest. A summary of the key outcomes, as provided by the UN meeting organizers is included as Annex 1 to this paper. Without timelines, or with only generally stated objectives, progress for many of these outcomes will be difficult to measure. This problem plagued Agenda 21 throughout the 1990s and it will very likely continue to be a major issue. Furthermore, costing for each of the key objectives is not well worked out.

Box 6. Excerpts from WSSD Political Leaders Statement.

We commit ourselves to act together, united by a common determination to save our planet, promote human development and achieve universal prosperity and peace.

We commit ourselves to the Johannesburg Plan of Implementation and to expedite the achievement of the time-bound, socio-economic and environmental targets contained therein.

From the African continent, the Cradle of Humankind, we solemnly pledge to the peoples of the world, and the generations that will surely inherit this earth, that we are determined to ensure that our collective hope for sustainable development is realized.

The exception may be the Millennium Development Goals. These targets are quite clear and the cost of achieving them reasonably well understood. Here it will be a question of political will, improved governance and long-term commitment on the part of poor countries, the multilateral agencies and donor nations. While some argue that the Millennium Goals do not go far enough, it is refreshing to have clear objectives focused on both poverty reduction and environment. These should be taken as the minimum level of commitment.

Box 7. IMF Development Committee Post-Johannesburg commitment.

Earlier this month, the WSSD concluded in Johannesburg with a number of decisions that provide additional direction to our task of eradicating poverty and achieving sustainable development. A series of important commitments were made in the areas of water and sanitation, energy, health, agriculture, biodiversity and ecosystem management, accompanied by the launch of implementation initiatives. Today we committed ourselves with a new vigor and determination to implement the agreed strategies and partnerships and to use our future meetings regularly to review progress through clear and measurable indicators. Building on the outcomes of Monterrey and Johannesburg, we also intend to have further discussions on global public goods.

Civil society and business enriched the WSSD agenda in many ways, including exchange of knowledge, new partnerships and as watchdogs of the official negotiating process. The World Conservation Union (IUCN), which successfully invested an enormous effort to establish an independent forum at the WSSD released an analysis of the official

negotiations, expressing disappointment that the Summit did not deliver a comprehensive, collaborative and integrated plan of action for the implementation of sustainable development. It was “a summit of lost opportunities” (see Annex 2 for further IUCN commentary).

Business, including a coalition of the World Business Council for Sustainable Development (WBCSD) and the International Chamber of Commerce, has made it very clear that the private sector will work best with clear objectives and timetables (see Annex 3). Their representatives to WSSD noted that:

“Business is disappointed that there is not a focus on creating the enabling environment for business, especially SME’s to grow and thrive. It is essential that we build the energy, transport and ICT infrastructure in developing countries in order to facilitate delivery of development goals. NEPAD provides an excellent framework for this to be achieved for Africa.”

The focus on small and medium-sized enterprises (SMEs) will become more and more important in achieving environmental goals and poverty reduction. Their needs are not well met anywhere in the world.

Clearly, many of the “deals” made on the sidelines of the WSSD are cross-sectoral partnerships intended to be practical problem-solving and capacity-building efforts. The issue is whether these new activities can be sustained in the years ahead. As noted at the start of this paper, there are several equally plausible scenarios for the future. Only some provide the enabling environment in which sustainable development enterprises can flourish.

Box 8. WSSD and global governance.

This summit will be remembered not for the treaties, the commitments, or the declarations it produced, but for the stirrings of a new way of governing the global commons—the beginnings of a shift from the stiff formal waltz of traditional diplomacy to the jazzier dance of improvisational solution-oriented partnerships that may include non-government organizations, willing governments and other stakeholders.

- Jonathan Lash, President, World Resources Institute

China was a major beneficiary from the extensive deliberations at the time of the Rio Summit, since many of the principles and concepts such as those of Agenda 21 could be immediately applied during this period of rapid change and high economic growth (see *The People’s Republic of China National Report on Sustainable Development, Beijing 2002*). For different reasons, Africa may well be in a position to take advantage of the Johannesburg negotiations. The recognition that no part of the world can be left in isolation when needs are great was made very concrete by the commitments of rich

nations to support NEPAD (New Partnership for Africa's Development), and the commitment of African leaders to improve governance and other requisites for more effective development. NEPAD's performance is a critical issue for meeting Millennium Development Goals. One of the important questions is how developing nations like China can transfer their successful experience with sustainable development.

It has been suggested that the WSSD may be the last in a series of environment and development summits extending from the 1972 Stockholm Conference. "Summit burnout" may well be a short-term problem, but it is difficult to imagine that the world is not a somewhat better place for having a venue where people of many walks of life and differing views can develop a shared understanding of needs along a complex spectrum of issues extending from local initiatives to global environment and development problems. At minimum the WSSD provided a measure of national and international attitudes towards achieving goals that most nations and people would agree are critical to the future of human existence and a healthy planet.

ISSUE 5. The WSSD has focused on partnership among business, government and civil society institutions in order to accelerate the pace of sustainable development and to spread the effort more broadly into society, for example, with small and medium-sized enterprises, and in rural and urban communities. These partnerships may prove hard to sustain, depending on everything from international relations, willingness to share experience, and the right enabling circumstances and openness of governments to new governance approaches. But China may be able to benefit tremendously from this partnership model, especially given the new emphasis on business and entrepreneurs participation within governance structures.

