

Regional Resource Centre for Asia and the Pacific

"Our world has enough for each person's need, but not for his greed."



You must be the change you wish to see in the world."

Mahatma Gandhi (1869-1948)

United Nations Environment Programme
Regional Resource Centre for Asia and the Pacific
(UNEP RRC.AP)
Outreach Building, Asian Institute of Technology
P.O. Box 4, Klong Luang, Pathumthani 12120
Thailand
Tel: +66 2 516 2124, 516 0110 Fax: +66 2 524 6233
www.rrcap.unep.org

Sustainable Development Priorities for South Asia



www.unep.org

United Nations Environment Programme
P.O. Box 30552-00100, Nairobi, Kenya
Tel: (254 2) 624105
Fax: (254 2) 624269
E-mail: dewainfo@unep.org
Web: www.unep.org
www.unep.net



Sustainable Development Priorities for South Asia



Sustainable Development Priorities for South Asia



Published by United Nations Environment Programme Regional Resource Centre for Asia and the Pacific

Copyright 2004, United Nations Environment Programme Regional Resource Centre for Asia and the Pacific

This publication may be reproduced in whole or part in any form for educational or non-profit purposes without special permission from the copy right holder, provided acknowledgement of the source is made. UNEP would appreciate receiving a copy of any publication that uses this publication as a source. No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from the United Nations Environment Programme.

Disclaimers

The contents of this volume do not necessarily reflect the views or policies of UNEP or contributory organizations. The designations employed and the presentations do not imply the expressions of any opinion whatsoever on the part of UNEP or contributory organizations concerning the legal status of any country, territory, city or area or its authority, or concerning the delimitation of its frontiers or boundaries.

Distributed by

United Nations Environment Programme
Regional Resource Centre for Asia and the Pacific
(UNEP RRC.AP)
Outreach Building, Asian Institute of Technology
P.O. Box 4, Klong Luang, Pathumthani 12120 Thailand

FOREWORD

The Sustainable Development Priorities for South Asia is published by UNEP to present the sustainable development challenges and priorities for the South Asian region over the next decade. The report aims to focus on the various strategies, the existing set of policy initiatives, and implementation to overcome these challenges.

Chapter 1 reviews the sustainable development challenges that have been articulated more recently in global deliberations. These challenges basically include poverty eradication, the changes in unsustainable consuming and producing patterns, and other environmental, social, and economic challenges.

Chapter 2 focuses on priorities for action in South Asia: poverty eradication and creation of human security; conservation of natural resource endowments; securing an economic base; and strengthening institutional systems at the local, regional, national, and global levels.

Finally, chapter 3 provides a framework for action in South Asia. The challenges and priorities of sustainable development clearly extend beyond national boundaries. Thus, South Asia needs to focus on enhancing regional cooperation in specific areas: poverty eradication; trade and economic policies; and natural resources management. These areas are highly supported by strengthened implementation systems.

UNEP hopes that the Sustainable Development Priorities for South Asia would be useful for the government, non-government, private, regional and international organizations in the pursuit of developing policies, strategies, and action plans. UNEP gratefully acknowledge the contribution of organizations, institutes, and individuals in the preparation of the report, in particular the valuable support and input provided by Development Alternatives, India.



A handwritten signature in black ink, appearing to read 'Klaus Toepfer'.

Klaus Toepfer

United Nations Under-Secretary
General and
Executive Director, United Nations
Environment Programme

ACKNOWLEDGEMENTS

UNEP would like to thank many individuals and institutions who have contributed to the preparation of Sustainable Development Priorities for South Asia 2004. They included individuals from Government Departments, intergovernmental organizations, academic institutions, and Civil Society Organizations. A full list of contributors, reviewers and participants are included in the Annex 5, 6, 7, and 8. Special thanks are extended to:

- Dr. George C. Varughese, and his team from Development Alternatives, India, for preparing the report;
- Senior officials of SACEP Governing Council for providing invaluable inputs;
- Mr. Raghunathan Rajamani, the Regional advisor , for reviewing and providing inputs to this report; and
- Division of Policy Development and Law for providing the funding support to the report.

UNEP RRC.AP Project Team

Surendra Shrestha
Subrato Sinha
Achira Leophairatana
Purna Chandra Lall Rajbhandari
Twinkle Chopra
Tunnie Srisakulchairak

Table of Contents

List of Figures	vii
Executive summary	1
Chapter 1 Sustainable Development Challenges	5
1.1 Introduction	7
1.2 Global Perspectives	7
1.2.1 United Nations Millennium Declaration	7
1.2.2 World Summit on Sustainable Development (WSSD)	7
1.2.3 Global Ministerial Forum	9
1.3 Regional and Sub-Regional Concerns	9
1.3.1 South Asian State of the Environment (SoE) Reports	9
1.3.2 South Asian Strategy Paper for WSSD	10
1.3.3 Asia-Pacific Environmen Policy Dialogue	13
Chapter 2 South Asian Priorities For Action	15
2.1 Introduction	17
2.2 Eliminating Poverty and Creating Human Security	17
2.2.1 Creating Human Security	17
2.2.2 Managing Population Growth and its Impacts	18
2.3 Conserving the Natural Resource Endowments	19
2.3.1 Arresting Industrial Pollution	19
2.3.2 Managing Urbanisation	20
2.3.3 Conserving Biodiversity	20
2.4 Securing the Economic Base	21
2.4.1 Promoting Technology Cooperation	21
2.4.2 Building a Sub-regional Trading Bloc	22
2.4.3 Depending on Minimal External Assistance	22
2.5 Strengthening Institutional Systems	22
2.5.1 Local Capacity Building and Empowerment	23
2.5.2 Effective National Governance	23
2.5.3 Enhance South Asian Cooperation	24
2.5.4 Responsible Global Systems	25
Chapter 3 Framework for South Asian Action	29
3.1 Introduction	31
3.2 Enhanced South Asian Cooperation	31
3.2.1 Poverty Eradication	31
3.2.2 Trade and Economic Policies	33
3.2.3 Sharing and Management of Natural Resources	35
3.3 Strengthened Implementation Systems	36
3.3.1 Sustainable Development Planning and Programming	36
3.3.2 Institutional Mechanisms	37
3.3.3 Resource Mobilisation Arrangements	38
3.3.4 Monitoring and Evaluation Systems	38
References	40

Annexures	41
Annex 1 List of Acronyms	43
Annex 2 Environment Concerns Identified in SOE Reports	44
Annex 3 Enhanced Awareness and Initiatives	45
Annex 4 List of Major Agreements and Co-Operations in South Asia	67
Annex 5 List of Contributors and Reviewers	70
Annex 6 UNEP Asia-Pacific Civil Society Meeting	71
Annex 7 South Asia Co-Operative Environment Programme (SACEP) Governing Council	74
Annex 8 List of Contributors and Reviewers	79

List of Figures

Figure 2.1	Poverty eradication: The global challenge	18
Figure 2.2	Save our previous gene pool	19
Figure 2.3	Revive traditional knowledge	21
Figure 2.4	Strengthened institutional system: Need of the hour	23
Figure 2.5	Key approach: Creation of sustainable livelihood	24
Figure 2.6	Promote responsibility	25



Executive Summary



Executive Summary

Two major events in the recent past have fairly lucidly articulated the sustainable development challenges and priorities for the global community over the next decade. These include the United Nations Millennium Declaration and the World Summit on Sustainable Development (WSSD) - Johannesburg 2002. Poverty eradication has been clearly identified as the foremost global challenge and an indispensable requirement for sustainable development particularly for the developing countries.

As an input to the WSSD, a South Asian Strategy Paper was prepared. It had drawn heavily upon learning's and conclusions from a number of earlier documents prepared for the region. It also had inputs from a group of 'wise persons' in the region, multilateral institutions and a series of consultations with governments and civil society. This document is a logical follow-up to the earlier Strategy Paper.

Chapter 1 reviews the sustainable development challenges that have been articulated more recently in global deliberations. There was a strong sense that Agenda 21 evolved out of the United Nations Conference on Environment and Development (UNCED) at Rio in 1992 had not been pursued vigorously enough. Hence there was a reaffirmation of commitment to the Rio principles and the Millennium Declaration. The WSSD agreed on a Plan of Implementation to further build upon the achievements since UNCED and commitments in the Millennium Development Goals.

Agenda 21 was taken fairly seriously by the countries in South Asia who put in efforts consistent with their development priorities and fiscal constraints. However, the sub-region was unable to reverse degradation but could slow down the rates of deterioration in some aspects. The concerns of the South Asian region have been endorsed by the recent global deliberations.

Chapter 2 focuses on four South Asian priorities for action - eliminating poverty and creating human security; conserving the natural resource endowments; securing the economic base; and strengthening the institutional systems at the local, national regional and global levels.

Finally Chapter 3 provides a framework for action in South Asia. Recognising that the challenges and priorities of sustainable development clearly extend beyond national boundaries the paper strongly emphasizes enhancing regional cooperation in specific areas of high potential, supported by strengthened implementation systems. Some of the suggestions for enhancing regional cooperation include:

- Addressing poverty eradication through
 - a. Setting up of a South Asian Food Bank
 - b. Initiating a South Asian Disaster Preparedness and Management System
 - c. Promoting a South Asian Health Alliance

- Strengthening trade and economic policies by establishing
 - a. South Asian Free Trade Area
 - b. South Asian Technology Bank
 - c. South Asian Development Bank
- Monitoring and Evaluation Systems - through independent institutions and individuals drawn from governments, civil society and the private sector, under the broad governance and oversight of SAARC
- Sharing and managing natural resources effectively by
 - a. South Asian Biodiversity Conservation Agreement
 - b. Formation of a South Asian Energy Alliance

Enhancement of South Asian cooperation will necessarily imply strengthening of implementation systems at the sub-regional level. While several initiatives have been undertaken under the auspices of SAARC, many of them suffer from lack of adequate implementation arrangements. Some of the key implementation systems that will require attention to address South Asian cooperation for sustainable development are:

- Sustainable Development Planning and Programming - through an alliance of South Asian National Councils for Sustainable Development (NCSDs) that act as a platform for sharing and learning and evolving a South Asian Happiness Index based on the experience of Bhutan
- Institutional Mechanisms - including building and strengthening current and proposed inter-governmental institutions with a mandate to work closely with civil society and private sector alliances in the region
- Resource Mobilisation Arrangements - including fuelling public and private sector investments from within the countries, promoting preferential trade within the region, attracting foreign investments as a region and depending least on external aid



Chapter 1

Sustainable Development Challenges

Chapter 1

Sustainable Development Challenges

1.1 Introduction

For nearly two decades the global community has been grappling to understand the concept and address the challenges of sustainable development. More recently, there has been a series of meetings and conferences to review initiatives at various levels and redefine strategies.

Besides reviewing the sustainable development challenges that have been articulated more recently in global deliberations, this section outlines the South Asian concerns that need to be addressed over the next decade.

1.2 Global Perspectives

Two major events in the recent past have fairly lucidly articulated the sustainable development challenges and priorities for the global community over the next decade. These include the United Nations Millennium Declaration and the World Summit on Sustainable Development (WSSD) – Johannesburg 2002. Poverty eradication has been clearly identified as the foremost global challenge and an indispensable requirement for sustainable development particularly for the developing countries.

1.2.1 United Nations Millennium Declaration

At the dawn of the new millennium, the United Nations General Assembly reviewed

sustainable development initiatives and processes around the world. Recognising the gravity and urgency of challenges, the global community committed itself to eight goals and eighteen targets to be achieved by 2015. Indicators of achievement were identified for each of the targets and responsibility entrusted to multilateral agencies to coordinate global efforts.

The declaration, often referred to as the Millennium Development Goals (MDGs) committed to:

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability, and
8. Develop a global partnership for development

1.2.2 World Summit on Sustainable Development (WSSD)

The World Summit on Sustainable Development (WSSD) held at Johannesburg in September 2002 was enriched considerably by the preparatory processes of stakeholders including governments, inter-governmental agencies and civil society groups. Many traced the evolution of concepts and practices from

Stockholm – 1972 to Rio – 1992 and the UN Millennium Declaration.

There was a strong sense that Agenda 21 evolved out of the United Nations Conference on Environment and Development (UNCED) at Rio in 1992 had not been pursued vigorously enough. Hence there was a reaffirmation of commitment to the Rio principles and the Millennium Declaration. The WSSD agreed on a Plan of Implementation to further build upon the achievements since UNCED and commitments in the Millennium Development Goals.

