

# Partnerships for Sustainable Development addressing the WEHAB agenda

Background paper



## Partnerships: the way ahead?

Ypartnership' generally implies a relationship of two or more entities conducting business for mutual benefit. This may be a very simplistic definition but then there is little common understanding of what exactly is meant by 'partnership', due to the diverse perspectives on the issue. In modern public policy, partnerships symbolize the recognition that development is not a unilateral process driven exclusively by governments but a multi-stakeholder process where every partner must offer the benefit of his /her strength to the relationship, must be correspondingly accountable, and must also expect reciprocal responses from all other partners. Further, partnerships are considered to be important means to bring together the strengths, capacities, approaches, skills, and methods of different actors, thereby creating powerful synergies to overcome some barriers to sustainable development.

## Background

The deliberations at the WSSD (World Summit on Sustainable Development), its preparatory process, the Millennium Summit, and the Monterrey Conference were all driven by the challenge of alleviating poverty. The first of the MDGs (Millennium Development Goals) – to eradicate extreme poverty and hunger – stresses on halving, over 1990–2015, the number of income-poor people (income below one dollar per day) and the number of people suffering from hunger. Other goals include securing universal primary education; promoting gender equality; reducing under-five and maternal mortality by two-thirds and three-quarters, respectively; and reversing the spread of HIV/AIDS, malaria, and tuberculosis. Also included are goals to ensure environmental sustainability and to develop a global partnership for development, with targets for aid, trade, and debt relief. The creation of global partnerships for development in terms of its impacts on human well-being and environment is, possibly, the most potent tool that may be harnessed to attain global development goals.

The concept of partnerships assumed a new dimension at the WSSD, with the emergence of Type 2 initiatives<sup>1</sup>—partnerships for sustainable development.

This paper raises critical issues related to effective partnerships and the perceived role of the involved stakeholders. It also reiterates some unanswered questions that should be explored further in the course of discussions at the fourth Delhi Sustainable Development Summit.

## Partnerships: the potential

## Rationale

While the concept of 'partnership' is not a new one, there has been a recent upsurge in the number of partnerships with a global dimension. The establishment of institutions such as the World Commission on Dams, the CGIAR (Consultative Group on International Agricultural Research), the Global Water Partnership, and plans akin to the World Water Vision 2025 are pointers to the increasing recognition of the need for addressing global issues through processes of networking, collaboration, partnership, and consensus-building.

During preparations for the WSSD, it was widely accepted that governments alone were unable to deliver implementation. It was felt that accomplishment of perceived targets

<sup>&</sup>lt;sup>1</sup> Besides the negotiated Type 1 outcomes at the Johannesburg Summit, there were the non-negotiated voluntary initiatives or Type 2 outcomes for achieving specified targets agreed to at the summit. About 220 such initiatives were registered with the Secretariat of the United Nations Commission for Sustainable Development.

required approaching issues from a multitude of perspectives, which could only be acquired through integration of efforts and building of consensus among the concerned actors. Based on this, early on in the preparatory process, the UN Secretariat determined that there would be two types of outcomes from the Johannesburg summit: Type 1 initiatives, which are negotiated by the UN Member States, and Type 2 initiatives/partnerships, which are voluntary instruments for achieving the following specified targets set at the summit.

## Bridging of governance deficits

Partnerships can play an important role in bridging governance deficits. Encompassing actors outside the government makes partnerships uniquely positioned to harness the strengths of non-government actors. Further, as it appears till date, the financial commitments with regard to Type 2 initiatives are unlikely to be substantial. To this extent, these initiatives can provide viable means of augmenting non-financial resources, such as direct local action, institutional development, and strengthening and sharing of knowledge and experiences.

## Facilitation of innovative thinking

Partnerships can help facilitate innovations and 'out-of-the-box' thinking and methods of execution. It may be recognized that much concerted action and thinking does take place in organizations, which are not under government control, in developed countries and even some developing countries. Partnerships can certainly offer opportunities for establishing linkages with such institutions.

## Conflict resolution

Partnerships can be useful in resolving conflicts emerging in the course of the development process. In this context, they can offer an important institutional platform for resolution of these conflicts and also for identifying positive roles for the stakeholders. They can provide a platform for the articulation and integration of diverse interests and perspectives.

## Role of stakeholders

Different actors in reform processes have different strengths (Table 1). They differ in their abilities to catalyse change, effect direct action, mobilize political support, and garner material and human resources (Krishnan and Narain 2003). For instance, NGOs have a good understanding of local socio-political dynamics, bureaucracy–user linkages, markets, and institutions. In the context of managing natural resources, for instance, they have experience in the application of innovative technologies for biomass-based development and watershed management. They are uniquely positioned to provide critical linkages between the state and civil society. This role is exercised at two levels: influencing policy change through advocacy and implementing new technologies, programmes, and policies.

However, NGOs tend to be local in their approach and are usually limited in their ability to produce reform on a larger scale, typically being constrained in terms of resources and geographical reach. That is where government support is needed in synergizing scattered local initiatives so that significant momentum is provided to reform processes. The corporate sector can support these initiatives not only through a direct involvement, for instance in the social sector, but also by providing financial resources to support both research and action. Besides, the corporate sector can supplement NGO interventions by capitalizing, where relevant, on its geographical reach through its wide presence or distribution networks.

Industry	<ul> <li>Committing resources for research and action</li> <li>Undertaking corporate responsibility for the environment</li> <li>Undertaking direct action in spread of civic amenities</li> </ul>
Non-governmental organizations	<ul> <li>Advocating for policy reform</li> <li>Mobilizing local action</li> <li>Implementing programmes and policies</li> <li>Introducing new technologies</li> <li>Providing feedback to the government</li> </ul>
International organizations	<ul> <li>Promoting networking and consensus-building among governments and institutes</li> <li>Setting guidelines for targets and monitoring</li> <li>Funding research and action</li> </ul>
<b>Research institutes</b>	<ul> <li>Carrying out process documentation research</li> <li>Providing feedback to government and policy-makers</li> <li>Consolidating and disseminating research and databases</li> </ul>
Governments	<ul> <li>Supporting civil society action</li> <li>Promoting networks among research institutes, NGOs, and civil society groups</li> <li>Providing enabling policy and regulatory frameworks</li> <li>Providing funds for relevant initiatives</li> </ul>

 Table 1
 Strengths of different actors in partnerships

Source Krishnan and Narain (2003)

The involvement of diverse stakeholders brings with it the strengths of each, which need to be mobilized well to ensure the success of partnerships. While there remains potential for a developing country from Type 2 initiatives, they, nevertheless, raise concerns, some of which are briefly mentioned here.