Global Agreements and National Action ("Global and Local")

The legacy of the 1992 Earth Summit (UNCED) is becoming more evident in decision-making particularly through the action under the major international environmental conventions and accords (a list of those negotiated since UNCED is provided in Chapter 4 of the *2002 PRC National Report on Sustainable Development*). These now demand major rethinking of private investment and government expenditures. The conventions were intended to address a growing global ecological debt not only by more effective control measures but also by gradually moving towards restorative and precautionary action.

China, which has ratified many environment and development conventions, likely now invests more of its GDP in addressing environment and sustainability than any other large developing country—more than 1%. This is still below many OECD countries such as the USA, which has not ratified either the Biodiversity Convention or the Kyoto Protocol.

Debate rages in countries like Canada over the costs of ratifying the Kyoto Protocol, suggesting that finally the interlocking of environment and economy is beginning to be felt. The tentative acceptance of the conventions on the part of some countries, and the relatively limited financial support for them in terms of official development assistance, and in the domestic budgets of OECD nations are major causes for concern. Indeed funding has never come close to meeting the estimated funding needs arising from the 1992 accords, and from earlier identified needs such as water supply and sanitation.

Yet the Earth Summit conventions are powerful instruments of change for sustainable development. Each has an established mechanism for information, negotiation and action. National action plans, domestic legislation, and changing business practices are all contributing to national and local internalization of globally-agreed objectives. These conventions are likely to have a higher profile in the years ahead, and their economic impact is likely to increase. Ultimately their value will be well recognized as environmental benefits become apparent and as innovations stimulated by the conventions demonstrate increasing economic return.

In the years ahead, during Committee of Parties (COP) meetings and in other negotiating forums, there will be efforts to weaken the conventions, and efforts to increase the commitments and roles of developing nations. The monitoring and scientific backstopping needed to assess progress and compliance will require expanded international cooperation and innovation at a scale we can hardly contemplate today. In addition, some of the older conventions such as the Law of the Sea will require major upgrading. The issue is whether the international system is so overloaded that the tasks will simply not get done properly. Already there are strong views that we should try to do what we can with the tools at hand rather than continue to build and adjust the system.

The accumulated number and range of multilateral environmental agreements (MEAs) is astonishing. Capacity to develop useful linkages among the many multilateral environmental agreements (MEAs) is still limited. The argument for seeking synergies and for creating more efficient/effective action and outcomes is compelling but there are many practical difficulties since secretariats are physically separated and overtaxed to the point where it is hard to carry out basic functions. Also, in general dispute mechanisms and sanctions for violating terms of MEAs are weak or absent. Will this situation change over time, and will adequate national reporting systems be set up? These are major issues that may well undercut the success of agreements.

Resolving relationships among MEAs, trade and other international agreements will become more important over time. This issue is already a concern for the WTO and it will certainly spill over into some of the regional trade arrangements. There will be other areas, perhaps concerning human rights, and certainly investment, if negotiations proceed towards new conventions on this topic.

It has become clear that building from the top-down and from the bottom-up are both necessary to create effective implementation regimes within nations for global and regional conventions and agreements. A demand-driven approach from communities and

local governments is likely to be more successful than elaborate plans crafted in national capitals but with limited comprehension and buy-in on the ground. Throughout the world there are some good signs of progress, but it is a major issue of governance to deal with the multi-level and cross-sectoral approaches needed to bring national action into line with international environment and development accords.

Without going into detailed discussion about each, the following four topics are examples of particularly difficult to implement agreements: Climate Change – Kyoto Protocol; Biodiversity Convention – Biosafety Protocol; Convention on Desertification – Global Mechanism; Sustainable Fisheries – FAO Responsible Fisheries. In each case success is unlikely without substantial behavior changes and action at local levels. No government has so far been successful in implementing a satisfactory regime of action.

The maturing international system of environment and development agreements has been a remarkable achievement of the past three decades. The general sense is that it is now time to make it work as a system, and for the common good. This is perhaps the most concrete opportunity we have, since the effort can be based on elements for which there is already substantial support.

ISSUE 6. The multilateral environmental conventions (MEAs) agreed upon during the Rio Earth Summit, and in the decade before and after, will continue to be the most prominent elements of the global framework governing environment and development. Yet they are still not fully internalized within national laws and decision-making of most countries. Even more difficult is the role of global conventions in creating change at local levels. China has done more than many other nations, but implementation is still limited. How can the domestic process be accelerated? And can China exert its growing influence within negotiating sessions such as the Committee of Parties meetings to develop a more effective overall system for the MEAs to operate internationally?

Science and Sustainability

If there is one topic on which most groups agree it is that our knowledge to motivate for behavioural change and to manage for complex institution changes is limited. As well, far too little is known about most environmental problems, about ecosystems, and about human adaptation and response to sustainability problems. Emerging scientific fields exist for addressing risk and surprise, adaptation and precaution. There are various theoretical underpinnings, with the most interesting being the science of complex adaptive systems. But there is not a consensus on the directions to be taken. Indeed, management practices in natural resource fields such as agriculture, fisheries and forestry have been slow to change. Many practices have worked against sustainability. In addition, bio-economic approaches to management are still, for the most part, crude and generally based on

inadequate models focused on enhanced production of economically-significant species rather than ecosystem health.