The WSSD Plan of Implementation focuses on the following:

1. Reinforcing the Millennium Development Goals, including:
 - a. Poverty eradication – Each country has the primary responsibility for its own sustainable development and poverty eradication through national policies and development strategies. At the same time, concerted and concrete measures are required at all levels to enable developing countries to achieve their sustainable development goals in relation to internationally agreed poverty eradication targets.
 - b. Changing unsustainable patterns of consumption and production – Fundamental changes in the way societies produce and consume are indispensable for achieving global sustainable development. All countries should promote sustainable consumption and production patterns, with the developed countries taking the lead and with all countries benefiting from the process.
 - c. Protecting and managing the natural resource base of economic and social –development – Human activities are having an increasing impact on the integrity of the ecosystems that provide essential resources and services for human well-being and economic activities. To reverse the current trend in natural resource degradation, it is necessary to implement strategies that include targets adopted at the national, and where appropriate, regional levels to protect ecosystems and achieve integrated management of land, water and living resources, while strengthening regional, national and local capacities.
- d. Health and sustainable development – The goals of sustainable development can only be achieved in the absence of a high prevalence of debilitating diseases, while obtaining health gains for the whole population requires poverty eradication. There is an urgent need to address the causes of ill health, including environmental causes and their impact on development.
2. Sustainable development in a globalising world – Globalisation offers both opportunities and challenges for sustainable development. Globalisation should be fully inclusive and equitable, and there is a strong need for policies and measures at the national and international levels, formulated and implemented with full and effective participation of developing countries and countries with economies in transition to help them respond to the challenges and opportunities.
3. Sustainable development in regions – Each region, whether they are small island developing states, Africa, Latin America or the Asia Pacific has their specific requirements. These need to be addressed individually and collectively, with the support of the international community.
4. Means of Implementation – The internationally agreed development goals will require significant increases in the flow of financial resources, including through

new and additional financial resources in particular to developing countries, to support the implementation of national policies and programmes developed by them. It will also include improved trade opportunities, access to and transfer of environmentally sound technologies on a preferential basis, as mutually agreed, education and awareness raising, capacity building, information for decision making and scientific capabilities within the agreed time frames. The international community will have to fulfil the commitments of various United Nations conferences.

5. Institutional Framework for Sustainable Development – Measures to strengthen institutional frameworks to fulfil the various commitments has been outlined for the global, regional and national levels.

1.2.3 Global Ministerial Forum

The Global Ministerial Forum that is taking place in March 2004 aims to focus on three key and inter-related themes highlighted at WSSD – Water, Sanitation and Human Settlements.

1.3 Regional and SubRegional Concerns

In the recent past, concerns of the South Asian region have been encapsulated in three documents. The national and South Asian State of the Environment Reports were prepared as part of the Global Environmental Outlook (GEO3) process. The South Asian Strategy Paper which incorporated learning's and recommendations from various initiatives in the region was a contribution to the WSSD. Recently UNEP convened an Asia-Pacific Environment Policy dialogue to identify and articulate emerging concerns in the region.

1.3.1 South Asian State of the Environment (SoE) Reports

The preparation of national State of the Environment (SoE) reports in 2000 enabled each country in South Asia, through a consultative process, to articulate their key environmental concerns (Annex I), on-going initiatives and challenges. The sub-regional SoE Report consolidated these findings and outlined recommendations for action. These learning's and recommendations were fed into UNEP's Global Environment Outlook (GEO3) Report.

The key environmental concerns in South Asia that emerged from the SoE process include:

1. Ensuring Livelihood Security – including food, water, energy and income security.
2. Combating Environmental disasters – including floods, droughts, cyclones, earthquakes, landslides, forest fires, industrial disasters, and cultural and ethnic conflicts.
3. Preventing Industrial Pollution – including specific needs of large, medium and small enterprises; impacts of restructuring; and relationships with communities.
4. Managing Urbanisation – including migration, employment opportunities, urban poverty, consumerism, stressed infrastructure and management systems.
5. Conserving Biodiversity – including undervaluation of biological wealth; subsistence, commercial and other threats to biodiversity.

The challenges and recommendations suggested are:

1. Building large scale awareness and local capacity – through formal and informal communications, education, training and follow-up initiatives
2. Operationalising participatory governance and decision making – through effective

implementation of laws and policies, and regional cooperation

3. Promoting regional and global cooperation – in a variety of areas of poverty reduction, environment management and economic stabilisation
4. Strengthening technological capacity – through enhancement of innovation capability and technology cooperation
5. Securing financial base – through a strong trade network, financial integration, and collective bargaining

1.3.2 South Asian Strategy Paper for WSSD

The South Asian Strategy paper for WSSD was a thought provoking paper to stimulate fundamental shifts in thinking and action. It drew heavily upon the learning's and conclusions reached in similar documents prepared for the region including the State of the Environment in Asia and the Pacific 2000 prepared by Economic and Social Commission for Asia and the Pacific (ESCAP) and the Asian Development Bank (ADB), Global Environment Outlook (GEO) by United Nations Environment Programme (UNEP) and Asian Environment Outlook by ADB.

While taking an overview of the road from Rio and where the sub-region stands at this juncture, the paper observes:

1. Enhanced Awareness and initiatives – on one hand there is enhanced awareness through a plethora of initiatives by governments, civil society, academia, and business corporations aimed at sustainable development.
 - National governments in the sub-region have attempted several measures to integrate sustainable development concerns in their planning processes, programmes and projects.
 - Over the last decade, virtually all South

Asian countries have made Environmental Impact Assessment (EIA) mandatory, especially for the larger projects. There have also been pioneering attempts at waste minimisation, clean technologies and initiatives, common effluent treatment and urban solid waste management.

- The need for conservation of biological diversity has been much more recognised and is visible in the several new initiatives including protection of National Parks and Sanctuaries.
- Countries like Maldives and Sri Lanka have also taken the lead in demonstrating to the rest of the region that it is possible to achieve nearly 100 percent literacy and basic child immunization even with all the social, economic and other constraints. Sri Lanka has been particularly successful in arresting the population growth rate.
- The need for people's participation in policy formulation, programmes and projects is increasingly being recognised by national and provincial governments.
- Civil society groups in the sub-region, well known for their unique and pioneering contributions from the 'Chipko' movement to micro-credit systems, continue a diverse range of activities aimed at capacity building and service delivery to poorer communities. However issues of social justice and equity are still not adequately addressed in the sub-region.
- The larger and more global players among the corporate sector in the sub-region are recognising the need to be more explicit about their environmental and social responsibility. However, the vast majority is still driven by only the financial bottom line. They are yet to be influenced by environmental management measures that reduce waste and consumption, and the social norms, traditions and cultural values that cherish the natural resource base.

- A number of media capsules and programmes generated indigenously and also adapted from global operations contribute immensely to generate awareness on sustainable development concerns.
- Regional initiatives to address sustainable development concerns are also moving slowly, yet forward. The Male' Declaration on Control and Prevention of Air Pollution and its Likely Trans boundary Effects for South Asia is a significant step in this direction.

Please refer Annex II for details and case studies. While most initiatives have been very successful on a micro-scale, the challenge is to set up and sustain systems that facilitate these initiatives on a much wider scale.

2. Unfulfilled promises – on the other hand, there is an element of disheartenment that commitments for overseas development assistance and technology cooperation have not really materialised.

- Decreasing Overseas Development Assistance (ODA) – WSSD assessments clearly indicate that only a fraction of the committed ODA was made available to the developing countries. On the other hand, despite financial constraints, countries in the sub-region have increased their domestic investments in social and environmental sectors by initiating measures like tax reforms, environmental taxes and reducing perverse subsidies. However their current reporting systems do not provide a clear picture of these investments.
- Technology co-operation has been a non-starter – A wide range of activities were initiated by many of the UN agencies to facilitate technology transfer, cooperation and capacity

building in the developing world. However, a decade after Rio, all developing nations and regions including South Asia still continue with obsolete technologies even as the rhetoric of technology transfer and cooperation continues. There are no firm commitments from the industrialised nations and thereby no compliance mechanisms within the international system to forge meaningful North-South technology cooperation.

- Inadequacy of the Multilateral Monitoring Systems – Developing regions like South Asia has been distressed by the inadequacy of multilateral coordination and monitoring systems. There has been very little responsibility and accountability towards global conventions and obligations. Follow up mechanisms like the United Nations Commission on Sustainable Development (CSD) and other UN agencies have little choice but to focus on softer issues of the agreements and commitments. They are not adequately empowered to ensure compliance and often are forced to be driven by concerns and changing policy directions of a handful of rich countries.

3. Sustainable Development – still a dream? – As a consequence, sustainable development in the South Asian sub-region, and also globally, still remains a dream. Although countries like Sri Lanka and Maldives have reached remarkable milestones in literacy, child immunisation and population control, poverty in the sub-region is chronic, population pressures are uncontrollable and the natural resource endowments are further being degraded and depleted. At the same time institutions and policies in the sub-region are not able to respond to emerging requirements.

Chronic Poverty

- More than half a billion of its people living on less than a dollar a day
- More than half the sub-region's children are malnourished
- Almost half the people are illiterate (35 percent men and 59 percent women)
- Nearly one-third of the people are unemployed

At the same time, the consumption patterns of the rich minority in the sub-region are moving rapidly towards unsustainable trends.

Uncontrollable population pressures

- South Asia, with its highest density of population in the world, is unable to support its unskilled people in agrarian activities
- Rural to urban migration has led to almost half of every city and town turning into slums and shanties
- Physical infrastructure and social facilities in both urban and rural areas are thus over stressed and very often dysfunctional
- Basic health and well-being of a majority of the population is constantly under threat

Depleting and degrading natural resource endowments

- Almost half the land area in the sub-region is degraded in one form or another
- Most part of the sub-region are highly vulnerable to natural calamities like floods, earthquakes, cyclones, landslides and droughts
- With over-exploitation, the water resource base in the sub-region is under severe threat and nearly a fourth of the population do not have access to safe drinking water

- Reduction in the natural habitat, loss of species and depletion of genetic diversity characterise the plight of biodiversity in the sub-region

Policy and Institutional Shortcomings

South Asia has witnessed a steady worsening of governance standards, essentially because of mutual distrust and threats from internal and external sources. In fact, institutional and policy shortcomings, have been one of the major causes behind overall sustainable development failures. The sub-region has suffered from lack of continuous focused attention to environmental and resource management by the national governments.

At the national level, an encouraging trend in recent years has been that environment ministries and state agencies have been restructured and empowered with greater institutional strength to promote better vertical and horizontal co-ordination amongst different agencies. New legislations, including strengthening of existing laws has empowered executives and also enabled judicial institutions to oversee the effective enforcement of environmental measures.

The prominent trans-national arrangements for strengthening the sub-regional institutional framework for sustainable development are the South Asian Association for Regional Co-operation (SAARC), South Asian Co-operative Environmental Programme (SACEP) and South Asian Preferential Trading Arrangement (SAPTA).

In addition, there are regional (South East Asia, Asia Pacific) and global institutional arrangements, through various treaties and conventions that have significant impacts on the decision-making processes in the South Asian sub-region.

On the other hand, institutional shortcomings in South Asia include political instability, failure of command-and-control regimes and improper valuations that ignore costs to the environment.

It is true that the region has received only a small fraction of what was promised at Rio. Yet, this can be no reason to justify institutional shortcomings in setting up the appropriate financial engines to lead the region into a sustainable future.

The paper identifies four thematic sub-regional priorities and action needed for eliminating poverty, managing population growth, conserving natural resources and building macro-economic stability all of which are interdependent. It also outlines the action and accountability required at the local, national, sub-regional and global levels.

1.3.3 Asia-Pacific Environment Policy Dialogue

The Asia-Pacific Environmental Policy Dialogue at Beijing in September 2003 convened by the United Nations Environment Programme identified four emerging environment issues – atmospheric brown cloud, glacial lake outburst floods, dust and sandstorms, and green house gases (GHG) reduction. A deliberations also stressed upon other concerns in the region including e-waste; water, habitat and sanitation; sustainable consumption; and creating wider awareness.

A majority of the countries of South Asia remain the poorest in the world. The SAARC countries - with one fifth of the world's population and one third of Asia's - contribute just one per cent of the World's and five per cent of Asia's Gross Domestic Product.

Agenda 21 was taken fairly seriously by the countries in South Asia who put in efforts consistent with their development priorities and fiscal constraints. However, the sub-region

was unable to reverse degradation of natural resources but could slow down the rates of deterioration in some aspects. It also appears that the sub-region would have done better if some of the promises of aid flows mentioned in Agenda 21 had materialised.

The concerns of the South Asian region have been endorsed by the recent global deliberations. While there have been more commitments for global cooperation and support, the countries of South Asia need to continue their war against poverty and to improve their environment with only a modest expectation of external aid which often comes with conditionalities and doses of advice.



Chapter 2

South Asian Priorities for Action

Chapter 2

South Asian Priorities for Action

2.1 Introduction

Developing countries and regions need to identify their own priorities and initiate concerted action with maximum self-reliance and minimal external assistance to retard the poverty and environmental degradation.