## Partnerships: addressing the WEHAB agenda

Partnerships – or Type 2 initiatives – specific to the WEHAB agenda form the focus of this paper. Box 1 gives an insight into the global status with regard to WEHAB issues.

## Box 1 Global WEHAB status at a glance

#### Water and sanitation

- By 2025, at least 3.5 billion people nearly 50% of the world's population will face water scarcity.
- Nearly 60 000 children die every day from diseases associated with lack of access to safe drinking water, inadequate sanitation, and poor hygiene.
- At any given time, half the world's hospital beds are occupied by patients suffering from water-borne diseases.

#### Energy

- Nearly 1.7 billion people do not have access to electricity, while nearly 2 billion are undersupplied.
- One-third of the world relies on traditional fuels to meet their daily needs.
- The world's billion poorest people use only 0.2 tonnes of oil-equivalent energy per capita while the world's richest those earning on average over 20 000 dollars a year use nearly 25 times as much.

Contd...

#### Box 1 Global WEHAB status at a glance (contd...)

#### Health and the environment

- Over 2 million children aged under five years continue to die every year from diseases that are easily preventable by available vaccines.
- Acute respiratory infections are the top killers of young children today, accounting for nearly 2 million deaths annually. Diarrhoeal diseases claim another 1.5 million young lives every year.

#### Agriculture

- About 70% of the poor people in developing countries live in rural areas and depend directly or indirectly on agriculture for their livelihood.
- About 70% of the water currently withdrawn from all freshwater sources is used for agriculture.

#### Biodiversity and sustainable ecosystem management

- Approximately 20% of the world's freshwater fish species have become extinct, threatened, or endangered in recent decades. Nearly 75% of major marine fish stocks are either depleted or overexploited or being fished at their biological limit.
- Nearly 75% of the genetic diversity of crop plants has been lost in the 20th century.

Source UN(2002)

## Status of partnership initiatives

Developing and implementing partnership initiatives, as a complement to the negotiated outcomes at the WSSD, has been an ongoing process with about 266 partnerships being registered with the CSD (Commission on Sustainable Development) Secretariat thus far. While some initiatives are fairly specific and concrete, with established partners, agreed goals, and clear funding strategies, there are others that still remain at the conceptual stage.

In terms of geographical coverage, about 60% of the agreed initiatives have a global scope while the remaining 40% have a regional focus. In accordance with the prescribed guidelines, all the partnership initiatives considered relate to accelerating implementation of *Agenda 21* objectives, with a proportion focusing on priority WEHAB themes and several others indirectly related to these themes. Table 2 enumerates the partnership initiatives according to the *Agenda 21* objectives.

With respect to the financial commitments, nearly two-thirds of the approved partnerships have funding either to carry out initial phases or the entire initiative. Not all submissions provide figures of funds involved/necessary to carry out projects. Based on the information provided, it is clear that over 1250 million dollars have been committed so far. Over 120 million dollars are currently being sought from or negotiated with potential donors (UN 2003)

Area under which partnership initiative developed		Number of partnerships
1. 2.	1. Changing unsustainable patterns of production and consumption       9         2. Protecting and managing natural resource base of economic and social development	
	Agriculture, food security / rural development	14
	Biodiversity/ecosystemmanagement	9
	Climate change / air pollution	7

#### Table 2 Partnership initiatives, as on 16 December 2003

Area under which partnership initiative developed		Number of partnerships	
	Early warning / disaster preparedness	4	
	• Energy	23	
	Fresh water	16	
	Forests	3	
	Minerals and mining	2	
	• · Mountains	2	
	• · Oceans / coastal areas / fisheries	13	
3.	Health and sustainable development	15	
4.	Sustainable tourism	4	
5.	Sustainable development of small island developing states	17	
6.	Sustainable development initiatives for Africa	25	
7.	Means of implementation	54	
8.	Local authorities and urbanization	15	
9.	Activities/processes undertaken to initiate partnerships	34	
	Total	266	

Source United Nations web site < www.un.org>

The following sections discuss issues relating to WEHAB areas where partnerships can play an important role.

#### Water

#### Lack of safe drinking water

Water is essential for life. Access to water is already a major limiting factor in the socio-economic development of many countries. Further, there is growing concern regarding the increasing stress on water resources caused by population growth, unsustainable consumption patterns, and uncontrolled use. The provision of safe and adequate drinking water has important equity implications. On one hand, the unavailability of potable water in desired quantities has implications for the quality of life in terms of time spent in collecting water. On the other hand, as noted earlier, the consumption of contaminated water has adverse impacts on human health and productivity. In the event of inadequate access to water for domestic purposes, for instance, women and children are known to spend a substantial proportion of their time in collecting it; this time could otherwise be spent on other productive or leisure activities.

Another issue that holds significance is the lack of access to organized sources of drinking water. Often, large proportions of the incomes of the poor are spent in buying water from the unorganized sector due to unavailability of organized sources of water supply (TERI 1998; Krishnan 2003).

#### Drinking water interventions

While lack of access to and availability of water are important concerns, appropriate drinking water interventions also assume significance. The analysis and assessment of these interventions require interdisciplinary approaches that examine the integration of drinking water technologies within the social context. Very often, it is found that a number of drinking water schemes are launched, but they leave much to be desired in terms of their efficacy in overcoming access constraints. For instance, in India, past efforts at expanding the supply of drinking water in rural areas have been carried out primarily through the Rajiv Gandhi National Drink-

ing Water Mission. The major thrust of this mission has been the installation of hand pumps, which, according to studies, does not completely ameliorate the stress incurred in water collection (Krishnan 2003; Venkateshwaran 1995).

Another study commissioned by the United Nation's Children's Fund (in eight major states of India) on the type of water source being used, also points out that merely introducing new technologies or hand pumps in villages would not be sufficient to change usage practices or to reduce the time and effort spent by women and children in water collection. It would be better to have programmes that take into account cultural contexts and knowledge levels of local communities, especially the women (Venkateshwaran 1995).