Our relative lack of knowledge about ecosystems, and their characteristics when under stress lead to bad decisions—including overinvestment in some environmental mitigation efforts, and almost complete disregard for other issues until they become huge concerns. The Millennium Ecosystem Assessment is therefore one of the most critical undertakings of the new century. This initiative will examine ecosystems and ecological goods and services globally and selectively at more local levels. It will provide baseline ecological information that will prove to be valuable for whole regions, and, over time, will yield some of the essential knowledge required for management of policy, institutional and technological change. The Millennium Assessment offers huge opportunities for developing countries in particular since it provides for a level of cooperation generally not available, especially in the poorer countries.

Another approach to highlight is the “Eight Grand Environmental Challenges” identified by the US National Academy of Sciences (*Grand Challenges in Environmental Sciences, National Academy Press, 2001*). These challenges are: biogeochemical cycles; biological diversity and ecosystem functioning; climate variability; hydrologic forecasting; infectious disease and the environment; institutions and resource use; land use dynamics; and reinventing the use of materials. They are deemed to be the most important areas of research for the next generation. Funding on the order of 10 billion dollars may be required to address each.

The knowledge economy is a combination of both science and technology. Some of the greatest challenges and potentially also the greatest contributors to sustainable development are the so-called transformative technologies. Among these are biotechnology, nanotechnology, remote sensing and associated tools such as geographic information systems and telemetry, and alternate energy such as hydrogen fuel cells. In one way or another most of these are related to the information technology revolution of the past two decades. The future holds much promise for the use of linked, large-scale data bases, realistic modeling and scenario development, more efficient design and operation of infrastructure and cost-effective environmental monitoring on a scale never before imagined. Great advances in the use of water and chemicals for agriculture should be possible, and better forecasting of weather and other natural phenomena should provide much better opportunities to reduce impacts of natural disasters.

The research and development investment, the institutional needs, cross-sectoral coordination and international cooperation required to reap the full sustainable development benefits are substantial. Some of the investment may best be carried out at regional levels. There are concerns over the extent to which poorer countries will be able to take advantage. For example, not only is there a “digital divide” but fears of “bio-piracy” and of the capacity of interests outside a country to extract valuable natural resource information through remote sensing. The issue of establishing equitable

arrangements so that benefits of sustainability technologies can be realized will continue to grow in significance and in urgency.

Box 9. Transfer of environmentally sound technologies.

In respect of technology transfer, developed countries have not kept their commitment to transfer to developing countries environmentally sound technologies at preferential conditions, under the pretext of intellectual property rights. That has led to little progress on the issue of technology transfer, and has seriously affected the improvement of developing countries' ability for sustainable development.

- Chapter 4, PRC National Report on Sustainable Development, 2002

It should be obvious that no single country can be expected to solve globally significant scientific puzzles. This is particularly true for biodiversity conservation, but it is equally true for climate variability and all the challenges noted above. Global cooperation for addressing environmental scientific needs is essential. But where should emphasis be placed? Should it be for the fundamental topics noted above, or for more applied concerns such as those related to food security? And where should research investments be increased, both from within-country sources and from international funding? There are successful network models such as the Consultative Group on International Agricultural Research (CGIAR); science-based panels such as the Intergovernmental Panel on Climate Change; global monitoring and reporting systems (e.g. for freshwater).

The interdependence of nations is increasing when it comes to building scientific capacity, and under any of the models noted above, it is only via active cooperation that individual nations will benefit. The means to ensure this happens is by no means assured for poorer countries. For richer nations (both developing and developed), the extent of innovation and investment in environmental and sustainability science and technology should be a critical issue. Too little, and the capacity to tap into international knowledge networks may be limited.

ISSUE 7. The current lack of knowledge concerning important environmental issues and ecosystems, the slow transfer of technology, and the high costs for development of sustainable technologies are working against innovative sustainable development solutions. The problem is particularly acute for China, given the rapidity of development and possible option foreclosure. Expanded international cooperation and strengthened global knowledge networks are required to address science and technology. This is an area where China may need to invest even more than it currently does in order to derive full benefits from linkages with the world's scientific and technology communities.

International Perspectives on China's Role

The world looks upon China with a mix of admiration for its immense achievements, at present and over past millennia, and of fear that, as the world's most populous nation and the fastest growing major economy, it will create regional or global impacts that cannot be readily addressed. In addition there are decisions and pathways taken within China that create concern outside the country. All of these perspectives are relevant to consider in relation to China's environment and sustainable development contributions and reputation.

Simplifying a complex discussion, there are three key perspectives to be considered:

- China as a pillar of support for international cooperation and multilateral action to address global environmental needs.
- China becoming the world's most important country in the future as a contributor to environmental problems (e.g. biodiversity loss within China and through impacts on distant areas such as high seas fisheries; ecological footprint on the world's natural resources such as tropical forests, endangered species used in medicines; regional and global polluter including transport of POPs, carbon dioxide; through desertification and other land and water management concerns; rising urban consumption patterns).
- China as a potential world leader and innovator in rapidly addressing domestic environment and development concerns.

While opinions vary about success level, and the effectiveness and efficiency of China's efforts to address environment and development issues (see, for example, *World Bank 1997. Clear Water, Blue Skies: China's Environment in the New Century*), a greater consensus exists that China's situation is unique and offers tremendous opportunity—perhaps beyond that of any other country in the world.

Thus China's support for international cooperation and multilateral action is of tremendous value in solving global and regional environment and development problems. The commitment of China's leaders is also very clear on this point, although not without qualification that the major job still lies with the developed world, based on the principle of "common but differentiated responsibilities."