Various regional and national assessments point towards four broad thematic priorities for the next decade. These tend to converge with recent global mandates and commitments:

- Eliminating Poverty and Creating Human Security
- Conserving the Natural Resource Endowments
- Securing the Economic Base
- Strengthening Institutional Systems

2.2 Eliminating Poverty and Creating Human Security

Poverty eradication has been recognised as the primary global challenge and an indispensable requirement to achieve sustainable development. However, eliminating poverty involves the whole complex paradigm of creating human security and managing population growth and its impacts.

2.2.1 *Creating Human Security*

Experiences at different levels in the sub-region aimed at poverty eradication indicate that food and income securities are the two essential priorities along with water, energy and health securities that need to be addressed. Simultaneously, local communities need to be protected from devastation caused by regular natural disasters. While government and civil society organisations traditionally played a pivotal role in this effort, the importance of more proactive action by the private sector is being recognised.

Some of the specific actions essential for creating human security in the sub-region are outlined below:

- Ensuring **food security** through accessibility, affordability and well-planned sustainable food production, storage and distribution strategies. Strengthen research, information, infrastructure and incentives especially for small farmers and promoting co-operative systems for aggregation of small land-holdings
- Promoting **income security** through micro-finance and micro-enterprises as a means of livelihood and developing effective marketing and distribution links with medium and large-scale industries. Facilitating reforms in the financial and capital markets to enable the private sector to energise

- entrepreneurship among poor communities
- Providing **water security** for human consumption, including livestock and farming of poor communities through affordable and socially acceptable technologies and practices. Developing integrated water management, including sanitation, systems to ensure adequate and sustained quality and quantity of water. Forging innovative financing and partnership mechanisms for effective extraction, treatment, storage and equitable distribution.
 - Enhancing **energy security** through improved access to reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources. Promoting various means such as enhanced rural electrification, decentralised energy systems, increased use of renewables, cleaner liquid and gaseous fuels and energy efficiency through national initiatives and regional cooperation.
 - Ensuring **health security** through significant investments in primary health care infrastructure and systems which are linked to referral systems in towns and cities. Enabling the poor to access health care through affordable and innovative insurance and other financing mechanisms. Promoting

private investments to increase availability and decrease pressure on public systems. Forging regional cooperation for specialised treatment, referrals – through use of information technology, and promoting the region as a health care destination.

- Providing **security from natural disasters** through preventive action including large-scale afforestation, rehabilitation of degraded lands, hazard resistant structures and other long term measure. Strengthening preparedness for disasters through national and regional risk assessment, mapping, monitoring and vigilance systems. Ensuring that timely relief, recovery and rehabilitation of victims affected by natural disasters through effective policies and procedures including regional cooperation. Information sharing and strengthening mechanisms, resource/expertise sharing and decentralised knowledge centres could be established for better information dissemination and experience sharing to take control of natural calamities.

2.2.2 Managing Population Growth and its Impacts

Arresting population growth is a priority for the survival of most countries in the sub-region. While population growth has to be directly addressed, experience shows that indirect measures are often more practically feasible and effective, though they may take a little longer to generate desired results. Some of the important measures that can be adopted include:

- Generating large-scale awareness and providing small family incentives
- Enabling rural communities to undertake non-farm income generating activities

Figure 2.1: Poverty eradication: The global challenge



Source: Sulabh Sanitation Movement; Vision 2000 plus

- Providing livelihood security through food, water, energy, income and decentralised production systems
- Formulating management approaches that provide for the needs of the urban residents and at the same time protects the environment
- Setting up or upgrading infrastructure for health, education, drinking water, sanitation, transport, energy, and other public systems

2.3 Conserving the Natural Resource Endowments

With almost half the land area in the region degraded in one form or the other; the water resource base threatened due to over-exploitation and pollution; cities like Mumbai and Dhaka having the dubious distinction of being among the most polluted in the world; and the biodiversity under severe threat; South Asia has no option but to focus seriously on conserving its natural resource endowments. The three areas that require immediate and sustained attention are:

- Arresting industrial pollution
- Managing urbanisation
- Conserving biodiversity

2.3.1 Arresting Industrial Pollution

On the accelerated road to economic development and poverty alleviation, environmental considerations have often been compromised. The implications are now visible in South Asia. Ameliorative action is possible by promoting corporate citizenship, addressing special needs of small and medium enterprises, and strengthening regulatory mechanisms.

Promoting Corporate Citizenship

Large industries in the region, both indigenous and trans-national corporations,

are increasingly being forced by discerning local and global consumer and shareholder pressure to adopt cleaner industrial production technologies and practices. The more enlightened recognise that without corporate environmental and social responsibility, their survival and long term sustainability is at stake. Hence, in the recent past, there has been a sudden surge in the cleaner production processes, technologies, and self regulatory mechanisms like the ISO 14000 series on Environmental Management Systems by the International Organisation for Standardisation (ISO). Besides regulations, these initiatives need to be promoted at the national and regional levels so that these operations are both competitive and sustainable.

Addressing Special Needs of Small and Medium Enterprises

Small and medium enterprises (SMEs) in the South Asia account for almost two-thirds of the industrial production and employment in the region. They find it difficult to comply even with the minimum requirements of the regulatory agencies since their products and services cater to markets that are very price sensitive. A majority of these units belong to the 'unorganised sector' and are dispersed.

Figure 2.2: Save our previous gene pool



Source: Sulabh Sanitation Movement; Vision 2000 plus

Hence they are a nightmare for regulatory agencies. As a consequence they are very often highly resource intensive and inefficient with a high level of pollution load per unit of production.

It is imperative for the region to support the SMEs with more efficient technologies, financial incentives, and capacity building for upgradation. Experience has also shown that collective systems for waste treatment are more cost effective but not necessarily easy to implement.

Strengthening Regulatory Mechanisms

Most countries in South Asia have recognised efficacy of the complementary approach of incentives with regulation rather than just depending on the ‘license and inspector raj.’ Most countries have already formulated various policies and standards at the national level which are being fine tuned for local application. The major problem has been in implementation due to lack of trained personnel, infrastructure and often local political interference. Regional cooperation will be very useful in sharing of experiences to enhance the capacity of regulatory agencies.

2.3.2 Managing Urbanisation

South Asia is home to over 4000 cities and towns. About 80 of these house populations of more than 500,000 and have some form of Urban Development Authority or City Improvement Trust and one or more municipal bodies to plan and manage their development process.

However, the vast majority do not have the support mechanisms to systematically plan and facilitate the development process. They only have some kind of agency for routine municipal administration. Most often they do not have the requisite technical, planning

and management skills, and their financial position is also bleak.

As a consequence, these small and medium towns, growing at the most rapid rate, are turning out to be potential environment and development nightmares. The current fire fighting focus is still on the large cities where the unplanned urbanization process has already taken its toll. The likelihood of major environmental and social disasters exploding in several places across the sub-region is imminent over the next decade if immediate attention is not focussed on these small and medium towns.

Regional cooperation can support local and national initiatives to plan, design, experiment and demonstrate strategies and solutions in municipal towns with a population of 100,000 to 500,000 people. The approach can bring together the concerned stakeholders on a participatory and consultative planning and management platform. The requisite technical and management expertise may be initially drawn from external sources. Ultimately, local capacity will be built to continue with the process. Various technological and social management options will also be demonstrated for issues like solid waste management, transportation systems, and water and energy management. Viable and sustainable financial management systems will also be designed with the participation of reputed financial institutions.

2.3.3 Conserving Biodiversity

South Asia harbours approximately 15 percent of the known global flora and fauna. Unfortunately the rich natural endowments, including the precious gene pool, are constantly under threat. More recently, traditional knowledge and ownership rights of indigenous communities are also being threatened by global trade and patenting agreements. This is in spite of the ecological debt built up by industrialised economies over

the years by systematically exploiting the natural endowments in developing regions.

The loss of sub-regional biodiversity adversely affects the people of South Asia and also the global community. Some of the key priorities for action by the sub-region are outlined below:

- Assess, map and document the biodiversity wealth of the sub-region
- Demarcate and protect fragile habitats at all costs
- Revive traditional knowledge, especially among local communities, indigenous people and women, that promotes conservation practices and integrate conservation efforts in all sectors
- Facilitate the manufacture of high value added products from the resource base by industry in the sub-region and curtail bio-piracy
- Use the rich biodiversity and products manufactured in the sub-region as a bargaining tool in the international market
- Formulate sub-regional policies and programmes, like the South Asian Regional Seas Programme and Biodiversity Action Plans, to address issues of biodiversity conservation and international trade

2.4 Securing the Economic Base

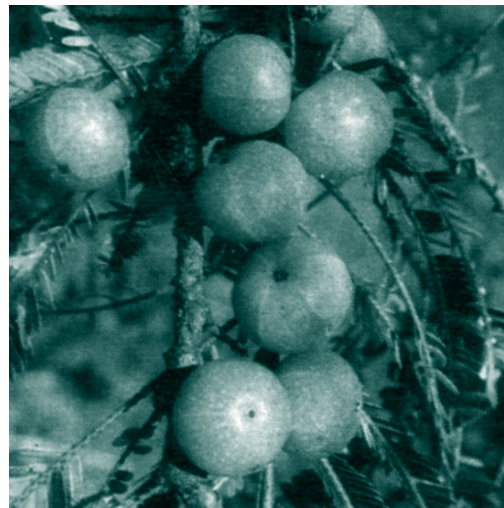
The long-term sustainability of the South Asian sub-region is critically dependent on a firm and secure financial and economic base which is currently rather fragile. Each country in the sub-region has to strengthen its financial and economic systems while also focussing on poverty eradication and survival issues. Considerable mutual support and assistance is possible through technology cooperation and sub-regional trade arrangements.

2.4.1 Promoting Technology Cooperation

Countries in the sub-region, like their counterparts in the developing world, have quite naturally looked towards the industrialised nations for state-of-the-art technologies. Experience clearly indicates that only second grade, or even obsolete, technology is often passed on. Countries in the sub-region need to focus seriously on indigenous technology development and sharing. Developing regions and sub-regions need to clearly demonstrate the potential and strength of South-South technology cooperation. Some of the vital steps in this process are:

- Identifying the value addition and technology needs of the sub-region
- Initiating research and development through mutual support
- Creating a South Asian Technology Bank
- Formulating agreements for technology sharing

Figure 2.3: Revive traditional knowledge



Source: *Report of The Independent Commission on Health in India; VHAI*

The sub-region needs to build up its capacity to negotiate with the industrialised world for specific technologies where it is critically required. The North-South technology cooperation should continue where it confers tangible and sustainable benefits to both the parties.

2.4.2 Building a Sub-regional Trading Bloc

With acute poverty at one end, South Asia is also rated as the second fastest growing economic zone in the world (over 5% per annum), next only to the East Asian tigers. Unfortunately countries in the sub-region have not fully recognised and taken advantage of this latent potential. South Asia, with a consumer base of over 425 million people in the middle class bracket – larger than any other economic bloc of the world - can contribute a great deal to the evolving global economy. Hence considerable rationalisation is required within the sub-region to tap this potential.

The countries in the sub-region need a much more liberalised trading regime among themselves. The South Asian Preferential Trade Agreement (SAPTA) and the proposed South Asian Free Trade Area (SAFTA) are important steps in this direction. Countries in the sub-region also need to pursue measures that reduce production and trading costs through sharing of basic resources. Sub-regional sharing of energy, water and other natural resources may be considered for the mutual benefit of collaborating nations. While strengthening preferential trade within the sub-region, South Asia also needs to build up its bargaining power as an economic bloc in the global trade negotiations. These include its rich traditional knowledge, practices, relatively pristine tourism destinations, biological diversity, arts and crafts, besides ‘modern’ industrial products and services and pool of contemporary brain power.

2.4.3 Depending on Minimal External Assistance

In all international deliberations, developing countries are seen to be negotiating for more development assistance, besides technology. It is clear that overseas development assistance has been decreasing over the years and the likelihood of its increasing substantively is remote. In fact, many a developing country has been gradually dragged into the debt trap.

Countries in South Asia need to consciously look at developing themselves with minimal overseas development assistance. With technology and trade cooperation, the economies in the sub-region can be bootstrapped. The sub-region also needs to seriously consider setting up a South Asian Development Bank.

2.5 Strengthening Institutional Systems

All recent assessments reiterate the need for strengthened institutional systems to cater to the emerging priorities of eliminating poverty and creating human security; managing population growth and its impact; conserving the natural resource endowments; and securing the economic base. Any successful effort to bring about sustainable development will necessarily require countries of the sub-region to establish mechanisms for formulating policy and implementing it at the relevant levels:

- Local
- National
- Regional
- Global

At each level, it is now necessary to build capacity for understanding the basis of action for sustainable development, formulate policies and programmes to encourage such action,

establish responsibilities, set up mechanisms for monitoring progress towards agreed goals and create mechanisms for accountability.

2.5.1 Local Capacity Building and Empowerment

A key approach to addressing the current challenges is the widespread creation of **sustainable livelihoods** - jobs that require minimal capital investment; jobs in decentralised rural or sub urban locations; create incomes, meaning and dignity; and place least pressure on the environment. They produce goods and services that cater to the basic needs of the local people and simultaneously help them generate purchasing power to acquire these goods and services.