#### Decentralization: encountering institutional plurality

Developing countries are making substantial efforts to build capacity at the local level to sustainably manage drinking water and sanitation. For instance, in India, an ambitious programme called Swajaldhara has been launched in December 2002, aiming to provide drinking water to all its villages by 2006. Its salient features include involving the users in water management and building local capacity for the same. The panchayats – village-level units of governance – under this scheme are expected to be more responsible for the project's implementation and management. Also, while the central government would provide 90% of the funds, the rest would have to be raised by the people themselves. This is intended to create a feeling of ownership amongst them. This is a welcome move from past efforts and trends that focused exclusively on installing drinking water sources, with little regard to building an organization or an institutional framework to manage the resources.

At the same time, however, the creation of local governance structures through the formation of water and sanitation committees poses new challenges as these bodies have an interface with other organizational structures. For instance, in a patriarchal society, women-managed water and sanitation committees often face resistance from village panchayats, which are dominated by men, as has been seen in the state of Gujarat in India (WRI 2003).

#### Reforms in urban water supply: breaking the vicious circle of poor quality delivery

Institutional bottlenecks dominate the provision of drinking water supply in urban areas. Drinking water supply has often been entrusted to public utilities that often lack the resources and the expertise to fulfil the mandate effectively. Many water supply systems are outdated, having failed to grow to accommodate the needs of an expanding population.

Investments are also hampered because of underpricing in this sector, which creates a dual handicap: on one hand, it does not create incentives for efficient use and consumption of water and, on the other, low accruals handicap expansion, operations, and maintenance. Another issue is that previous allocations for these schemes have been used largely for the initiation of new schemes while the maintenance of existing schemes has been neglected. Thus, there exists a vicious trap of low internal accruals and poor quality and reliability of water delivery.

#### Partnerships in water

Some challenges relating to the water sector can be tackled effectively through partnerships. Since the WSSD, about 16 partnerships on freshwater resources have been registered with the CSD Secretariat with the objective of delivering safe and affordable water and sanitation services, besides ensuring sustainable management of water resources. Partnerships have a potential role to play in expanding access to unserved areas besides assessing the effectiveness of drinking water supply interventions. By working at the grass-roots level, these initiatives can bridge a crucial governance deficit, by improving the provision of basic services. Currently, significant efforts are being made in the direction of IWRM (integrated water resources management) at the country level, which definitely calls for stakeholder participation. All this requires international scientific collaboration as well as the active and committed presence of the private sector (TERI 2003a).

Existing partnerships in the water sector include the WASH (Water, Sanitation and Hygiene) programme and several others initiated by the CGIAR network. WASH (Box 2) is based on the principles of the *Vision 21:Water for People* initiative, which was presented at the Second World Water Forum at the Hague in 2000, following extensive consultations. The Water Supply and Sanitation Collaborative Council, under its existing thematic group on monitoring and evaluation, regularly monitors and reports progress on WASH activities.

#### Box 2 The WASH campaign

WASH - the Water, Sanitation and Hygiene campaign - is a concerted global advocacy effort by members and partners of the Water Supply and Sanitation Collaborative Council to place sanitation, hygiene, and water firmly on the world's political agenda. It seeks to raise the commitment of political and social leaders to achieving these goals and effecting the necessary behavioural changes through various information and communication channels, using traditional and mass media, hygiene promotion in schools, training and local capacity building in communications, and improved networking and research. Particular emphasis is placed on achieving a global sanitation target, without which health cannot be accomplished. (Further details can be accessed at <a href="http://www.wsscc.org">http://www.wsscc.org</a>.)

A CGIAR CP (challenge programme), 'Water and Food', involves a large number of intergovernmental organizations, national agricultural research extension systems, advanced research institutes in developed countries, and NGOs. It seeks to increase the productivity of water for food and livelihoods in an environmentally sustainable and socially acceptable manner.

Another partnership that involves a number of intergovernmental organizations such as the UNDP (United Nations Development Programme), the GWP (Global Water Partnership), and the UNESCO-IHE (International Institute for Infrastructure, Hydraulic and Environmental Engineering) is Cap-Net or the International Network for Capacity Building in Integrated Water Resources Management. It also involves several regional networks. It seeks to develop capacity for IWRM at the local, regional, and national levels as well as information sharing and mobilization of donor resources for capacity-building in recipient countries. Its activities are coordinated by the Cap-Net Secretariat, hosted by UNESCO-IHE. A management committee made up of the United Nations Office for Project Services, UNDP, IHE, and the Government of the Netherlands oversees the implementation of Cap-Net and provides guidance on its policies and strategies.

Another example of partnership in the water sector is that of the UNDP, which in partnership with the GWP and the International Council for Local Environmental Initiatives seeks to promote effective governance of water resources worldwide through the 'Dialogue on effective water governance'. It has made headway in placing water governance on the agendas of decision-makers and has moved the issue from the global to the local levels. The dialogues have shown that improved water governance opportunities are at hand to avert water crises. The outcomes of the discussions have impacted deliberations at the WSSD and the Third World Water Forum in Japan. The dialogue will continue to promote the implementation of identified priority actions in water governance. It is expected that the results of the dialogue will be used to further strengthen water governance procedures (policy, legislation, and institutions) at national and local levels. The Urban Governance Initiative, a regional project of UNDP under this partnership, promotes good urban governance related to water supply and sanitation services by developing institutional capacity, advising on policy, enabling innovations in urban governance, and disseminating information within and between cities in Asia and the Pacific.

## Energy

## Prime mover for sustainable development

Energy is the pivot of economic development. It is critical for fulfilment of practically all basic human needs. Figure 1 shows a star-n-delta connection with energy as an essential input to the provision of water, health, and agriculture. Energy is an indispensable input for productive and

economic activities. It is also critical in providing improved health services such as vaccine refrigeration and in mitigating health hazards due to the use of traditional energy sources.

Electricity, for instance, remains an important input for overall health and well being of individuals. For vulnerable and rural populations, positive impacts of electricity inputs for basic activities such as pumping of water; lighting for extending working and learning hours; and powering smallscale rural industry are considerably greater due to bundling of socio-economic benefits (TERI 2003b).



showing energy linkages with water, health, and agriculture

## Accessibility

Wider access to affordable energy is a necessary condition for meeting the MDG of halving the proportion of people living on less than one dollar a day by 2015. Currently about 1.64 billion or 27% of the world's population does not have access to electricity. CSD-9, the ninth session of the CSD, held over 16–27 April 2001 in New York reiterated the importance of energy in meeting the MDGs: '…in order to halve the proportion of people living on less than one dollar per day by 2015, access to affordable energy services is a prerequisite.'