The concern that China may be accruing an enormous and cumulative environmental debt within its own borders, while contributing to environmental problems regionally and globally, is widely held. And there are many facets to this issue. Perhaps the most commonly quoted is China's growing energy uses and the environmental impacts associated with coal burning. China now leads the world in sulphur emissions and therefore contributes acid rain to a significant area of northeast Asia and beyond.

While per capita energy use remains low, some studies suggest that domestic energy supplies will be insufficient, thus potentially driving up global energy prices, and ultimately taking over from the USA as the world's largest contributor to carbon dioxide releases. Also, black soot from China and India is now believed to be contributing to global warming on a substantial scale. In a recent book from the Woodrow Wilson International Center (*Crouching Suspicions, Hidden Potential: U.S. Environmental and Energy Cooperation with China, August, 2002*) it is suggested that "even countries halfway around the globe are feeling the impact of China's pollution problems and inefficient use of resources."

Box 10. Addressing China's global responsibilities.

We are deeply aware of the responsibilities on our shoulders...If we do a good job in running China well, it will be a great contribution to the world cause of sustainable development...We will continue to work hard, unflinchingly shoulder our responsibilities, honor our commitments with deeds, and steadfastly take the road of sustainable development.

- Premier Zhu Rongji speaking at the WSSD

Throughout, China has been very proactive in tackling international environmental issues. It has signed an array of important international environmental instruments and registered widely hailed achievements in stringently fulfilling its own international obligations and responsibilities. In the new century, we will, as always, make further efforts in international cooperation and make our due cooperation to achieving sustainable development and protecting the global environment.

- Xia Zhenhua, Minister of SEPA, GEF Assembly in October 2002, Beijing

China's logging ban has undoubtedly had an impact on the forests of other nations through increased wood imports. In a strange twist, over-reporting of fish catches over a long period of time apparently has led to substantial errors in world fish statistics. While world catches have been reported to be on the increase, when the Chinese national figures are corrected, world catches are shown to be on the decline—a very significant shift (see *R. Watson and D. Pauly, Nature, November 29, 2001. Systematic distortions in world fisheries catch trends. Vol. 414*).

Development in Western China is eliciting a number of international concerns, including a fear that downstream water shortages may occur, affecting a number of countries that receive water from rivers with origins in the Tibetan Qinghai plateau (see *M.H. Glantz, Qian Ye and Quansheng Ge, May/June 2001 Aridlands Newsletter. China's Western Region Development Strategy and the Urgent Need to Address Creeping Environmental Problems.*) Desertification receives attention in the international press each year as dust storms swirl around Beijing, but the reports are now as likely to come from North America when the dust is deposited in locations such as the Yukon territory of Canada.

As noted by IFAD in its partnership on desertification in China: “The global problem of desertification has hit China far worse than most countries worldwide. The 1.3 billion Chinese people survive on just one quarter of the worldwide per capita average of arable land and water resources...In China alone, between 1957 and 1990, the area of arable land was reduced by an area equal to all the crop land in Denmark, France, Germany and the Netherlands combined, mainly because of land degradation.”

While China is justifiably proud of its efforts to be self-sufficient in food, and its growing capacity to produce and export high value organic and processed foods, others worry about the ecological footprint that will be created elsewhere if a richer and more urbanized China becomes a major consumer of imported meat and other items high on food chains. For example, a researcher in the USA (Eugene Takle at Iowa State University) calculated that if every Chinese citizen were supplied from U.S. farms the equivalent beef of a MacDonald’s “Quarter Pounder” each week, it would take half the U.S. corn crop, and would require the equivalent of 4.5 times the total human wastewater treatment facilities available in the U.S. to treat the animal wastes of the U.S. raised cattle.

In the 2002 ranking of 142 countries by the World Economic Forum using an Environmental Sustainability Index (ESI) based on 20 indicators aggregated from 68 variables, China scored poorly. It ranked 129 with a score of 38.5, while the USA was ranked 45 with a score of 53.2, and four countries (Finland, Norway, Sweden and Canada) ranked above 70.

Box 11. “Painting China green: the next Sino-American tussle”

[China’s] environmental practices affect Americans, from the rate of skin cancer to agricultural productivity to the frequency and scale of natural disasters. Moreover, China’s need for grain has a direct and growing impact on U.S. farmer’s interests. Beyond these direct effects, however, China’s environmental policy influences the full range of U.S. interests in China: stability and security, human rights, democracy and trade.

-Elizabeth Economy, Foreign Affairs, March/April 1999

Many of these perceptions and fears will disappear if China is highly successful with its sustainable development efforts over the course of this decade, and can communicate these successes to the world community. Certainly with the 2008 Olympics China has the global showcase to do so.

ISSUE 8. Despite considerable evidence of China’s proactive and positive positions in support of international environmental negotiations and remarkable progress domestically on environmental management, there is considerable and probably growing international concern about China’s potential impact on the global environment and regional conditions. These perceptions likely can only be altered through a

combination of more international cooperation to address specific problems, well-documented improvements, on-going international communication of successes, and consideration of international impacts arising from resource management and other decisions.

China may already have established the world's most profound and potentially important transformation of a national economy towards sustainable development. It is too early to know. Much will depend upon the continued level of leadership, investment patterns, and the emerging patterns of urban consumption and increased participation of the Chinese people in sustainable development.

In the aftermath of the major global meetings of this past year, we can hope that the international community and private sector will be attentive to Jiang Zemin's call in 1999 for rich nations to "take on more responsibilities and utilize their economic, scientific and technological advantages to assist developing countries actively in tackling environmental problems." China could do much to demonstrate how effective such external support could be used in leveraging domestic funding and action.