The creation of sustainable livelihoods requires fundamental changes in the choice of technology, financing systems and the functioning of the marketplace. It also needs strengthening of the institutions of local governance, which must now be designed to create a sense of ownership by local people over the resources on which they depend, and the decisions systems that guide their lives; address the minds of the children on values of giving, caring and sharing. Fortunately, there have been several initiatives and considerable experience in the region.

There is widespread consensus in South Asia, both at the official level and among civil society organizations that social mobilisation is the most effective instrument for creating both the supply of sustainable livelihoods and the demand for them. This is where the traditionally marginalised and vulnerable groups like women, indigenous people, youth and others play a critical role. The countries of South Asia have experimented with a broad range of social mobilisation options and are becoming increasingly familiar with the kinds of intervention needed.

Successful social mobilization must be based on active participation by the stakeholders, transparency and access to information, technology, credit and markets. Certain institutional factors can accelerate the process of social mobilization. The most widely accepted ones include local self-government, clearly defined entry points and effective support systems.

2.5.2 Effective National Governance

The primary responsibility of national governments in the sustainable development process is to empower and facilitate the functioning of local governance institutions. They need to ensure that governments at all levels are democratic, participative, transparent and accountable.

Civil society, including community based organizations and non-governmental agencies are now growing rapidly in terms of their influence on people's lives. Such institutions need to be encouraged and nurtured, based on their track record particularly because they are usually better capable of delivering social mobilization services, and usually at a fraction of the cost. Because of their high levels of

Figure 2.4: Strengthened institutional system: Need of the hour



Source: Report of The Independent Commission on Health in India; VHAI

motivation and willingness to work within severely constrained circumstances, they are also effective innovators from whom many new solutions can be adopted on a larger scale.

The corporate sector is also beginning to realise the opportunities offered by the rural market in South Asian countries and can be a major potential partner in introducing sustainable development services to the poor. While corporate sector participation in the development process needs to be encouraged, governments and regulatory systems must ensure that profit motives do not deteriorate cultural values and traditional conservation practices. Traditional knowledge and traditional lifestyle has played a vital role in conserving biodiversity.

Perhaps the most important responsibility that governments have is to set an example of efficient operations for agencies in the other sectors to follow. Some of the specific actions for better governance are outlined below:

- Facilitate meaningful involvement in policy formulation and implementation by representatives of the private sector, local authorities, NGOs, trade unions and other major groups.
- Respect indigenous peoples' intellectual and cultural property rights while recognising cultural diversity and ethnic plurality.
- Balance short-term economic benefits with medium and long term objectives, particularly in the social and environmental spheres
- Incorporate sustainable development principles in national Constitutions or legislation to accelerate the adoption of better development strategies
- Plan development activity on the basis of active public consultation as demonstrated by Bangladesh in evolving National Environment Management Action Plan
- Focus on design of legal and regulatory regimes that improve political and civil service accountability within the context of decentralized government.

Figure 2.5: Key approach: Creation of sustainable livelihood



Source: *Source: Sulabh Sanitation Movement; Vision 2000 plus*

2.5.3 Enhance South Asian Cooperation

Asia is assuming importance in terms of its centrality to global geopolitics and geoeconomics. Though characterised by tensions and conflicts, the continent is also an area of potential economic growth. South Asia is home to a phenomenal skilled manpower. It also houses some of the largest emerging markets in the world. Such a diverse resource base can be pooled together for broader regional co operation, which in turn will engender durable peace and security in the region.

Key areas of regional cooperation include:

- Joint action on Poverty Eradication and Human Security

- Sub regional Trade and Economic Policies
- Sub regional Sharing and Management of Natural Resources
- Strengthening Implementation Systems

Each of these is discussed in detail in the next Section on the Framework for South Asian Action.

2.5.4 Responsible Global Systems

Concerted efforts are required by the global community to fulfil commitments made in the MDGs and at WSSD. Multi-stakeholder collaborative programmes are called for. More action and accountability is needed to promote sustainable consumption and production systems, strengthen global cooperation, and ensure fulfilment of government obligations and corporate social responsibility.

Promoting Sustainable Production and Consumption Patterns

Virtually every country today wishes to “become competitive in the global economy” by emulating the same technological strategies and production systems that have proven to be unsustainable. This means that transforming production systems to meet the imperatives of sustainability will not be easy.

Sustainable consumption is an even more ambitious objective, which aims at transforming the ways in which goods and services are used and disposed of so that the needs of all people are met and the environment is conserved.

Governments must now take some responsibility to help guide the driving forces that influence consumption patterns in any society. This means addressing issues such as market pressures (e.g. pricing, advertising, credit), the policy framework (e.g. perverse

incentives), cultural expectations, technological innovation, infrastructure and land use as well as individuals purchasing decisions. This, in turn, entails tackling the institutionalised inertia in today's markets, policy and society, which currently prevents widespread action. Just as commercial advertising can deeply influence consumption patterns, new publicly funded methods must be evolved that communicate the advantages of more sustainable consumption.

WSSD renewed the call on industrialised countries to take the lead in sustainable consumption. It is not only an issue for the developed world with only a single valid approach that is applicable to all countries and situations. The developing countries have a lot to offer in terms of lifestyles for sustainability. The ECO-Asia initiative launched by the Government of Japan provides a salutary reminder of the value of cultural diversity: it called on countries in the region to “rediscover those elements in their traditional way of life suited to conserving the environment”.

Figure 2.6: Promote responsibility



Source: Report of The Independent Commission on Health in India; VHAI

Making consumption sustainable is a long-term task, which will require structural change in economies and lifestyles, tackling often entrenched expectations and vested interests. These issues cannot be addressed by policy alone, but will require political vision and determination to take tough choices where these are necessary, supported by a broad public movement for change.

Strengthening Global Cooperation

Bringing about fundamental changes will need concerted effort on the part of international agencies, governments, corporations and civil society. They will need to establish innovative partnerships to support research and action, globally and particularly in developing countries, on sustainable development and integration of economic, environmental and social issues:

- To eradicate global poverty
- To conserve the environmental resource base
- To ensure that the benefits of globalisation processes reach the poor and conserve the environment
- To ensure market access of the poor countries in the global market and global trade
- To create a financial institutional framework that ensures access to micro-credit and mini-credit.
- To ensure support for micro and mini enterprises and financial institutional capacity at local and community levels, particularly in poor countries
- To strengthen the capacity of developing countries to negotiate, access technology and ensure implementation of global conventions
- To develop global governance code of ethics on corruption and agree to eliminate corruption at all levels of public life

Ensuring Implementation of the MDGs and WSSD Plan

Both the Millennium Declaration and the WSSD Plan of Implementation have drawn out a clear agenda to address the priority for poverty eradication. Recognising that earlier commitments were not fulfilled due to weak institutional arrangements for action and accountability, the documents clearly specify targets and entrust responsibilities to international institutions, regional groups and governments. Besides coordination of implementation at the global level, mechanisms for financing the initiatives have been outlined. Systems for monitoring progress and accountability have also been put in place. The global community now has a second chance to demonstrate its seriousness in eradicating poverty and steering itself towards the path of sustainable development.

Ensuring Corporate Responsibility

It is increasingly becoming clear that companies that integrate social and environmental concerns into their business operations can improve relations with governments, address stakeholder concerns, identify strategic advantages and improve their management systems. In this context the efforts like the Global Reporting Initiative (GRI) and the Global Compact initiated by the United Nations Secretary General need to be encouraged. Attempts are being made to evolve more comprehensive reporting and monitoring mechanisms with the participation of a broader set of stakeholders.

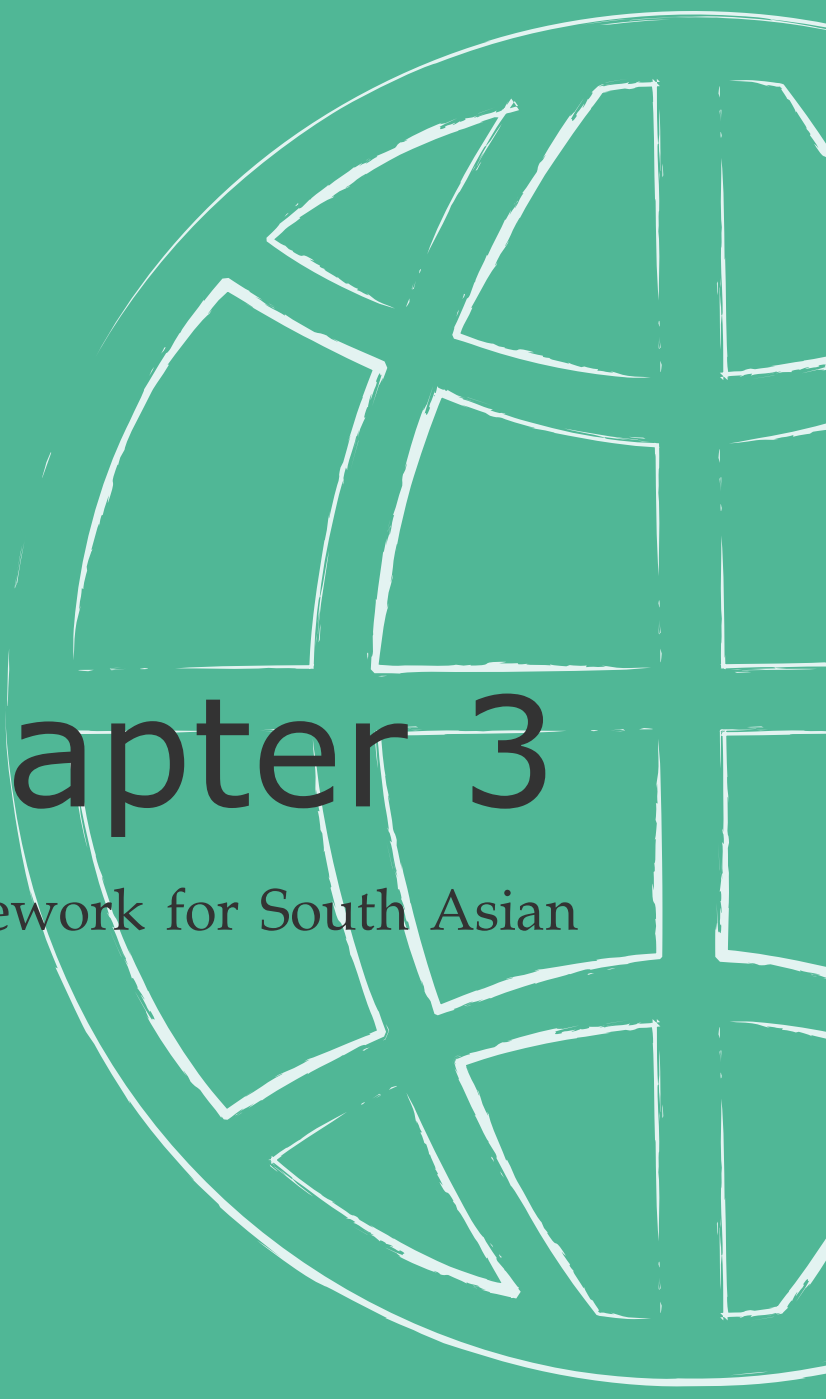
Besides regulation, three critical aspects needed to promote corporate responsibility at the global level include:

- Voluntary commitments, in order to encourage companies to go beyond existing legal and regulatory requirements;

- Flexibility, permitting companies to tailor corporate responsibility principles to local conditions in a given country;
- Company participation in decision-making, to ensure corporate responsibility initiatives reflect the experiences and realities of a wide range of industry.

Corporations need to be challenged to implement policies, programs and practices that protect human rights, communities and the environment based on principles of justice and sustainability.

The priorities of eliminating poverty and creating human security; conserving the natural resource endowments; and securing the economic base have essentially to be addressed at the local and national levels. Regional cooperation will be extremely useful in mutually supporting and reinforcing the national and local initiatives. Regional collaboration will also enable South Asia to negotiate with the international community from a position of strength and contribute meaningfully in determining the global agenda.



Chapter 3

Framework for South Asian
Action

Chapter 3

Framework for South Asian Action

3.1 Introduction

The challenges and priorities of sustainable development clearly extend beyond national boundaries. South Asia needs to focus on enhancing regional cooperation in specific areas of high potential, supported by strengthened implementation systems.

3.2 Enhanced South Asian Cooperation

Three specific areas that will benefit from enhanced regional cooperation include poverty eradication; trade and economic policies; and the sharing and management of natural resources.

3.2.1 Poverty Eradication

For over a decade governments in South Asia have collectively recognised that poverty eradication is the key pre-requisite for development of the sub-region. The Sixth SAARC Summit at Colombo – 1991 established an Independent South Asian Commission on Poverty Alleviation (ISACPA). Based on its findings, the Seventh SAARC Summit at Dhaka – 1993 adopted a consensus on poverty eradication in the region.