Figure 2 shows the regionwise status of electrification, clearly depicting huge gaps that have to be bridged, especially in sub-Saharan Africa and south Asia. The *World Energy Outlook* 2002 (IEA 2002) predicts that about 17% of the world's population will not have electricity even in 2030 despite assumptions of more widespread prosperity and advanced technology. Adding on, total investment required for energy supply infrastructure worldwide over the period 2001–30 would be of the order of 16 trillion dollars (IEA 2003).

#### **Energy efficiency**

Energy efficiency opportunities can be found in almost all energy end-uses, sectors, and services. Measures that can enhance access to technology, capacity building, financing, market stimulation, and institutional issues will help in meeting the energy efficiency challenge. Given the integration of global markets, measures to improve energy efficiency can be taken more effectively through international and regional cooperation. Partnerships in this context can be seen as important means for improving overall economic efficiency while producing environmental benefits at the global and national levels.

#### **Renewable energy**

RETs (renewable energy technologies) are singularly important in extending accessibility to safer and affordable fuels. They can contribute significantly to efforts for promoting energy security and are often the preferred options for electrification of remote areas. In order to derive significant and quantifiable benefits from RETs, their diffusion and penetration for specific and vital end-use applications have to be promoted substantially. The solutions have to be localized, integrated with overall development agenda, and developed through multi-stakeholder approaches, that is, partnerships (TERI 2003b).

#### Partnerships in energy

Since the WSSD, about 23 partnership initiatives relating to energy within the Agenda 21 objective of 'protecting and managing the natural resource base of the economic and social development' have been registered. Most of these partnerships such as the GVEP (Global Village Energy Partnership) and the European Union's Energy for Poverty Eradication and Sustainable Development Initiative focus directly on alleviating poverty. Several others, such as the GNESD (Global Network on Energy for Sustainable Development) of UNEP (United Nations Environment Programme); the Indonesia–French Public and Private Partnership to develop mini-hydropower in rural areas on a sustainable basis; UNEP-GEF's Market Facilitation Partnership for concentrating solar power technologies, and the Renewable Energy Based Rural Electrification initiative, relate to promoting the use of renewable energy sources and clean technologies globally. There have also been some regional initiatives focusing on energy, such as the Pacific Umbrella initiative, the African Energy Legacy Project, and AREA (Alliance for Rural Energy in Africa, and Energy Integration in West Africa). These initiatives primarily aim at providing adequate, affordable, and environmentally sound energy worldwide. At Johannesburg, nine major electricity companies of the E-7 signed a range of agreements to facilitate technical cooperation for sustainable energy projects in developing countries.

While several partnerships initiated in the energy sector are clear on their objectives and time frames, no very concrete results have really emerged. Partnerships such as the GVEP and REEEP have attempted to generate stakeholder participation, an important means to achieve desired objectives (Box 3). Under the GVEP, work on the action plans that seek to provide the 'implementation vehicle' for energy-related activities have been formulated for a number of countries through a series of regional and national energy-poverty activities (see also <http://www.gvep.org/section/services/actionplans/>).

9

#### Box 3 Partnerships in energy

#### GVEP (Global Village Energy Partnership)

The GVEP is a proposal initiated by the World Bank's Energy Sector Management Assistance Programme, the Winrock International, and the United Nations Development Programme and seeks to create a 10-year programme to reduce poverty and enhance economic and social development through the accelerated provision of modern energy services to those unserved or underserved. The partnership brings together developing and industrialized country governments, public and private organizations, multilateral institutions, consumers, and others in an effort to ensure access to modern energy services by the poor. The GVEP builds on existing experience and adds value to the work of its individual partners. It reaches out to non-energy organizations in the health, education, agriculture, water, transport, and enterprise sectors, and offers a range of technology solutions to meet their needs. This covers renewable energy, energy efficiency, modern biomass, liquefied petroleum gas, and cleaner fossil fuels. It seeks to help accomplish the Millennium Development Goals while paying special attention to gender concerns. The GVEP's desired outcomes are as follow.

- A significant number of countries will have nation-wide energy-poverty reduction programmes based on modern energy services.
- At least 400 million previously unserved people will have access to modern energy services.
- At least 50 000 new communities will be served.
- A cadre of trained entrepreneurs and institutions, capable of developing and implementing village energy projects and programmes, will be developed.
- There will be tangible Increases in productivity, income, environment, equity and quality of life, and gender equality.

#### REEEP (Renewable Energy and Energy Efficiency Partnership)

REEEP is a coalition of progressive governments, businesses, and organizations committed to accelerating the development of renewable and energy systems. Initiated at the World Summit on Sustainable Development in August 2002 by the UK government, REEEP seeks to provide an open and flexible framework within which governments can work together to meet their own sustainable energy objectives according to their own time frames. It seeks to promote the objectives of enhanced energy security, economic development, social equity, and environmental protection. Its focus is on strategic action in three key areas: policy and regulation, innovative finance, and communications. The UK government is currently acting as the temporary coordinating secretariat to facilitate the development of REEEP as a global partnership. Partners contribute to this process through consultation, regional meetings, and an advisory board.

#### GNESD (Global Network on Energy for Sustainable Development)

The GNESD has been formed through a consultative process involving governments, intergovernmental and nongovernmental organizations, private sector energy companies, and national/regional centres of excellence and networks. The objective of the initiative is to make it easier for partners to contribute to the provision of environmentally sound energy services underpinning sustainable development.

The GNESD has primarily been building knowledge and sharing lessons, building capacity, facilitating development, and generating new knowledge. Through its networks, discussions have been undertaken on energy access amongst various GNESD centres. The network is currently considering new themes such as potential and assessment of RETs to be taken up by the network in due course (see also <http://www.gnesd.org/activities.htm>).

At this juncture, it must also be kept in mind that financing a changeover in the context of energy demands a capital investment of a very high magnitude. All this entails (1) active participation by the private sector towards encouraging entrepreneurship, generating financial resources, converging best practices, and spreading awareness about efficiency and best practices; (2) keen involvement by research institutions and technology entrepreneurs in

proactively targeting research and technology development; and (3) proactive efforts by governments in offering enabling environments and finances. A crucial role can also be visualized for innovative financing, such as micro-lending to ensure easy access to energy.

## Health

Health is both an indicator as well as a resource for sustainable development. Ill health creates and perpetuates poverty, triggering a vicious cycle that hampers economic and social development and exacerbates unsustainable resource use and environmental degradation. According to the *World Health Report 2002*, about 170 million children in poor countries are underweight with over 3 million dying each year as a result; 9 out of every 10 deaths are of children, virtually all in the developing countries and caused due to unsafe water and sanitation (WHO 2002).