Furthermore, there is growing recognition of the need and value of incorporating Chinese environment and development approaches with solutions being developed and applied elsewhere—including emissions trading, carbon credits, sustainability certification for traded goods and services, sustainability criteria for foreign direct investment, and eco-friendly technology development.

Other developing countries undoubtedly will be seeking technical assistance and other support on environmental matters from China in the years ahead. Chinese environmental technology, knowledge about sustainable agriculture, reforestation and techniques for addressing desertification, integrated coastal planning and a host of other successful tools and problem-solving techniques will be in demand. Can China prepare itself for this role? And should it do more on a partnership basis within its own regions of East, Southeast and Western Asia. These are important international relations and development matters.

ISSUE 9. China's progress towards sustainable development is of interest to all parts of the world but particularly valuable to developing countries. In the years ahead China can be expected to serve as a major source of advice, services and technology for other countries. How can China prepare for such tasks within the region and in other areas such as Africa? To what extent should it be partnering with others in this process, for example via development agencies and through private sector and professional and international civil society organizations?

Conclusion

The most important window of opportunity to address international environment and development concerns is the current decade, and the window will start to close if

continued erosion of biodiversity, land and water degradation, ocean and atmospheric pollution reduces options. The period for demonstrating large-scale success has been defined by the world community as 2010 to 2020. This is a very short time from the present. The challenge is great. And much of the outcome will be determined mainly by progress by a relatively small number of the largest nations and groups of countries such as the European Union.

Will China become the leader among developing nations, or even among all nations concerning sustainable development? This might be quite possible over the coming 10 to 15 years. While leadership may appear to be a difficult burden, it also could be an incredible opportunity. Indeed, an opportunity without parallel. This is not to say that all environment and development problems could be resolved over such a time span within China, or through China's international contributions. What is important is to continue building the momentum for change towards sustainable pathways. In this past decade China has been able to demonstrate a capacity to "bend the curve" under conditions of rapid economic growth, dramatically so in the case of energy conservation, and in certain badly polluted situations.

ISSUE 10. China appears to be well positioned to take a global leadership role in sustainable development, serving its own needs and for the ultimate benefit of the entire world.

Annex 1

Key Elements from the Johannesburg Plan of Implementation (as abstracted by UN WSSD Secretariat)

Poverty Eradication

Halve, by the year 2015, the proportion of the world's people whose income is less than \$1 a day and the proportion of people who suffer from hunger (*reaffirmation of Millennium Development Goals*).
By 2020, achieve a significant improvement in the lives of at least 100 million slum dwellers, as proposed in the "Cities without slums" initiative (*reaffirmation of Millennium Development Goal*).
Establish a world solidarity fund to eradicate poverty and to promote social and human development in the developing countries.

Water and Sanitation

Halve, by the year 2015, the proportion of people without access to safe drinking water (*reaffirmation of Millennium Development Goal*).
Halve, by the year 2015, the proportion of people who do not have access to basic sanitation.

Sustainable Production and Consumption

Encourage and promote the development of a 10-year framework of programs to acceleratethe shift towards sustainable consumption and production.

Energy

Renewable energy

Diversify energy supply and substantially increase the global share of renewable energy sources in order to increase its contribution to total energy supply.

Access to Energy

Improve access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources, sufficient to achieve the Millennium Development Goals, including the goal of halving the proportion of people in poverty by 2015.

Energy Markets

Remove market distortions including the restructuring of taxes and the phasing out of harmful subsidies. Support efforts to improve the functioning, transparency and information about energy markets with respect to both supply and demand, with the aim of achieving greater stability and to ensure consumer access to energy services.

Energy efficiency

Establish domestic programs for energy efficiency with the support of the international community. Accelerate the development and dissemination of energy efficiency and energy conservation technologies, including the promotion of research and development.

Chemicals

Aim, by 2020, to use and produce chemicals in ways that do not lead to significant adverse effects on human health and the environment.

Renew the commitment to the sound management of chemicals and of hazardous wastes throughout their life cycle.

Promote the ratification and implementation of relevant international instruments on chemicals and hazardous waste, including the Rotterdam Convention so that it can enter into force by 2003 and the Stockholm Convention so that it can enter into force by 2004.

Further develop a strategic approach to international chemicals management, based on the Bahia Declaration and Priorities for Action beyond 2000, by 2005.

Encourage countries to implement the new globally harmonized system for the classification and labeling of chemicals as soon as possible, with a view to having the system fully operational by 2008.

Management of the Natural Resource Base

Water

Develop integrated water resources management and water efficiency plans by 2005.

Oceans and fisheries

Encourage the application by 2010 of the ecosystem approach for the sustainable development of the oceans.

On an urgent basis and where possible by 2015, maintain or restore depleted fish stocks to levels that can produce the maximum sustainable yield.

Put into effect the FAO international plans of action by the agreed dates:

- for the management of fishing capacity by 2005; and - to prevent, deter and eliminate illegal, unreported and unregulated fishing by 2004.

Develop and facilitate the use of diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012 .

Establish by 2004 a regular process under the United Nations for global reporting and assessment of the state of the marine environment.

Eliminate subsidies that contribute to illegal, unreported and unregulated fishing and to overcapacity.

Atmosphere

Facilitate implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer by ensuring adequate replenishment of its fund by 2003/2005.

Improve access by developing countries to alternatives to ozone-depleting substances by 2010, and assist them in complying with the phase-out schedule under the Montreal Protocol.