At this stage, three areas require strategic focus at the sub-regional level to address the issue of poverty eradication, while other efforts will continue at the national and sub-national levels. These include:

- Setting up of a South Asian Food Bank
- Initiating a South Asian Disaster Preparedness and Management System
- Promoting a South Asian Health Alliance

South Asian Food Bank

With more than half a billion of its people living on less than a dollar a day, more than half the sub-region's children are malnourished. At the same time, the food production within the region is nearly adequate to feed its population for basic nutritional requirements. Hence the issue is timely and targeted distribution of food to the poor communities in the region.

At the Third SAARC Summit at Kathmandu – 1987, an Agreement to establish the SAARC Food Security Reserve (SFSR) was signed. In 1998, the SAARC Food Security Board (SFSB) was established to advise governments on the food situation and prospects in the sub-region including factors such as production, consumption, trade, prices, quality and stocks of food grains. With stronger research capability, the SFSB can play its full role in advising on the international trade issues to protect the social and economic rights of poor/marginal farmers.

The SFSB now needs to seriously consider the setting up of a South Asian Food Bank. Decentralised centres can be designated in different parts the sub-region to ensure that

any deficits is a particular location, at any given time can be balanced with supplies from other centres. This Food bank will have the responsibility to ensure food security through well-planned sustainable food production, storage and distribution strategies that:

- Emphasize self-sufficiency in food grains as a means of poverty reduction and livelihood for the 70 percent people who live in the rural areas
- Promote co-operative systems for aggregation of small land-holdings
- Strengthen research, information, infrastructure and incentives especially for small farmers
- Create a favourable and stable macro-economic environment for farmers
- Ensure availability, accessibility and affordability of food grains both during emergencies and normal periods

While the Food Bank will focus on indigenous capacity development and co-operation, assistance will also be drawn from specialised international agencies like the Food and Agricultural Organisation (FAO) and the World Food Programme (WFP). The aim over the next 15 years would be to ensure that no person in the sub-region suffers from hunger.

South Asian Disaster Preparedness and Management System

The World Bank Regional Environmental Strategy notes that between 1990 and 1998 the sub-region accounted for more than 60 percent of disaster related deaths worldwide. More than half a billion people in the sub-region are vulnerable to regular natural and human induced calamities including floods, droughts, cyclones, earthquakes, landslides, forest fires, industrial disasters, cultural and ethnic conflicts.

Countries in the region are linked individually to global initiatives on disaster preparedness. For example, tropical cyclone advisories are issued by Regional Specialised Meteorological Centres (RSMCs) to all member countries of the WMO/ESCAP Panel on Tropical Cyclones during the cyclone period at regular six hourly intervals. However, there is only very marginal regional co-operation on disaster preparedness and management, like the SAARC Meteorological Research Centre (SMRC) at Dhaka, while the potential for technical co-operation and cost reduction is immense. The deliberations on global climate change also clearly indicate the need for regional adaptation and mitigation measures.

The proposed South Asian Disaster Preparedness and Management System will promote regional cooperation to ensure security from natural disasters. Some of the key activities will include:

- Establishing communication, cooperation and consensus among key stakeholders
- Preventing natural disasters through large-scale afforestation, rehabilitation of degraded lands, hazard resistant structures and other long term measures
- Strengthen preparedness for disasters through risk assessment, mapping, monitoring and vigilance systems
 - Promoting and conducting research and studies into alert and warning systems
 - Assisting and advising government on the development, implementation and operation of public warning systems, technologies, policies and procedures
 - Supporting timely generation of standards, specifications, and protocols
 - Encouraging private sector

- investment in the development of new warning technologies and promoting the existing technologies
- Ensuring that timely relief is available to disaster victims anywhere in the sub-region
- Evolving policies and strategies that guarantee recovery and rehabilitation of victims affected by natural disasters
- Generating a knowledge base for public and informed decision making by establishing, maintaining and providing educational materials and other information on disaster preparedness and management.
- It is fairly well known that many of the currently designated natural disasters are in fact human induced. The ultimate aim will be to reduce vulnerability to any form of disasters to less than five per cent of the population in the region. At this stage, the SMRC and SACEP are best poised to initiate the process. Based on experience, SAARC will have to decide upon the final institutional mechanism.
- Designating and upgrading public domain referral centres across the region to share expertise through use of information and communication technology
- Promoting and developing partnerships to enhance health care education, training and capacity building at all levels
- Promoting regional insurance and refinancing systems that enable poor to access health care facilities
- Encouraging private sector investments in health care infrastructure and services across the region so that the pressure on public facilities and also the brain drain of available expertise is reduced. At the same time the region can be promoted as a cost effective health care destination for people from other parts of the world.

This critical area of regional cooperation and potential needs to be deliberated at the level of SAARC Health Ministers. They need to seriously consider setting up a South Asian Health Alliance which can contribute significantly to achieving the health related targets set for 2015. This Alliance would consolidate and synergise the numerous initiatives of governments, private sector and civil society in the region.

South Asian Health Alliance

More than two-thirds of the people in South Asia still lack access to even rudimentary health care facilities. Infant mortality and prevalence of diseases like tuberculosis, malaria and HIV/AIDS is among the highest in the world due to rampant poverty coupled with health care deficiencies.

While considerable effort is being put in by national governments supported by bilateral and multilateral agencies, there are virtually no initiatives of significance at the regional level even though significant potential exists. Some of these include:

- Setting up systems for technology cooperation and production, storage and distribution of drugs at affordable prices in a sustained manner

3.2.2 Trade and Economic Policies

With acute poverty at one end, South Asia is also rated as the second fastest growing economic zone in the world (over 5% per annum), next only to the East Asian tigers. Unfortunately countries in the sub-region have not fully recognised and taken advantage of this latent potential. South Asia, with a consumer base of over 425 million people in the middle class bracket – larger than any other economic bloc of the world - can contribute a great deal to the ever evolving global economy.

Hence considerable rationalisation is required within the sub-region to tap this potential.

Three specific areas of cooperation are imminent:

- South Asian Preferential Trade Agreement / South Asian Free Trade Area
- South Asian Technology Bank
- South Asian Development Bank

South Asian Preferential Trade Agreement / South Asian Free Trade Area

The countries in the sub-region need a much more liberalised trading regime among themselves. The South Asian Preferential Trade Agreement (SAPTA) and the proposed South Asian Free Trade Area (SAFTA) are important steps in this direction. However, these need to be strengthened and accelerated aggressively with several associated initiatives. For example, countries in the sub-region can accord “Most Favoured Nation (MFN)” status to each other to boost trade and their economies. Similarly, a single currency for the sub-region may soon become inevitable. Civil society organisations in the sub-region like South Asian Watch on Trade, Economy and Environment (SAWTEE) are already suggesting the formation of South Asian Economic Union by 2020.

While strengthening preferential trade within the sub-region, South Asia also needs to build up its bargaining power as an economic bloc in the global trade negotiations. The sub-region has several unique products and services to be offered to the rest of the world. These include its rich traditional knowledge, practices, relatively pristine tourism destinations, biological diversity, arts and crafts, besides ‘modern’ industrial products and services and pool of contemporary brain power. The sub-region needs to carefully value these products and services as a bloc

and negotiate with other regions from a position of strength.

South Asian Technology Bank

Countries in the sub-region, like their counterparts in the developing world, have quite naturally looked towards the industrialised nations for state-of-the-art technologies. Experience clearly indicates that only second grade, or even obsolete, technology is often passed on. Countries in the sub-region need to focus seriously on indigenous technology development and sharing. Developing regions and sub-regions need to clearly demonstrate the potential and strength of South-South technology cooperation.

Some of the vital steps in this process are:

- Identify the value addition and technology needs of the sub-region
- Initiate research and development through mutual support
- Create a South Asian Technology Bank
- Formulate agreements for technology sharing

For example, Bangladesh, India and Pakistan have common interests in textiles and leather. It is only logical to cooperate in research and development for value added products. The opportunities become immense to compete in the global market.

SACEP, with the support of SAARC can initiate the process of setting up the South Asian Technology Bank by 2006. A wide range of activities have been initiated by many of the UN agencies to facilitate technology transfer, cooperation and capacity building in the developing world. The Asia Pacific Centre for Technology Transfer (APCTT) is already operating in the region. The proposed South Asian Technology Bank will forge partnerships with these entities and also the private sector.

The sub-region needs to build up its capacity to negotiate with the industrialised world for specific technologies where it is critically required. The North-South technology cooperation should continue where it confers tangible and sustainable benefits to both the parties.

South Asian Development Bank

Overseas development assistance has been decreasing over the years and the likelihood of its increasing substantively is remote. Besides trade, technology cooperation and private investments, soft and targeted public investments will continue to play a major role in the economic development of the region.

The Asian Development Bank (ADB) has played a commendable role in supporting the development of infrastructure and critical services in the region. Based on this experience, the Finance Ministers of SAARC need to seriously consider setting up a South Asian Development Bank which is much more targeted towards the needs of the sub-region which is adequately large and having the absorptive capacity. Besides technical and management support from the World Bank and the ADB, equity contribution can be mobilised from the member countries and other multilateral, bilateral and private institutions.

With trade, technology and investments cooperation, the economies in the sub-region can be bootstrapped. Establishing such cooperation alliances would open up technology transfer and regional trade which will help expand production and employment in all the countries.

3.2.3 Sharing and Management of Natural Resources

The threat to natural resource endowments in South Asia need not be re-emphasized.

Countries in the sub-region also need to pursue measures that reduce production and trading costs through sharing of basic resources. Recognising the need for regional cooperation in sharing and management of natural resources, the South Asia Co-operative Environment Programme (SACEP) was established in 1982. SACEP has focussed on capacity building and institutional strengthening, conservation and sustainable use of bio-diversity, ecosystem conservation and management, environmental information, education and awareness.

Two important initiatives have been coordinated by SACEP. The South Asia Seas Programme (SASP) aims at protecting and managing the marine environment and related coastal ecosystems of the region. The Male Declaration focuses on air pollution and its likely trans-boundary effects in South Asia. Besides these on going activities, areas of potential regional cooperation in cleaner and more sustainable industrial production, and management of urbanisation have already been outlined in Section 2.2.

SACEP needs to consider seriously a South Asian Biodiversity Conservation Agreement and the formation of a South Asian Energy Alliance.

South Asian Biodiversity Conservation Agreement

South Asia is home to spectacular natural beauty which is approximately 15 percent of the global biological endowments. They are however under severe threat from subsistence communities, commercial interests, alien invasive species, disasters and episodic events.

Most countries have formulated National Biodiversity Action Plans which outline threats to the biodiversity and the proposed conservation activities. At the regional level UNEP, in collaboration with SACEP, have initiated the South Asia Seas Programme.

Besides efforts by the governments, a large number of initiatives towards conservation of biodiversity have been taken by NGOs, community based organizations (CBOs), and other institutions. However, there are still several areas in which collaborative action needs to be urgently initiated.

Formulating a South Asian Biodiversity Conservation Agreement would facilitate more detailed assessments, mapping and delineation of protected areas; revival of traditional conservation knowledge; curtailment of bio-piracy; setting up of domestic and joint venture manufacturing units; and facilitate trade in finished products rather than raw materials.

While SACEP will have the primary responsibility for formulating the Agreement and co-ordinating follow-up action, it can take assistance from several institutions in the region, including UNEP and the World Conservation Union (IUCN).

South Asian Energy Alliance

Sharing of energy and other natural resources may be considered for the mutual benefit of collaborating nations. While some suggestions have been discussed over the years, the initiative to set up a South Asian Energy Alliance needs to be taken by SAARC.

Sub-regional sharing of energy, besides rationalising peaks, can reduce costs and demand for power. For example, Pakistan has surplus power while Bhutan and Nepal have not harnessed their energy potential. On the other hand power deficient India and Bangladesh can make investments in Bhutan and Nepal to generate hydropower which is cheaper and cleaner than coal based thermal power.

South Asia is also well endowed with renewable sources of energy including wind,

hydro, biomass and solar energy which offer the high potential for power generation. They could help address the problems of depleting fossil fuel resources and emission of greenhouse gasses. Regional cooperation will be relevant in sharing of technologies, expertise and investments.

The Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC) provides mechanisms through which developing countries may get technologies as well as funds from the industrialised countries for adopting means of carbon emission reduction. The South Asian region can thus look at how these mechanisms may be utilized for the benefit of the region as a whole and the countries in particular.