The importance of health in the context of sustainable development was well recognized both at the Millennium Summit and at the WSSD. The MDGs of reducing under-five mortality by two-thirds and maternal mortality by three-quarters, and of reversing the spread of diseases (especially HIV/AIDS and malaria) are pointers to the increasing importance being attached to human well being. It is well recognized that gains in terms of economic development and poverty reduction accrue to the countries that invest carefully in people's health. Evidence suggests that each 10% improvement in the life expectancy is associated with an increase in economic growth of about 0.3%–0.4% per year, other factors being equal (Brundtland 2002).

Progress towards the health-related MDGs will require the creation of infrastructure, human capital, and awareness on an unprecedented scale, mostly in the poorest regions of the world, which lack resources. Government action in partnership with multiple stakeholders is considered an important means to achieve this. Carefully managed partnerships in the field of research and development have stimulated the development of new drugs/vaccines for malaria, tuberculosis, and AIDS.

The WHO (World Health Organization) has been working for over half-a-decade towards the attainment of the highest possible level of health by all people. In today's context, achieving a truly healthier future would require focusing simultaneously on current global risks to health and the more immediate challenges to survival. This calls for collective action by WHO and other parties in international development to ensure that scientific knowledge is translated into action. Box 4 provides some examples of successful international concerted action.

#### Box 4 International partnerships in health

#### Stop-TB Partnership

The Stop-TB Partnership has an open membership of governments, NGOs, foundations, individuals, and others hosted by the WHO (World Health Organization). It is an advocacy and advisory public-private partnership that aims to detect 70% of all new infectious TB (tuberculosis) cases and cure 85% of them by 2005 and halve TB-related deaths by 2010.

#### GAVI (Global Alliance for Vaccines and Immunization)

The GAVI is a good example, where private and public finance together, has been able to increase coverage through stronger health systems besides creating markets for new vaccines. This new international public-private partnership was launched in 2000, is hosted by WHO, and has broad and specialized task forces. Other members include governments, the United Nations Children's Fund, the World Bank, NGOs, and the pharmaceutical industry. By June 2002, over 900 million dollars had been committed to 60 countries, mainly in Asia and Africa. The GAVI has been seen as a potential model for the new Global Fund to Fight AIDS, Tuberculosis, and Malaria.

Source WHO (2002)

## Partnerships in health

Since the Johannesburg summit, about 15 partnerships have been registered under the *Agenda* 21 objective of health and sustainable development. Most of these have a global focus aiming at improving quality of life through provision of better healthcare services, nutrition, and means to prevent chronic diseases. Initiatives are also undertaken for specific regions, such as the Small Island Developing States and Africa,<sup>2</sup> where drudgery inflicted due to health disorders remains high. Whereas encouraging partnerships have emerged in the field of drugs and medicine development, very little has been achieved by way of improving health infrastructure and ensuring easier access to it. Governments have spent huge sums on creating hardware and concrete structure for healthcare but until these are complemented with adequate capacities of skills, significant results will not be visible, over the short term. A new paradigm for healthcare is strongly called for. The emphasis on building on traditional knowledge and harnessing the benefits of traditional systems of medicines in India is one step in this direction. Partnerships, as instruments towards achieving health objectives in developing countries, can offer significant benefits through this revived approach to healthcare.

## Agriculture

## Food security and sustainable livelihoods

With most countries steadily approaching the limits of utilization of agricultural land, increases in farm production require an increase in agricultural productivity. This, in turn, is threatened by land degradation and falling water tables. All this has a bearing on livelihoods and food security. Further, the increasing water stress that is driving countries towards the strategy of being net food grain importers may not be viable for several countries taken together (Box 5).

#### Box 5 Importers of food grain

Water scarcity has emerged as a binding constraint to food production and is driving many countries to join the ranks of net food grain importers. It is estimated that more than 20 water-stressed countries rely on imports for at least one-fifth of their grain consumption and 15 for more than half (WWI 2002). In order for a strategy of relying on grain imports to work, at least two conditions must be met. First, there must be enough surplus grain offered for export in the world markets. Second, that grain must be available at a price that the importing nations can afford. There is room for some scepticism on whether these conditions can be met in the future. As water stress deepens and spreads, more countries will join the ranks of net grain importers, and those already in this camp will be driven by population and consumption to import even more grains. Three large countries that currently produce most of their own food - China, India, and Pakistan - are likely to be driven by water stress and other factors to join the ranks of the grain importers in the near future. The pursuit of food security by trading other goods and services for virtual water - perhaps a wise water strategy for each individual nation - may not be a wise strategy when applied to all nations in this situation. In the absence of an international food aid bank or other global mechanisms for filling food supply gaps, this may indeed be a risky strategy for poorer water-stressed countries that do not have the foreign exchange earnings to handle large fluctuations in world grain prices. The vast majority of the increase in waterstressed countries is likely to occur in sub-Saharan Africa and south Asia, both sites of the deepest pockets of hunger and poverty.

<sup>&</sup>lt;sup>2</sup> Some examples of partnerships in this respect include (1) the International Labour Organization's HIV/AIDS in the World of work: A Tripartite Response in Caribbean, (2) Pacific Umbrella Initiative (partner to be determined), and (3) African Regional Centre for Infectious Diseases.

In India, the states of Punjab and Haryana – major contributors to India's food basket – are experiencing declining wheat yields due to soil degradation, which is a consequence of excess fertilizer and pesticide use. It is reported that soils are turning unsuitable for wheat cultivation (Reddy 2003). The water table in the Punjab continues to fall by half-a-metre every year (Postel 1999, cited in WWI 2002).

#### Water: a binding constraint in agriculture

Falling water tables are threatening the sustainability of agriculture in India, China, Pakistan, and the US (WWI 2002). It is estimated that as much as one-fourth of India's agricultural production – about 45 million tonnes – is jeopardized by groundwater overpumping alone (Postel 1999, cited in WWI 2002). This is reinforced by studies carried out by the IWMI (International Water Management Institute); 25% of India's harvest will be at risk from groundwater depletion, and water scarcity will soon emerge as a binding constraint on India's progress. India has some 20 million private tube wells and this number is increasing by nearly 1 million every year (IRI 2000). Almost 35%–40% of India's electricity and fossil fuel consumption is devoted to pumping groundwater, mostly for irrigation.