Biodiversity

Achieve by 2010 a significant reduction in the current rate of loss of biological diversity.

Forests

Accelerate implementation of the IPF/IFF proposals for action by countries and by the Collaborative Partnership on Forests, and intensify efforts on reporting to the United Nations Forum on Forests, to contribute to an assessment of progress in 2005.

Corporate Responsibility

Actively promote corporate responsibility and accountability, including through the full development and effective implementation of intergovernmental agreements and measures, international initiatives and public-private partnerships, and appropriate national regulations.

Health

Enhance health education with the objective of achieving improved health literacy on a global basis by 2010.

Reduce, by 2015, mortality rates for infants and children under 5 by two thirds, and maternal mortality rates by three quarters, of the prevailing rate in 2000 (*reaffirmation of Millennium Development Goal*).

Reduce HIV prevalence among young men and women aged 15-24 by 25 per cent in the most affected countries by 2005 and globally by 2010, as well as combat malaria, tuberculosis and other diseases (*reaffirmation of General Assembly resolution*).

Sustainable Development of Small Island Developing States

Undertake initiatives by 2004 aimed at implementing the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities to reduce, prevent and control waste and pollution and their health-related impacts.

Develop community-based initiatives on sustainable tourism by 2004.

Support the availability of adequate, affordable and environmentally sound energy services for the sustainable development of small island developing States, including through strengthening efforts on energy supply and services by 2004.

Review implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States in 2004.

Sustainable Development for Africa

Improve sustainable agricultural productivity and food security in accordance with the Millennium Development Goals, in particular to halve by 2015 the proportion of people who suffer from hunger.

Support African countries in developing and implementing food security strategies by 2005.

Support Africa's efforts to implement NEPAD objectives on energy, which seek to secure access for at least 35 per cent of the African population within 20 years, especially in rural areas.

Means of Implementation

Ensure that, by 2015, all children will be able to complete a full course of primary schooling and that girls and boys will have equal access to all levels of education relevant to national needs (*reaffirmation of Millennium Development Goal*).

Eliminate gender disparity in primary and secondary education by 2005 (*reaffirmation of Dakar Framework for Action on Education for All*).

Recommend to the UN General Assembly that it consider adopting a decade of education for sustainable development, starting in 2005.

Institutional Framework for Sustainable Development

Adopt new measures to strengthen institutional arrangements for sustainable development at international, regional and national levels.

Enhance the role of the Commission on Sustainable Development, including through reviewing and monitoring progress in the implementation of Agenda 21 and fostering coherence of implementation, initiatives and partnerships.

Facilitate and promote the integration of the environmental, social and economic dimensions of sustainable development into the work programs UN regional commissions.

Establish an effective, transparent and regular inter-agency coordination mechanism on ocean and coastal issues within the United Nations system.

Take immediate steps to make progress in the formulation and elaboration of national strategies for sustainable development and begin their implementation by 2005.

Annex 2

IUCN Perspectives on WSSD Comments by Juanita Castaño, IUCN Special Advisor to the WSSD

IUCN notes that the Plan of Implementation fails to speed up the process towards sustainable development. Furthermore, the Plan let overriding attention to trade liberalisation defuse energy targets and impede the harmonization of international agreements such as integrating Multilateral Environmental Agreements into the WTO trade rules.

As for Rio's precautionary principle, it was only reaffirmed after much debate and was not further elaborated or applied in any concrete way. The ecosystem approach was

confined to fisheries, biodiversity and protected areas rather than applied to the management of all resources. In fact, the Summit did not even bring solid new commitments on resources to existing agreements and goals such as the Millennium Development Goals.

However, IUCN does recognize that governments made some concrete commitments such as halving the number of people without access to *safe water and sanitation* by 2015 (paragraph 7); significantly reducing the loss of *biodiversity* by 2010 (paragraph 42); and maintaining or restoring *fish stocks* by 2015 (paragraph 30). Other positive pledges include minimizing the negative impacts of *chemicals and toxics* on human health and the environment by 2020 (paragraph 22) – the date is subject to further agreement as well; developing the use of various instruments, including *marine protected networks*, to promote the conservation and protection of oceans by 2012 (paragraph 31); and removing *ecologically harmful subsidies* (paragraph 86). IUCN also commends the call by states that have ratified the *Kyoto Protocol* on climate change asking other states to follow suit (paragraph 36).

On the one hand, the Summit renewed the attention given to sustainable development; yet on the other, it did not deliver a comprehensive, collaborative and integrated plan of action for the implementation of sustainable development. For one, it fell short of recognizing that the conservation of nature and natural resources for poverty alleviation is a prerequisite for sustainable development.

A summit of lost opportunities, the WSSD did however mark an important step in the search for a new mode of global collaboration between governments, the private sector and civil society for the sustainable development of our planet's wealth. In this frame of mind, IUCN, as a partnership of governments and civil society, remains dedicated to work with the millions around the globe who strive for a just and equitable world that values and conserves natural resources.

Annex 3

Business Sector Comments on WSSD

Business Action for Sustainable Development (BASD)

Business welcomes the agreement reached at this Summit, and particularly the Implementation Plan. Business is at its best when it has clear goals and practical targets. These give us a framework for entrepreneurial opportunities, long-term planning and partnership possibilities. So we are rolling up our sleeves to help make it happen.

We need to make sustainable development happen by generating economic growth with greater resource efficiency, minimizing environmental impacts and with maximum social well being for more people.