3.3 Strengthened Implementation Systems

Enhancement of South Asian cooperation will necessarily imply strengthening of implementation systems at the sub-regional level. While several initiatives have been undertaken under the auspices of SAARC, many of them suffer from lack of adequate implementation arrangements. Some of the key implementation systems that will require attention to address South Asian cooperation for sustainable development are:

- Sustainable Development Planning and Programming
- Institutional Mechanisms
- Resource Mobilisation Arrangements
- Monitoring and Evaluation Systems

3.3.1 Sustainable Development Planning and Programming

South Asia has witnessed a whole range of sustainable development planning, programming and implementation initiatives

at various levels in the last decade. While most of them at the national level are primarily government driven, some have had the benefit of active involvement and ownership from other stakeholders. The experience of National Councils for Sustainable Development (NCSD) would be useful to emulate. Representatives from government, private sector and civil society come together at the national level for planning and programming. An alliance of South Asian NCSDs would be useful as a platform for sharing and learning.

Current thinking, planning, programming and monitoring of sustainable development activities around the globe are essentially driven by conceptual research and thinking from the industrialised world. Hence they do not necessarily reflect the values, and ethos of developing nations who are in fact culturally rich and diverse civilizations. There is a need for a new global sustainability ethic. The experience of Bhutan in officially adopting the concept of Gross National Happiness index as the measure of the nation's progress is interesting.

Taking the clue from this pioneering policy initiative, it would be opportune for countries of the sub-region to explore developing a composite South Asian Happiness Index. Such an index would provide a much-needed counterweight to the purely economic indices of progress that currently define and underlie economic, environmental and social development policies.

3.3.2 Institutional Mechanisms

There are several regional agreements and initiatives under the broad rubric of SAARC. However most of them do not have robust institutional arrangements to pursue their mandates. Many of them are ad hoc inter-governmental panels or a skeletal organization with very minimal expertise, infrastructure and financial support. SAARC needs to recognize

the importance and potential of regional cooperation and commit people, infrastructure and resources to set up and strengthen regional institutions. The leveraging power of dynamic regional institutions to mobilize additional resources is immense.

This document strongly advocates the upgradation of several regional initiatives with robust inter-governmental institutions. These include the South Asian Food Bank; South Asian Disaster Preparedness and Management System; and the South Asian Health Alliance for poverty eradication. Trade and economic policies like SAPTA and SAFTA can currently be supported by SAARC and the proposed South Asian Technology Bank and the South Asian Development Bank till such time as a formal South Asian Economic Union is crystallized. Sharing and management of natural resources in the region can be coordinated by the South Asia Co-operative Environment Programme (SACEP).

On the other hand, there are quite a few regional initiatives by civil society which have bearing on sustainable development in the region. The South Asian Forum for Environmental Journalists is a very useful platform to spread the messages of sustainable development in the region. Climate Action Network South Asia (CANSAs) has been actively involved in the climate negotiations. The Regional and International Networking Group (RING-South Asia) is currently working on programmes of Community Led Environment Action Network (CLEAN-South Asia), corporate social responsibility and climate change. These need to be strengthened and encouraged.

The South Asia Alliance for Poverty Eradication (SAAPE) formed in December 2001, has commitments for promoting the welfare of the poor and marginalised in South Asia. The South Asian Watch on Trade, Economic and Environment (SAWTEE) is a partnership for capacity building to address

liberalisation and globalisation. Similarly business associations in the region also maintain their network links through the SAARC Chamber of Commerce and Industry and other alliances.

It would be useful for SAARC and other intergovernmental bodies like SACEP to encourage and work much more with these regional alliances of civil society and business organisations. They bring in rich and diverse expertise and experience, and also propagate the regional initiatives at nominal costs.

3.3.3 Resource Mobilisation Arrangements

Sustainable development in South Asia has essentially to be fuelled by public and private investments from within the countries. Micro-credit programmes in Bangladesh, now accelerating rapidly in India and other countries of the region, have demonstrated the power and potential of internal resource generation through innovative mechanisms. It is only the potential of internal resource generation – even from the poor – that can leverage external finances with pride and dignity.

Preferential trade and the proposed SAFTA needs to be pursued urgently and aggressively since it can go a long way in triggering and accelerating economic growth in the region. The SAARC countries need to re-look and re-evaluate the business opportunities in intra-regional trade and trade generating joint ventures.

The World Bank Global Development Finance report indicates that private sector financial flows to developing countries has increased. However in South Asia, this is virtually to India with marginal flows to the other countries. The proposed regional enabling environments – like the South Asian Technology Bank, South Asian Development

Bank and SAFTA for production and trade – can enhance these private investments significantly. These arrangements can also facilitate negotiations from a position of strength taking into consideration the specific requirements of the region.

Overseas Development Assistance needs to be seen as the last resort to fuel the sustainable development process in the region. While over the years development aid has been useful, it has also created a dependence syndrome. In the 1980s the Bangladesh economy became substantially dependent on external aid. It is adequately clear the development assistance is declining and the chances of increases are remote. The nominal amounts of development assistance have to be judiciously utilised to support and test innovative approaches and catalyse private investments.

3.3.4 Monitoring and Evaluation Systems

The three sets of proposed activities for regional cooperation – poverty eradication, trade and economic activities, and sharing and management of natural resources – aimed at sustainable development are complex and diverse. SAARC will have to set up independent mechanisms for supportive supervision and monitoring of the three sets of activities. Expertise can be drawn from time to time as required from among government, private sector and civil society individuals and institutions. Ensuring transparency and accountability, a common strategy for government and NGOs can be formulated and joint monitoring programmes can be launched. Formal evaluations and reporting to SAARC would be useful on an annual basis.

Indicators of progress can be adapted from the targets and milestones encapsulated in the Millennium Development Goals, the WSSD

Framework for Implementation and the various Multilateral Environment Agreements. This will facilitate national, regional and global reporting. However, as elaborated in Section 3.3.1, it would be essential to work on modifying these indicators to reflect more the values and cultures of the region.

Annex II provides a number of case studies where successes have been achieved in South Asia on various sustainable development initiatives. The challenge is to scale up these efforts on a regional scale. The regional cooperation activities can utilise these and other case studies to benchmark their operations.

References

1. Development Alternatives, UNEP, SACEP, ADB, ESCAP, UNDP (2001). Sustainable Development: Challenge for Action and Accountability, A South Asian Strategy Paper for WSSD.
2. Development Alternatives, SACEP, NORAD, UNEP (2001). State of the Environment Report, South Asia 2001
3. UNDP (2000). The Human Development Report 2000. New York, United Nations Development Programme
4. The World Bank (2000). World Bank Environment Strategy 2000.
5. IEA (1999). World Energy Outlook, Looking at Energy Subsidies : Getting the Prices Right. The International Energy Agency, Paris
6. World Resources 2000-2001 WRI
7. Agenda 21 and the Asia Pacific Regional Perspective on the achievements, a paper by R. Rajamani, Regional Policy Advisor, LTNEP-EAP/,AP

Annexures



Annex 1. List of Acronyms

ADB	-	The Asian Development Bank
APCTT	-	Asia Pacific Centre for Technology Transfer
CANSA	-	Climate Action Network South Asia
CLEAN	-	Community Led Environment Action Network
CSD	-	Commission on Sustainable Development
EIA	-	Environmental Impact Assessment
ESCAP	-	Economic and Social Commission for Asia and the Pacific
FAO	-	Food and Agricultural Organisation
GEO	-	Global Environmental Outlook
GHG	-	Green house gases
GRI	-	Global Reporting Initiative
ISACPA	-	Independent South Asian Commission on Poverty Alleviation
ISO	-	International Organisation for Standardisation
IUCN	-	World Conservation Union
MDGs	-	Millennium Development Goals
MFN	-	Most Favoured Nation
NCSDs	-	National Councils for Sustainable Development
NGOs	-	Non Government Organisations
ODA	-	Overseas Development Assistance
RSMCs	-	Regional Specialised Meteorological Centres
SAAPE	-	South Asia Alliance for Poverty Eradication
SAARC	-	South Asian Association for Regional Co-operation
SACEP	-	South Asian Co-operative Environmental Programme
SAFTA	-	South Asian Free Trade Area
SAPTA	-	South Asian Preferential Trading Arrangement
SASP	-	South Asia Seas Programme
SAWTEE	-	South Asian Watch on Trade, Economy and Environment
SFSB	-	SAARC Food Security Reserve
SMEs	-	Small and medium enterprises
SMRC	-	SAARC Meteorological Research Centre
SoE	-	State of the Environment Reporting
UN	-	United Nations
UNCED	-	United Nations Conference on Environment and Development
UNEP	-	United Nations Environment Programme
UNFCCC	-	United Nations Framework Convention on Climate Change
WFP	-	World Food Programme
WSSD	-	World Summit on Sustainable Development

Annex 2. Environment Concerns Identified In SOE Reports

India	Bhutan	Bangladesh	Nepal	Sri Lanka	Pakistan	Maldives	Sub-region
Land degradation	Land degradation	Land degradation	Soil degradation	Land improvement and conservation	Land degradation		
Biodiversity		Loss of biodiversity			Biodiversity conservation		Biodiversity
Air pollution with reference to vehicular pollution	Air pollution	Urban air pollution	Air pollution		Air pollution		Industrial Pollution
Fresh water management	Water pollution	Water pollution and scarcity	Water quality	Improvement of water quality	Water pollution	Freshwater resources	
Hazardous waste management	Solid waste management		Solid waste management	Waste management		Solid waste	
		Impact of natural disasters on economy and livelihood				Climate change and sea level rise	Environment disasters
	Environment concerns of rural urban migration						Urbanisation
							Livelihood security
			Forest depletion				
				Developing of coastal resources			

Annex 3. Enhanced Awareness and Initiatives

There has been considerable awareness enhanced at all levels on the concepts and challenges of sustainable development through the efforts of the Governments and Civil Society, especially NGOs and the media. A range of significant initiatives and trends are visible. The sample of case studies in Annex VIII testify this.

National governments in the sub-region have attempted several measures to integrate sustainable development concerns in their planning processes, programmes and projects. The process and outcome of the National Conservation Strategy in Pakistan stands out globally as one among the more rigorous efforts with content and commitment. Governments in the sub-region are attempting more holistic indices to assess their performance. The Gross National Happiness Index of Bhutan is a pioneering attempt towards integrating good governance, economic growth, environment protection and cultural promotion. Several progressive state governments in India have also adapted the concept of the Human Development Index.

Over the last decade, virtually all South Asian countries have made Environmental Impact Assessment (EIA) mandatory, especially for the larger projects. There have also been pioneering attempts at waste minimisation, clean technologies and initiatives, common effluent treatment and urban solid waste management. The need for conservation of biological diversity has been much more recognised and is visible in the several new initiatives including protection of National Parks and Sanctuaries.

Countries like Maldives and Sri Lanka have also taken the lead in demonstrating to the rest of the region that it is possible to achieve nearly 100 percent literacy and basic child immunization even with all the social, economic and other constraints. Sri Lanka has been particularly successful in arresting the population growth rate.

The need for people's participation in policy formulation, programmes and projects is increasingly being recognised by national and provincial governments. More than 70,000 people participated in the evolution of the National Environment Management Action Plan (NEMAP) of Bangladesh. Experience from the Community Forestry Programme in Nepal, the Joint Forest Management Programme in India, and the Bangladesh Flood Action Plan indicates that several hurdles, including capacity building and empowerment, are yet to be crossed before meaningful participation is possible. The 73rd and 74th Constitutional Amendments in India have been a bold step towards empowering local self-governments in the rural and urban areas. More recently Pakistan has also enacted legislation to empower local governments.

Civil society groups in the sub-region, well known for their unique and pioneering contributions from the 'Chipko' movement to micro-credit systems, continue a diverse range of activities aimed at capacity building and service delivery to poorer communities. However issues of social justice and equity are still not adequately addressed in the sub-region.

The larger and more global players among the corporate sector in the sub-region are recognising the need to be more explicit about their environmental and social responsibility. However, the vast majority is still driven by only the financial bottom line. They are yet to be influenced by environmental management measures that reduce waste and consumption, and the social norms, traditions and cultural values that cherish the natural resource base.

The globalisation process over the last decade has forced the academia in the sub-region to be less dependent on state funds¹ and generate earnings through research for corporates. This has taken its toll on rigorous academic research on environmental and social issues. On the other hand, the globalisation process has increased manifold opportunities and space in the media - especially television. A number of capsules and programmes generated indigenously and also adapted from global operations contribute immensely to generate awareness on sustainable development concerns.

Regional initiatives to address sustainable development concerns are also moving slowly, yet forward. The Male' Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia is a significant step in this direction. Other sub-regional Mechanisms like South Asian Association for Regional Cooperation (SAARC) and South Asian Preferential Trade Agreement (SAPTA) are also gradually beginning to focus on more concrete issues after going through the initial processes of confidence and institutional building.

Most initiatives have been very successful on a micro-scale. The challenge is to set up and sustain systems that facilitate these initiatives on a much wider scale.

Unfulfilled Promises

The enthusiasm of the civil society, considered efforts of the governments, dynamism of the media and cautious initiatives of the corporations in the sub-region have not been dampened by unfulfilled promises of the global community. Yet the unfulfilled promises are an important factor to be reckoned with in global deliberations on environment and sustainable development.