#### Governance and agriculture productivity

The above trends can clearly be related to a number of governance challenges that need to be addressed for improving agricultural productivity. For instance, Indian farmers who rely on electric pumps to irrigate their crops are continually plagued by power interruptions and voltage fluctuations, resulting in damage to their pumps, many lost irrigation days, and, ultimately, lower crop yields and lower incomes (World Bank 2003). Besides, the poor reliability of power supply encourages farmers to pump as much water as possible when electricity is available. This, combined with low and flat electricity tariff, which makes the marginal cost of pumping equivalent to zero, provides an incentive to farmers to overpump, often leading to waterlogging and salinity problems. At the same time, subsidizing electricity encourages the cultivation of more water-intensive crops, which in some areas results in declining ground-water levels. Both these trends affect the productivity and sustainability of agriculture.

At the same time, water deliveries in canal irrigation systems have been known to be unreliable because of a number of factors (Latif 1993, Jairath 1985). These include drought conditions, limited storage, breaching, high losses, manual interventions, and malpractices. Farmers are confronted with several problems, such as the absence of information about canal closure, illegal canal cuts, and breaches and water thefts by the use of siphons and pipes on the canals and distributaries. The actual state of maintenance of the canals is also far from satisfactory. The bureaucratic functioning of the irrigation department often takes up a high proportion of the funds for the organizational working, leaving a small proportion for the operation of the irrigation systems (Jairath 1985).

#### The agenda of institutional reform

Conventionally, large-scale irrigation systems have been managed and financed by the state. In recent years, however, there has been a trend towards state disengagement in the irrigation sector with a greater role being envisaged for non-state actors, particularly farmers. This trend has been referred to variously as IMT (irrigation management transfer), irrigation management turnover, or participatory irrigation management (Turral 1995; Brewer, Kolavalli, Kalro, *et al.* 1999; EDI 1998). It takes the form of the establishment of farmers' groups called variously as WUAs (water users' associations), water users' groups, or farmers' organizations for

irrigation. These WUAs are encouraged to take over functions pertaining to operations and maintenance of irrigation systems at different levels.

There is a need for greater research on the impacts of this trend on agricultural productivity and farm incomes, as well as the technological conditions under which this may, or may not, happen. A possible impact of IMT on productivity can take place through its impact on redefining rights and entitlements to water for irrigation. It can also result through a reorientation of the bureaucracy that improves management of irrigation systems.

#### Partnerships in agriculture

As noted earlier, partnerships have an important role to play in bridging crucial governance deficits. Under the theme of agriculture, food security / rural development, about 14 Type 2 national, regional, and global initiatives have been registered thus far. The partnerships under this area comprise several interlinkages with other WEHAB initiatives, such as those with water (Water and Food Initiative), with energy (Enterprise of Trust, economic welfare in rural areas through the use of renewable energies), with health (Bio-fortified crops for improved human nutrition), and with biodiversity (Eco-agriculture).

Type 2 initiatives can play an important role in facilitating the spread and diffusion of water-saving technologies that are cost-effective and fit in well with users' cropping practices and priorities. There is now a wealth of experience in the developing world on local initiatives for soil and water conservation, many of which have been led by NGOs. However, this experience is scattered geographically, and there is a need for networking and sharing of experiences on this front.

In fact, agriculture is an area with a tremendous potential for change through partnerships. As some countries approach the limits to expansion of irrigated areas, there is scope and potential for research in fostering productivity of rain-fed areas. Type 2 partnerships can, therefore, play a role in improving the performance of watershed management programmes. There is also a potential for partnerships in areas such as training and extension for promoting crop diversification. Land improvement practices, development of irrigation commands, animal husbandry, agricultural processing, and finance and marketing provide other avenues.

An example of a CP under the CGIAR is the programme on bio-fortified crops for improved human nutrition. This programme seeks to improve the health of poor people by breeding staple food crops that are rich in micronutrients. It works through an international alliance of Future Harvest centres such as the IWMI and the International Food Policy Research Institute, national agricultural research and extension systems, departments of human nutrition and plant science at universities in developing and developed countries, advanced research institutes with expertise in micronutrients in plants and animals, NGOs, farmers' organizations in developing countries, and private sector partnerships. This programme builds on the existing collaboration between the CGIAR system and research organizations in developed countries and countries in transition.

#### Biodiversity and ecosystem management

Biodiversity has an important role in reducing poverty, sustaining livelihoods, and ensuring human security (UN 2002). Biodiversity includes every form of life and interactions between various forms. It supports the ecosystem functions essential for life on earth, such as providing products like food, medicines, and materials for industry. As biodiversity is degraded, communities become more vulnerable because options for change are diminished. Biodiversity can be

seen therefore as a 'life insurance policy for life itself '—something especially needed in this time of fast-paced global change.

## Food security

Human society is highly dependent on genetic resources, including those from wild and semidomesticated sources, for the productivity of its agriculture, livestock, and fisheries. Biodiversity associated with agriculture is critical to maintain soil quality, feed livestock and fish, control agricultural pests and diseases, and provide critical pollination services. In addition, biodiversity is a source of alternative food products during periods of scarcity.

## Health improvements

Biodiversity is a source of invaluable information and raw materials that underpin medicinal and healthcare systems. Poor people in particular suffer most from scarce or polluted water and air and from diseases associated with disrupted ecosystems. Further, having a variety of sources of foods supports better nutrition and therefore improved health.

## Income generation

Poor people tend to depend the most on direct use of biodiversity for livelihoods, and are therefore the first to suffer when these resources are degraded or lost. Biodiversity also offers great potential for marketing unique products, many of which are extremely valuable, but the benefits only infrequently accrue to the poor.

## Reduced vulnerability

Poor people are often exposed to – and are least prepared to cope with – unpredictable events such as fluctuations in access to food and other resources or environmental shocks and risks. Ecosystem degradation exacerbates the frequency and impact of droughts, floods, landslides, forest, and other natural hazards, and can intensify competition and the potential for conflict over access to shared resources such as food and water.

## Ecosystem services

Forests, wetlands, coastal ecosystems, and so on provide essential services that contribute in numerous ways to the productive activities of rural and urban poor people, including through the generation of water, cycling of nutrients, replenishment of soil fertility, and prevention of erosion. These services are public goods, providing indirect values that are not traded in the marketplace but are vital to the livelihoods of all people.