We also welcome the growing realization that business is an indispensable part of the solution to the problems of the world. We have improved our relationships with governments, NGOs and others. Together we will turn the idea of sustainable development through practical partnerships into a growing reality on the ground.

As we move forward the view of business could be summarized in the words of Elvis Presley:

*“ A little less conversation
a little more action ”*

WBCSD, Int’l Chamber of Commerce and Others

The following comments were developed by a series of business consultative groups in Johannesburg comprising members of the International Chamber of Commerce, World Business Council on Sustainable Development, and other business organisations and company representatives who participated in the World Summit on Sustainable Development. The consultative groups coordinated the participation of business experts on the following subjects in the plenary sessions, roundtables, panel discussions, and other meetings that took place at the World Summit on Sustainable Development.

GENERAL

If we are successful in the years ahead, the Johannesburg plan of implementation establishes the enabling framework to address global poverty and inequity, whilst at the same time making the world more robust to the adverse impacts of climate change, desertification and deforestation and setting the scene to mitigate these impacts in the long term. Historical paradigms must be overcome to achieve this – new initiatives such as the Community Development Carbon Fund and the mechanisms established under the Kyoto Protocol are good examples of how we can achieve this.

Business is disappointed that there is not a focus on creating the enabling environment for business, especially SME’s to grow and thrive. It is essential that we build the energy, transport and ICT infrastructure in developing countries in order to facilitate delivery of development goals. NEPAD provides an excellent framework for this to be achieved for Africa.

CORPORATE GOVERNANCE

The agreements on transparency and good governance are strongly supported as these are the norm in the business sector. Business needs a well defined and consistently enforced regulatory environment in order to thrive.

With respect to corporate accountability we welcome the thrust to enhance mechanisms to reinforce corporate responsibility and social contributions – especially at a local level. In this regard we see a future of corporate social responsibility increasingly becoming core business, along with triple bottom line management and reporting. e.g. GRI, the UNEP process and OECD guidelines.

At the same time we feel that not enough companies are reporting on a triple bottom line basis and we need to encourage more to be done in this regard. Multinationals tend to be the most advanced in corporate reporting. In fact compliance plus is the norm for multinationals. We need to get this accepted as a standard practice for all businesses.

ENERGY

The agreement relating to energy is welcomed – in particular the recognition of the need to develop all energy sources aimed at addressing common challenges. This enables every nation to address their energy needs in alignment with their resource constraints whilst creating the framework to enhance access to clean, modern, cost effective and affordable energy for those who are currently starved of energy.

In particular the recognition of hydro as a renewable option creates the environment for the realisation of NEPAD's energy aspirations through the development of Southern Africa's massive hydro resources.

With respect to the absence of a specific renewable target, we welcome the emphasis this gives to energy access. At the same time the strong encouragement to increase the global share of renewable energy sources enables national targets as an integral component of national energy plans.

AGRICULTURE

Farmers need greater market access, but the transport and information infrastructure in developing countries needs to be enhanced in order to maximise this opportunity.

Farmers need access to a full range of technologies as well as the information that allows them to determine the best combination for local conditions.

SUBSIDIES

Subsidies – Subsidies should not distort open markets and where applied should enable access to energy depleted regions and promote sustainable development.

Subsidies are generally undesirable, but where applied must be transparent and be used with a view to catalyse a sustainable activity. As such they should be consistent over time and include definitive exit strategies, which will enable the long term commercial viability of the activity subsidised. Tax incentives, where appropriate, should promote energy that contributes to sustainable development.

PARTNERSHIPS

Business supports partnerships as one of the most practical means of delivering sustainable development outcomes. Partnerships are supplementary to strong Type I agreements, and business is supportive of partnerships as implementation mechanisms where business can play a meaningful role.

Over 300 partnerships have come forward to BASD. These partnerships are illustrated on the BASD website and the Virtual Exhibit, or were awarded ICC/UNEP World Summit Business Awards for Sustainable Development. These 300 + partnerships are illustrative of the thousands of diverse partnerships that business is involved in to deliver sustainable development solutions around the world. Out of this wealth of partnerships, some have come forward and submitted their initiatives directly to the UN as Type II Summit Outcomes. The business contribution is measured by partnerships that deliver solutions.

CORPORATE RESPONSIBILITY AND ACCOUNTABILITY

The interpretive statement will refer to promoting corporate responsibility and accountability through “development and implementation” of intergovernmental agreements. This refers to existing agreements and is not a call for a new international regime. Business is part of civil society, a major group designated by Rio Earth Summit, participating in WSSD process constructively.

Business is already accountable to national law (wherever it operates), customers, investors, employees, communities – this applies to companies of all sizes, sectors and nationalities, not just multinational companies.

Business has worked with governments, trade unions, and interest groups to develop guidelines for responsible business conduct (U.N. Global Compact, OECD MNE Guidelines, others on corruption, social aspects, transparency). Business maintains and abides by numerous voluntary policies, codes, agreements of its own (national, sectoral, international).

Despite successes, progress, more needs to be done. Business cannot do this alone, depends upon partnerships and an enabling framework at national, international levels in which business will work thru networks, supply chains, employees, investors and customers, w/technologies and financial resources at its disposal.

There are a range of indicators and vehicles for tracking and reporting business practices (beyond internet, publications, consumer information, etc.): The Global Reporting Initiative, Emerging ISO standards, UNEP/business prepared 22 sectoral reports on industry sector sustainability practices, all of which were subject to stakeholder review. All above are points of departure for further elaboration & to draw in other sectors.