Decreasing Overseas Development Assistance (ODA)

Two main vehicles were designed at Rio for financing environmental protection and ensuring that the development process continued unhindered. The first was increased ODA flows to developing nations. The United Nations Conference on Environment and Development (UNCED) Secretariat had estimated that US\$600 billion would be required each year between 1993 and 2000 to implement Agenda 21 in the low-income countries. Of this, US\$125 billion was supposed to come from international donations or concessions. Towards this end, the high-income countries reaffirmed their commitment at Rio to reach the UN target of providing 0.7 percent of their GNP as ODA.

The reality however has been that ODA flows have failed to reach the 1992 figure of US\$ 60 billion which is less than half the requirements. In fact the OECD records that ODA fell to its lowest of less than US\$ 48 billion in 1997.

The second vehicle was in the form of additional investment flows to the developing nations, through the Multi-lateral Environmental Agreements (MEAs) that were signed and agreed to during Rio. The only visible financial outcome of Rio is about \$5 billion worth of commitments, mostly for the Global Environment Facility. Of this only \$2 billion has been actually spent.

In addition, there have been increased private sector investments into the low-income countries. However these have been concentrated in countries like China and India. Most countries in the sub-region do not have the enabling conditions to attract large quantum of private sector investments.

On the other hand, despite financial constraints, countries in the sub-region have increased their domestic investments in social and environmental sectors by initiating measures like tax reforms, environmental taxes and reducing perverse subsidies. However their current reporting systems do not provide a clear picture of these investments.

Technology co-operation has been a non-starter

The Rio process deliberated considerably on the ways and means by which developing nations can have better access to technologies available with their industrialised counterparts. In the absence of firm commitments, there was a general understanding that various measures will be initiated to forge technology cooperation among the nations. The United Nations Commission of Sustainable Development (CSD) was mandated to lead the process globally while the United Nations Asian and Pacific Centre to Technology Transfer (APCTT) was to complement this effort in the region.

A review of the implementation of Chapter 34 of Agenda 21 which includes transfer of environmentally sound technologies (ESTs), cooperation and capacity building was undertaken by the Department of Social Affairs and Development (DESA) on behalf of CSD. It clearly indicates that a wide range of activities have been initiated by most of the UN agencies to facilitate technology transfer, cooperation and capacity building in the developing world especially over the last decade.

However, the fact remains, that a decade after Rio, all developing nations and regions including South Asia still continue with obsolete technologies even as the rhetoric of technology transfer and cooperation continues. There are no firm commitments from the industrialised nations and thereby no compliance mechanisms within the international system to forge meaningful North-South technology cooperation.

Probably, it may just be better for the developing nations and regions to pool in their resources for South-South cooperation in technologies. Technology cooperation with industrialized countries would be welcome on the basis of a clear understanding that they will be on mutually favourable terms and promote sustainability.

Inadequacy of Multilateral Monitoring Systems

Another distressing factor for developing regions like South Asia has been the inadequacy of multilateral coordination and monitoring systems. There has been very little responsibility and accountability towards global conventions and obligations like Agenda 21.

Follow-up mechanisms like the United Nations Commission on Sustainable Development (CSD) and other United Nations Agencies have little choice but to focus on softer issues of the agreements and commitments. As such they are not adequately empowered to ensure compliance and often are forced to be driven by concerns and changing policy directions of a handful of rich countries. While these agencies are pushed to the corner, developing nations quite helplessly watch and wait for the best. The marathon experiences at the Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC) is adequate evidence.

SUSTAINABLE DEVELOPMENT PRACTICES – Case Studies			
S. No	Country	Issue	Title
1.	Bangladesh	Participatory Resource Management	Eco-Specific Participatory Resources Management in Bangladesh
2.	Bangladesh	Micro Finance	Fighting Poverty – The Grameen Bank in Bangladesh
3.	Bhutan	Rural Development	Model Village In Bhumtang Bhutan
4.	India	Environment Management Practices Regency, Delhi	Cost reduction – Benefit of ISO 14001 Implementation at Hyatt
5.	India	Environment Management Practices	EMS in Hotel Industry - The Orchid - An Ecotel Hotel, Mumbai
6.	India	Environment Management Practices	The Business Role in Development A Best Practice Case Study from India - Tata Steel
7.	India	Participatory Planning & Local Self-Governance Planning & Local Self-Governance	The Road to Success: Women Showed the Way Experience on Participatory
8.	India	Traditional Knowledge	Reviving Traditional Knowledge : The Barefoot College - Promoting Productive Employment for Youth in India
9.	Pakistan	Waste Management	Private Sector Initiative towards Urban Waste Management in Pakistan
10.	Sri Lanka	Cleaner Production	Cleaner Production at a Toddy Distillery in Sri Lanka

Source : An abstract from South Asian Strategy Paper for WSSD; Section 1

Eco-Specific Participatory Resources Management in Bangladesh

The Bangladesh Centre for Advanced Studies (BCAS) initiated an advocacy programme at Chanda Beel, to involve people in the sustainable management of wetland resources. The central objective of the project is to build environmental awareness and to encourage proactive solutions to problems by local CSOs, local government and resource users. A people's participatory wetland management plan has been developed by BCAS in conjunction with local stakeholder input over the course of the project.

Two thirds of the country was wetland, mostly floodplains, which had been every rich in flora and fauna. But, increasing pressure of a growing population on natural resources and other associated human interventions have greatly depleted the resource bases, particularly fisheries of many of the floodplains and the ecosystems of Bangladesh. Chanda Beel is one of the large wetlands located in the south central part of Bangladesh facing tremendous pressure. BCAS realised that sustainable management of wetland resources is largely dependent upon building social capital to create greater cohesiveness, trust and common purpose among the key stakeholders. But these changes are most likely to occur with facilitated consensual management of the resource through awareness and advocacy at the community levels.

Preliminary stages involved the identification of target stakeholders. This was followed by group-wise consultation to discuss primary concerns before the joint preparation of action plans with each group. Local CSOs provided further information regarding stakeholder profiles, together with details of their own thoughts concerning project activities and project management.

An extensive training programme was conducted to impart training of the staff engaged for facilitation and skill development. The programme involved sharing of experiences and field trips to other locally-based natural resource management project sites. The training of male and female staff was central to this advocacy project (in particular, training in “lobbying and liaison maintaining strategies”). In addition, local CSOs staff attended four programmes to outline project objectives and approaches and to develop participatory skills. Again, the emphasis was on building skills to maintain liaison with CSOs, locally elected representatives and government officials, and to develop ways in which local stakeholders could take a greater responsibility to solve problems and disseminate solutions.

In order to prepare participatory wetland management action plan, the project considered several activities. It formulated a Participatory Wetland Management Action Plan (PWMAP) and identified a number of key environmental problems and specific actions such as policy advocacy project, etc. in reference to environment and natural resources management in Chanda Beel. The major project activities can be summarised as follows:

- Training of CSOs, local government, fisheries and farmers in natural resource management
- Motivation and awareness building among all concerned stakeholders
- Development of effective communication between local government, CSOs and local people with respect to environmental issues
- Habitat restoration activities

In order to ensure sustainable management of natural resources of Chanda Beel, one central committee and 10 sub-committees have been formed involving representatives from all stakeholders and professionals. The committees have been organising meetings frequently to discuss development and natural resources conservation issues. It has been evident from a participatory assessment of the programme that communities in the surrounding villages of the beel have greater understanding about the causes and trend of the degradation of natural resources (fish, snails, birds, aquatic vegetables, etc.) of the beel. They are well aware of their environment and usefulness of the resources base for both natural system and human existence.

Source : Civic Entrepreneurship : A Civil Society Perspective on Sustainable Development; Volume IV, Pg. 61.

Fighting Poverty – The Grameen Bank in Bangladesh

The Grameen Bank of Bangladesh is one of the world's leading programmes for poverty alleviation. It was initiated in 1977 and is based on the understanding that the lack of access to credit is the main hurdle in the progress of the rural poor.

The major objective of the bank is to provide institutional credit to landless people for remunerative self-employment. With its specially designed credit programme, it extends loans to women and men living in absolute poverty who cannot otherwise offer collateral for bank loans. Membership to Grameen Bank groups is open to like-minded people having the same social status and whose families own less than 0.5 acre of cultivable land or the value of a family's total assets does not exceed the market price of one acre of average quality land in the locality.

In 1983 Grameen Bank was reconstituted as a specialized financial institution. The operational objectives include: extending banking facilities to the poor especially women; elimination of exploitation of the poor by money lenders; creation of self-employment opportunities for the un-utilized manpower; organization of people to strengthen themselves in socio-political and economic aspects through mutual support: reversing the vicious cycle of poverty – low income, low savings, low investment to 'more income, more credit, more investment'; encouragement of self-reliance among the groups; ensuring better health, nutritional, housing and education facilities for its members.

The total number of borrowers to date far exceeds 2 million, out of which 94 per cent are female borrowers. Grameen Bank's services reach about 40 000 villages. It has extended small credit amounting to US\$1 810 million. The small savings of poor villagers to date are over 4 900 million takas (US\$130 million). Women are considered more banable and more trustworthy (this trust has been amply rewarded through a recovery rate of ninety eight per cent on all loans advance to women).

The main reasons for the successes of Grameen Bank are as under:

- Loans are small (average of US\$100 each) and carry no interest subsidy
- Loans are given at a much higher interest rate than bank loans in the market, reflecting the extra-administration cost of small loans
- The poor are required to put aside some saving - at least one taka (US2.5 cents) a week, thus encouraging the habit of self-reliance among the poor
- The bank went to the poor, rather than waiting for the poor to come to the bank.

Grameen Bank has also introduced housing loans for the poor. A Grameen Bank member can borrow up to US\$640 for constructing a simple tin roof house. It has disbursed housing loans for construction of over 310,000 houses. The GB members are also encouraged to pay attention to their social situations and health conditions. These issues have been documented as the 'sixteen decisions' which are strictly followed by staff and each member. The sixteen decisions certify a change in the attitudes of its clients.

The Grameen Bank is now experiencing with other initiatives, including the creation of a \$100 million People's Fund to finance replication of this experiment in other developing countries. Grameen Bank is also working towards reducing environmental degradation. This aspect has also been incorporated in the sixteen decisions. Grameen Bank's approach is total development. The sixteen decisions and the credit are an effective mix to approach alleviation of poverty. This approach has proved that the poor have the capacity to improve their lives. Grameen Bank experiences have been replicated in 40 countries of the world.

Source : State of Environment Asia and the Pacific – 2000, Pg. 212, UNESCAP and ADB

Model Village in Bhumtang, Bhutan

The Challenge

In order to ensure equity in the improvement of the living conditions in the rural areas of Bhutan, it is necessary to encourage a balanced development in the provision of essential basic services such as safe drinking water, electricity, roads, telecommunications, marketing facilities and social services.

The Model Village

The Model Village is one such balanced strategy which is used to ensure village-based developments. While checking shifts, it also fosters a development which is environment-friendly and promotes socio-economic and cultural development. A model village is a demonstration village where the environment and sanitary conditions are improved through community participation with the overall objective to improve the health status of the village population.

The Model Village approach was initiated in the district of Bhumtang as one of the main components of the Primary Health Care Intensification Programme. The district started with the ten Model Villages following the decision of the Programme. Intensification workshops were attended by community leaders, women, religious and traditional practitioners, village health workers and sectorial heads from the district administration. Following are a few of the practices applied in the Model Village approach :

- construction and use of latrines and refuse disposal pits;
- separation of animal sheds from the house as well as control of stray animals in the village;

- regular cleaning of the village surroundings and maintenance of the drinking water supply through organized support systems;
- provision of soiling and stepping stones for village footpaths;
- promotion of personal hygiene;
- promotion of kitchen gardens and the cultivation of a variety of vegetables;
- planting of trees and protection of community forests.

The Approach

Model, in this context, signifies initiatives for replication and emulation by the villages based upon their local situations. The actions making up the Model Village can be summarized as: it is indigenous concept and approach whereby health is used as an entry point;

- the sustenance of the Model Village is ensured through active community participation and use of local resources;
- it improves the local habitat within the existing culture and traditions;
- there is government support for recognition and granting approvals;
- a social welfare development fund is established to help the handicapped and the aged and to ensure the maintenance of drinking water supply systems; the fund is developed through community kitchen gardens and interest charged on the loan taken by the community members.

The Model Village approach is dynamic and flexible to enable continued development over time with progress in socio-economic development. Because of local ownership,

participation and affordability, the long-term sustainability is ensured. The local needs and the problems are identified by the community itself. The solutions and technologies are based on local priorities, conditions and resources. Consensus is sought on decisions taken and community ownership is ensured which influences peoples participation and sustenance.