## Biodiversity and the Millennium Development Goals

Ensuring environmental sustainability has been identified as one of the eight key MDGs. As biodiversity underpins the survival of human society, continuing progress towards these goals can only be possible when it is conserved and the benefits of its uses are equitably distributed. Further, it can be seen that this goal is closely tied with that of eradicating extreme poverty and hunger. Since the poor people are most directly dependent on biodiversity, they are immediately affected by its loss. The need to stem this loss thus becomes important for eradicating extreme poverty and hunger and ensuring environmental sustainability.

#### Partnerships in biodiversity

The international community has a vital role to play in helping developing countries achieve their objectives in biodiversity and sustainable ecosystem management. Clearly, various cooperative actions are needed on the parts of governments, businesses, civil society, international organizations, and other relevant stakeholders to address the challenges. This requires consultation among different actors in order to harmonize the views and needs of all stakeholders—donors, participating institutions, technical groups, and recipients. An illustration where a participatory approach has helped realize the conservation and management of forest resources that of the joint forest management programme undertaken in India. It has catalysed a clear shift in forestry management from a protectionist approach to a participatory one. Another example, also from the Indian context, is the recent preparation of the draft National Biodiversity Strategy and Action Plan that has made use of a multi-stakeholder consultative approach at the country level. There exists tremendous possibility of involvement of grassroots level NGOs and research and scientific bodies, both nationally as well as internationally, to deliver results in partnership.

Since the WSSD, 9 initiatives have been registered under the thematic area of biodiversity and ecosystem management, under the *Agenda 21* objective of protecting and managing the natural resource base of economic and social development, with several others linked across other themes. The Critical Ecosystem Partnership Fund and the Global Trust Fund are some initiatives that have been put in place for facilitating partnerships for protecting biodiversity and ecosystems (Box 6). Most of the initiatives specified have a regional focus with the aim of conserving biological diversity and other ecosystem resources.

#### Box 6 Partnerships in biodiversity

#### CEPF (Critical Ecosystem Partnership Fund)

The CEPF involves the Government of Japan, intergovernmental organizations such as the Global Environment Facility and the World Bank, major groups such as CI (Conservation International) and the MacArthur Foundation, local communities, NGOs, and the private sector. Its objective is to serve as a catalyst to create strategic working alliances among diverse groups, combining unique capacities and eliminating duplication of efforts for a comprehensive and coordinated approach to conservation challenges. The CEPF allocates authority and accountability to each partner according to its strength and responsibility. Investments support projects such as managing of protected areas and coordinating biodiversity corridors; training and transboundary planning; encouraging local dialogue with extractive industries and engaging in conflict resolution; priority setting and consensus building; strengthening indigenous organizations; and facilitating partnerships between the private sector and protected areas. The CEPF builds on the CI's strategic focus on global biodiversity hot spots. The fund has an interesting coordination and implementation mechanism. Its donor council provides strategic guidance reviews and endorses ecosystem profiles and investment plans.

#### **Global Conservation Trust**

The Global Conservation Trust is a public-private partnership whose goal is to establish an endowment fund that will provide a permanent source of funding for *ex-situ* conservation of plant genetic resources for food and agriculture around the world. It aims to assure the availability of genetic material that underpins global food supply to all researchers and scientists in perpetuity, and promote the development of an efficient and equitable global system of genetic resources exchange.

Source United Nations web site < www.un.org>

## Charting the path ahead: can partnerships make a difference?

International summits over the years have articulated commitments and targets to achieve sustainable development. At both Rio and Johannesburg, the responsibilities of the affluent nations towards providing assistance to the poorer nations in their efforts towards sustainable development were well recognized; the Johannesburg Plan of Implementation emphasized good governance within each country and at an international level. However, an absolute fall in official development assistance between 1992 and 2000 in place of committed assistance; the failure to reduce the insurmountable trade subsides; and the lack of agreement on ratification of the Kyoto Protocol are pointers towards the rising trend of national priorities taking precedence over international causes.

In light of this changing situation, the basic question that emerges is this: What can put things on track? The WSSD deliberations put forward one solution in this respect—partner-ships or Type 2 outcomes. These initiatives depict the emergence of a new stream of thinking to deliver implementation. At the WSSD, diverse stakeholders entered into partnerships, mostly related to WEHAB areas, as means to attain sustainable development. While there was a common belief that collective action could make a difference, there were also doubts on the possibility that partnerships could act as substitutes for intergovernmental commitments. A number of developing country delegates expressed their concern regarding the implications of the Type 2 approach. Discussions on the partnership initiative continue to be contentious as the following fears persist (IIED 2004).

- The initiatives will marginalize intergovernmental decision-making on sustainable development and put in its place 'coalitions of the willing' that involve organizations less accountable to the needs of the world's poorest.
- Global partnerships could favour major international companies in provision of services such as water and energy and serve as vehicles for market expansion at the expense of existing providers but with no clear long-term benefits for the countries concerned.
- The term 'partnerships' would mask a whole range of power imbalances between the actors involved, which will not be tackled without strong political leadership and commitment to the principle of transparency, accountability, equality, and sustainability.

While these apprehensions are not completely baseless, the potential of partnerships to deliver change must not be ruled out. Most of those involved in Type 2 partnerships offer to make real progress towards existing commitments such as the MDGs. However, this remains unproven to a large extent. In fact, it would be a critical test for the CSD to increase the credibility of Type 2 partnerships by demonstrating that they

- are really making a difference in increasing the amount of available resources rather than merely diverting funds from other sources;
- are enhancing accountability and increasing the means by which civil society can influence actions, which have impacts on their livelihoods; and
- can be assessed independently and credibly.

In the words of Mohammad Valli Moosa, South Africa's Minister of Environment Affairs and Tourism,

'At Johannesburg, we entered into a solemn pact with future unborn generations not to destroy our beloved planet Earth. We also entered into a deal with the poor and hungry to ensure social and economic development. Now, the poor watch and wait to see whether hunger, disease and global warming will be tackled with the same vigour displayed by some on the military front.'<sup>3</sup>

#### **TERI's partnerships**

TERI's activities in diverse areas of sustainable development encompass strong ties with a diversity of stakeholders, right from the communities at the grass-roots level to policy-makers in the global arena.

For effective management of natural resources, TERI has closely worked with communities, forest agencies, and a corporate partner—the TVS Motor Company's Srinivasan Services Trust. The initiative has succeeded in fostering partnerships between rural people and forest agencies for jointly managing forest resources. It has inspired the emergence of a community-based model for holistic environmental management in Tamil Nadu.