Business requires a clear, equitable and predictable decision making framework in which to make long-term investments and dedications of capital. It is not attracted to invest in countries where regulation is lax, which would put such investments at risk.

Building, strengthening capacity in national, local governments to develop, implement, enforce the regulatory frameworks is the utmost priority. This is essential to local business entrepreneurship, good business practices and foreign investment: predictable, clear rules, consistent enforcement, absence of corruption, an independent judiciary system, private property systems, and strong institutions.

TRADE/FINANCE

The challenge of globalization and sustainable development: through Doha, Monterrey and Johannesburg follow up to make the markets work for everyone, improving quality of life worldwide. Doha, Monterrey and Johannesburg outcomes should be seen as a reinforcing ensemble, much greater than the sum of their parts. (Also regional partnerships, like NEPAD)

We support the WSSD reaffirmation of: Millennium Declaration targets and goals
mutual supportiveness of trade disciplines, agreements and environmental agreements and institutions

We do not support trade distortive subsidies.

HEALTH

Business strongly supports the notion that health is a key enabling factor for sustainable development, and supports the WSSD outcomes which highlight the linkages between health and sustainable development.

The draft plan of implementation rightly re-emphasizes the need for greater access to health care systems and services. Industry strongly supports the three pillars of sustainable development: good governance, financing and public/private partnerships to achieve these outcomes.

Industry has a history of partnerships facilitating access to health care and remains committed to long term partnerships to address health care needs.

Industry strongly endorses the vital role of the Global Fund for AIDS, TB and Malaria and the need for continued funding of health care infrastructure in developing countries. Key to sustainable development in

health care is the need for continued research and development into diseases requiring vaccines, enhanced treatments and cures. To this extent, an environment conducive to innovation is essential.

Industry strongly supports the need for good governance and political commitment to address health needs. These are essential to attract short-term aid and the long-term capital investments that are key to economic growth. Indeed, it is only sustainable economic growth that can forever change the status of developing countries to that of developed.

BIODIVERSITY

Business is working positively on biodiversity issues – e.g. the partnership launched between ICCM and IUCN on biodiversity and the mining sector.

Business urges governments to resolve the issues of indigenous rights and traditional knowledge with respect to using the products of biodiversity sustainably whilst developing equitable benefit and access sharing regimes.

Clear, transparent, equitable and consistent decision making frameworks are needed

Poverty and excessive consumption are both detrimental to biodiversity

Business supports delinking production and negative environmental impacts in the context of the concept of responsible prosperity.

BIOTECHNOLOGY

Biotechnology is one critical tool in the quest for sustainable development, and countries need to be free to make their own choices regarding its responsible use.

While no negative health impacts have been reported, concerns about the safety of the technology continue to be raised. These concerns need to be addressed by scientists, government officials and others through the provision of accurate and understandable information and dialogue.

Recognizing the adoption and near-term implementation of the Cartagena Protocol on Biosafety, there is need to move forward to responsibly harness biotechnology to enable more sustainable development through applications in health, agriculture, industrial processes and environmental remediation.

WATER

Business supports the sanitation goal and has played a role in promoting this.

Water issues are at the very core of poverty. Industry has been pushing hard for sanitation goals and is delighted with the new goal to halve the number of people without access to sanitation by 2015

Industry does not support privatisation of water assets, we believe that Governments should maintain the ownership and control of water supply.

Industry does have a critical role to play in providing innovative and least impact collection, treatment and distribution of drinking water, as well as sanitation.

Human impact on water supply is evident through the different ‘footprints’ of economic activity and also of poverty

The provision and maintenance of water supply and sanitation can save communities money, while at the same time protecting health, improving quality of life and ‘freeing up time’ desperately needed for other activities. But water and sanitation provision do require cost recovery – research, technology, appropriate infrastructure require high levels of investment. The sustainability of this basic service to address poverty means it must be a user pays or Government funded service.

SUSTAINABLE PRODUCTION AND CONSUMPTION AND TECHNOLOGY

To paraphrase Nitin Desai - overcoming poverty by 2015 must be coupled with the long term objectives of achieving sustainable production and consumption by 2050. Business applauds this approach as a long term framework of regulation, investment and procurement must be put in place to drive innovation and the decoupling of economic activity from negative environment and social impacts. It is important that governments help to establish baseline markets for sustainable production and consumption and that they also help to raise awareness of the need for action at all levels. Again this is an area of partnership at its most fundamental.

We do not have three planets and even with the combined financing and intellectual power of business we will never have the resources required – we therefore have an obligation and responsibility to reduce the impact of economic activity. We accept this obligation with enthusiasm and look forward to working with governments, NGOs and civil society to make sustainable production and consumption a reality.

By recognising the different ‘footprints’ of production/consumption and poverty, business is determined to help reduce the negative externalities that drain economies, the environment and health. We need to make markets work for all and a holistic, compassionate, multi-sectoral and long term approach will be fundamental to delivering practical solutions.

Markets and trading patterns are already changing to favour sustainable production and consumption and business encourages this transition. Investment into eco-efficiency, resource efficiency, renewable energy and energy efficiency is a dynamic driver. The partnership approach to sustainable prosperity at international, national and local levels must be underpinned by sustainable production and consumption.

Our challenge lies in demonstrating the benefits that will encourage SMEs across all sectors to embrace sustainability. We need clear signals to the marketplace and clear signals to the breadth and depth of industry to achieve this.

Exit