TERI's efforts in enhancing energy services through entrepreneurs in the states of Uttaranchal and Rajasthan have manifested themselves in the shape of the Uttam Urja project, supported by the India–Canada Environment Facility. The project seeks to popularize renewable energy technologies in rural India. It promotes individual and community ownership / management of energy services as well as technology transfer to and capacity building of local entrepreneurs. By consolidating a network of dealers and retailers, service stations, NGOs, financing institutions, government agencies, self-help groups, technicians, and customers, the initiative drives home the encouraging point that commercial dissemination of renewable-based products is possible through joint efforts.

TERI's ongoing activities in mining regions have also benefited from robust partnerships. Regeneration of mining areas using tri-sector (community, industry, and government) partnerships has been a much-wanted step towards promoting responsible mining in Goa. The project rests on the belief that multi-stakeholder involvement can regenerate the quality of life in mining areas. By bringing together partners to identify various innovative uses that a mine pit can be put to, along with empowering the community to seek alternative livelihoods, the project articulates the message that collective action can indeed change lives.

TERI and the Swiss Agency for Development and Cooperation have entered into partnerships with a number of smallscale industry associations in India for technology development, pilot demonstration, and technology dissemination. Interventions have been undertaken for foundries making iron castings, the glass industry, brick kilns, silk reeling and dyeing units, and cardamom curing set-ups. Activities under the various programmes are planned and implemented in collaboration with a large and diverse set of partners, making partnerships the backbone of most interventions.

## Summing up

- Deliberations at the WSSD recognized that partnerships offer immense potential for translating political commitments into action. They were assumed to pave the way for meeting the sustainable development challenges even beyond 2015.
- Partnerships can bridge governance deficits; facilitate innovative thinking; and resolve conflicts. Further, it is important to have capacity building of a nature not limited to merely giving technical assistance, loans, and grants but also imparting 'knowledge'.
- However, there remain crucial unresolved issues such as ambiguity in defining their scope, their relationship with politically agreed Type 1 initiatives, and mechanisms for monitoring and reviewing their progress.
- Thus, while partnerships seem to hold immense potential, how exactly that can be tapped still remains a concern.

<sup>&</sup>lt;sup>3</sup> From Mr Mohammad Valli Moosa's opening address as Chairman of the 11th session of the United Nations Commission on Sustainable Development, New York, 28 April 2003, cited in IIED (2004)

## References

Brewer J, Kolavalli S, Kalro A H, Naik G, Ramnarayan S, Raju K V, Sakthivadivel R. 1999 *Irrigation Management Transfer in India: policies, processes and performance* New Delhi and Calcutta: Oxford and IBH Publishing Company

Brundtland G. 2002 Health for all In Johannesburg Summit 2002: Challenges and Partnerships London: Agenda Publishing

EDI (Economic Development Institute). 1998 Handbook on Participatory Irrigation Management, compiled by D Groenfeldt Washington, DC: EDI, World Bank

IEA (International Energy Agency). 2002 World Energy Outlook 2002 Paris: IEA

IEA (International Energy Agency). 2003 *World Energy Investment Outlook 2003* [Available online at <www.worldenergyoutlook.org/weo/pubs/gio2003.asp>, last accessed on 16 December]

IIED (International Institute for Environment and Development). 2004 *Survival for a small planet: the sustainable development agenda*, edited by Tom Bigg London: Earthscan Publications. 359 pp.

IRI (International Research Institute). 2000 Indian foundation joins forces with international research institute to find practical solutions to India's water crisis

Available online at < http://www.1worldcommunication.org/indianfoundation.htm >, last accessed on 30 January 2004

Jairath J. 1985

**Technical and institutional factors in utilization of irrigation: a case study of public canals in Punjab** *Economic and Political Weekly* **XX**(13): A2–A10

Krishnan R. 2003 Swajaldhara: more empty promises? Economic and PoliticalWeekly, XXXVIII(10): 937–39

Krishnan R and NarainV. 2003

Partnerships and scientific perspectives in water and energy In Looking beyond Johannesburg: scientific perspectives in water and energy, pp. 3–38, edited by R K Pachauri and Gurneeta Vasudeva New Delhi: The Energy and Resources Institute. 173 pp.

Latif M. 1993

Water allocation and distribution dilemma at farm level

In Proceedings of the 15th Congress on Irrigation and Drainage titled Water management in the next century, Volume I-CR, pp. 73–103, organized by the International Commission on Irrigation and Drainage

Postel S. 1999 *Pillar of Sand* New York: WW Norton and Company

ReddyV R. 2003 Land degradation in India: extent, costs and determinants Economic and PoliticalWeekly, XXXVIII(44): 4700–13 Partnerships for sustainable development

TERI (Tata Energy and Research Institute). 1998 *Population, environment, and development: interactions at the village level* New Delhi: TERI. 108 pp.

TERI (The Energy and Resources Institute). 2003a *Looking beyond Johannesburg; scientific perspectives on strengthening partnerships in water and energy*, edited by R K Pachauri and Gurneeta Vasudeva New Delhi: TERI. 173 pp.

TERI (The Energy and Resources Institute). 2003b **Strengthening the e-links: meeting challenges in energy, water, and health through partnerships** [Base paper prepared for the Forum of Collaborative Research] New Delhi:TERI

Turral H. 1995 Devolution of management in public irrigation systems: cost shedding, empowerment and performance; a review [Working Paper 80] London: Overseas Development Institute

UN (United Nations). 2002 **WEHAB Working group: Framework Action Papers** Available online at <www.johannesburgsummit.org/html/documents/summit\_docs/wehab\_papers/>, last accessed on 17 December 2003

UN (United Nations). 2003

Partnerships for Sustainable Development: summary analysis Available online at <http://www.un.org/esa/sustdev/partnerships/summary\_analysis.html>, last accessed on 27 January 2003

Venkateshwaran S. 1995 *Environment, development and the gender gap* New Delhi: Sage Publications

WHO (World Health Organization). 2002 World Health Report 2002 [Reducing risks, promoting healthy life] Geneva:WHO. 248 pp.

World Bank. 2003 *Why are power sector reforms important for the poor?* New Delhi: The World Bank. 16 pp.

WRI (World Resources Institute). 2003 World Resources 2002–2003: Decisions for the Earth, Balance, Voice and Power Washington, DC:WRI. 315 pp.

WWI (World Watch Institute). 2002 *Vital Signs (2002–2003):The trends that are shaping our future* London: Earthscan Publications