New and simple technologies are adapted to the local needs and conditions. Such technologies include squatting slabs for deep pit-latrines, rural drinking water supply systems, smokeless stoves, etc. Such new technologies have also helped to promote environment-friendly customs while improving community health.

The community and development agents work as partners on equal terms, the latter acting as facilitators and helping with technical know-how and other needed resources. The community takes the lead role in decision-making and implementation of development activities.

The Impact

One of the major achievements of the Model Village Programme is the positive changes in the behaviour of the population as a result of increased public awareness and perceptions about health in particular, and community development in general. Reduction in morbidity and mortality is achieved through improved personal hygiene and sanitary behaviour of the population. An improvement in the nutritional status of children was found due to availability and consumption of various kinds of vegetables through the promotion of kitchen gardens and improved dietary habits.

Because the Model Village programme was successful in the Bhumtang district, the Government of Bhutan recognized the role that the Model Village can play in mobilizing community participation for the promotion of health and other community development activities. As a consequence, the Government approved the replication of this concept and approach in other districts.

The Model Village is an example of an activity which contributes towards the development of a habitat in harmony with the environment and technological advances. However, additional development such as lighting facilities, road and telecommunications, marketing and social services are equally important components to ensure equitable development between the urban and rural areas.

Source : <http://www.hsd.ait.ac.th/bestprac/bplist.htm>

Cost Reduction – Benefit of ISO 14001 Implementation at Hyatt Regency, Delhi

The Environmental Management System (EMS) of Hyatt Regency, Delhi covers all environmental aspects associated within boundary wall of the hotel arising out of its activities, products and services. This standard (ISO 14001) enabled the hotel to establish an effective EMS, achieve continual improvement of environmental performance and ensure regulatory and related legislative compliance. EMS allowed the hotel to address, control and improve the short-term and long-term impacts of its activities, products and services, thereby helping to operate in an environmentally responsible manner, anticipate and meet growing environmental performance expectations. The total timeframe of EMS implementation took fourteen months. Initial six months went in carrying out the detailed initial environmental review and prioritising the significant environmental aspects, so as to act immediately in minimising the adverse environmental impacts. Hyatt Regency, Delhi is the first hotel in the world under Hyatt International chain to get the ISO 14001 certificate from Det Norske Veritas (DNV), September 2001.

Mainly challenges were faced in the beginning of implementing the EMS. Most of the core group members representing various departments took the initiative as an additional burden, as they felt lot of time goes in documentation and reviewing their own day to day work under initial environmental review. But later the same group realised that it gave an opportunity to see their own activities under environmental perspective. The second major challenge faced is the support from management. The key, followed in achieving commitment on the part of management was in identifying the environmental aspects, which affected the organisation activities, products and services.

Source: Manual for developing and implementing EMS in hotel industry; Development Alternatives, New Delhi

EMS in Hotel Industry - The Orchid, An Ecotel Hotel, Mumbai

Launched in 1997, The Orchid, Asia's First Ecotel Hotel, a leading landmark in the city of Mumbai, has gained international importance due to its pioneering efforts in the eco friendly sphere. The Mission Statement of The Orchid sums up its core values in accepting responsibility for living in close harmony with nature and community. In continuation to this Orchid has reinforced its commitment to eco friendly practices by achieving the ISO-14001 Environment Management System certification in just twelve months of commencing the process. When the management decided to lead the way in reflecting the hotel's intrinsic values, little did they realize then that the venture would place the hotel at the very top.

It started with the formation of the core team headed by Management Representative (MR). The initiative was executed by involving the team – HODs, department representatives and internal auditors. The MR being a team player streamlined the entire initiative, and was able to not only foster team spirit and use the principles of the orchid culture, but he was able to tactfully handle the orchid team members and channelise their energies in the direction to achieve the goal.

Inspite of being an ecotel where the orchidians have been already practicing environmentally friendly system and procedures, it was a challenge for the orchid team to find ways and means to go further in this endeavour. Each Orchidian rose to the challenge to document and implement the ISO 14001 environment management system. The system was audited by Bureau

Veritas Quality International (BVQI) and was found to be in accordance with the requirements of the environment standard ISO 14001. During the process and inspite of a busy period in terms of occupancy approximately 80% from May 2000 to May 2001, the orchid team stuck to their guns and went through a structured program provided by consultants "Development Alternatives.

It is not really an easy task for Orchid to strike a balance between environmental improvement and five star deluxe hotel services. But Orchid's genuine desire to reduce adverse environmental impacts without sacrificing five star services can be seen by taking a glance on its everyday operation, even the slightest aspects.

- Energy saved, at the push of a button on the Bedside Control Panel, a unique "Ecoswitch" which automatically increases the AC's thermostat by two degrees in 2 hours, without affecting comfort levels. Guests, who generally actively participate in this venture, are then rewarded and motivated with Certificates and a free subscription of the environment-based magazine 'Sanctuary'. About 16,000 guests used the Eco-Button and saved energy.
- Packaging was reduced by 30% by our suppliers which also brought down waste.
- For the aesthetics potted plants are used instead of cut flowers.
- The Restaurants doesn't use the table cloth and thus reduce the load on laundry.

As per the Managing Director of Orchid, the ISO 14001 initiative has been the result of “The Orchid team work, persistence and culture – we will exert vigorous effort such that others join in enthusiastically”. Quality is never an accident, but the result of hard work and dedication, and this is what has paid rich dividends. Today the Orchid looms high above the horizon, a leader in its own right, culminating with the hotel bagging ISO 14001 certificate.

Source: Manual for developing and implementing EMS in hotel industry; Development Alternatives, New Delhi

The Business Role in Development – A Best Practice Case Study from India Tata Steel

When the anti-big-dam environmental activist Medha Patkar visited Tata Steel a couple of years ago, she said “I was pleasantly surprised to find the rivers around Jamshedpur full of water and the land green for many miles away as I flew into the city. It is quite unusual near a big industry.” Such endorsement from an environmental activist to an industrial giant is unusual anywhere in the world. It speaks volumes about the Tata reputation for a high degree of self regulation and commitment to sustainable development long before it became a buzz word.

That’s hardly surprising for corporate watchers. Tata Steel is India’s first corporation to report its business in accordance with GRI (Global Reporting Initiative). It has many initiatives towards reducing pollutant emissions and discharges. There’s also a Committee of Boards which vets and debates all management proposals before they reach the 17-member board. As the shareholder’s watchdog, the board looks at all key issues such as financial performance, capital expenditure, executive remuneration, and labour and legal issues. The meeting’s agenda is pre-circulated to the board (except quarterly results) so that the actual meeting only lasts for a couple of hours. There are two officers who report directly to the board, bypassing the managing director. They are the internal auditor and the ethics counsellor. As against the SEBI (Securities & Exchange Board of India) mandated four board meetings a year, Tata Steel does eight - two every quarter. The group has put together a strategy for corporate sustainability that take into account Tata traditions and back up based on company level initiatives to meet world class standards (see accompanying figure).

Sustainability is deeply ingrained in the business orientation of Tata Steel. This year the groups’ Tata Council for Community Initiatives committed Rs.150 crores (approx US\$ 30.5 million) for a diverse range of activities. Tata Steel is also involved in a pilot-test with CII, the Confederation of Indian Industries which will be the basis for the development on which Corporate Sustainability Management System will be put in place for Indian industry.

In the year 2000-2001 the Tata Group Environmental Expenditure stood at Rs.82 crores (approx US\$16.73 million). This was spent on upgrading equipment and technology for emission control, effluent treatment etc. Another Rs.19.5 crores (approx US\$3.98 million) was spent on conserving natural resources like water, energy, power etc.

Situated in the newly carved state of Jharkhand, which until recently was part of the notoriously chaotic state of Bihar, Jamshedpur is a picture of calm efficiency. It resonates with the ideals of Gandhian trusteeship where the interests and aspirations of local community is the cornerstone of all activity. When construction began around 1909, India’s first industrial city reflected the towering vision of its founder Jamshetji Nusserwanji Tata.

CSR practices under the stewardship of Jamshetji’s successor, visionary Chairman the late JRD Tata continued to flourish. He said “I believe that the social responsibilities of our industrial enterprises should now extend, even beyond serving people, to the environment. This need is now fairly well recognized but there is still considerable

scope for most industrial ventures to extend their support not only to human beings but also to the land, to the forests, to the waters and to the creatures that inhabit them. I hope that such need will be increasingly recognized by all industries and their managements because of the neglect from which they have suffered for so long and the physical damage that the growth of the industry has inflicted, and still inflicts, on them”.

Says S. A. Sabavala, a long-time director on the board and a confidante of the Tata family: "Let us not forget that our job is much bigger than making steel. Wealth created must go back to the community." It's precisely because of this inherent dilemma that companies across the world define corporate governance variously. For instance, in the US, the focus of governance is on enhancing shareholder wealth. In a country like Japan, the governance universe is larger and covers all stakeholders, meaning shareholders, employees, suppliers, customers, and the community. Says J.J.Irani, Director Tata Sons Limited and erstwhile CEO of Tata Steel, corporate governance is defined as "making proper use of and being accountable for the rights and values that have been reposed in the corporate body by shareholders".

Tata Steel has influenced life itself in this part of India and is a part of folklore. The steel company's vision "where Tata Steel ventures.... Others will follow" may at first seem to be an over ambitious proclamation of an individual company. Yet, the track record of Tata Steel testifies that it has always been ahead of the pack. "Common Good" has always been the corner stone of the way Tata Steel has chosen to govern itself with unwavering commitment to each of its

stakeholders, including the community at large. Today, it occupies a unique position not only as the first steel plant of India, but as the first Industrial enterprise to ingrain responsible corporate governance.

Tata Steel was the first steel plant in the country to receive the ISO 14001 award for its environment efficient operations beginning with mining of ores at its captive mines to the processing of finished steel at Jamshedpur to illustrate that steel production, social welfare and ecology can go together. Recycling plants save on water and new treatment plants keep the rivers clean.

Tatanagar in Jamshedpur is the only city to implement EMS and be certified with ISO14001. Even to the casual observer, it is clear that Tata Steel will increasingly want to outsource most of the social services it currently provides. Liberalisation of the economy and intense competition has got the Tata Group to think of innovative ways to manage its social commitments without the cost burden being too high. In fact, there are even plans of setting up a joint venture to turn part of the 200-acre Jubilee Park in Jamshedpur into an amusement park, rides and all. Says Mantosh Sondhi, former steel secretary and a Tata Steel director for a quarter century: "(The company has) to cut down on facilities it itself provides, but at the same time ensure that workers get the benefits they have been getting."

Tatanagar is a city with hundreds of acres of parks and gardens cared for and maintained by the company. In the state of Orissa, where Tata Steel has a major presence, the Tata Steel Rural Development Society (TSRDS) plays a crucial role in the

socio-economic development of the local people. The focus areas include community health, basic education and vocational training, in line with the developmental goals of the Indian state.

*Source : TATA Council for Community Initiatives
report 2002*

The Road to Success : Women Showed the Way Experience on Participatory Planning & Local Self-Governance

The present experience took place in Lathia village in Eastern Uttar Pradesh in India where the women of the weaker sections built the road which was the prime need of the area. Sahbhagi Shikshan Kendra (SSK) initiated the process with people of the area. But, the participation of the community was at the lowest ebb in the initial period even after orienting the community about the resources available with them. After many deliberations it was decided that a group of women should be promoted which can be involved in the planning process.

Gradually the platform was utilised by the staff of SSK to discuss with the women folk the problems they were facing in the daily life at their home. Providing ideas to tackle those problems and successful results in them developed confidence among the women on the staff of SSK. Gradually the topic of discussion shifted to the problems of the village. The confidence of the women on the SSK that was developed in a period of time (about six months) proved to be handy in this. The women agreed to sincerely devote time for the process. The process started and PRA techniques were utilised to prioritise the problems of the area. The process took about seven days to complete. The basic problem which came out of the process was the absence of a link road in the village. The village was about 2 Km. away from the main road and there was a small drainage, which use to flow in-between the village and the main road. But now the problem that came up was that the resources required for such a long link road were not available with the village level panchayat.

Following discussions the women of the group felt that the problem could be if the link road is built with the mud and not with

the bricks or the concrete. The D-day came and the women started constructing the link road. Unsatisfied with a mud road the women encouraged by SSK took up action to get a concrete road constructed. Beaming with confidence the women started putting pressure on local bureaucracy to provide money as the panchayat didn't have enough resources and finally they were successful in getting the money allotted from the bureaucracy for a concrete road.

The after effect of the whole implementation process has been that the women encouraged other members of the community as well as the panchayat of the village to start a process of participatory planning for the development of that area. Inspired by their action the men folk have also they also joined hands with the women to take part in the in the second round of planning along with the panchayat of the area. The second round of planning saw a very enthusiastic planning by the community in which they came out with the issue of electrification and promoting alternative sources of employment for the members of the community. This has helped the community in identifying the gravity of their other problems and hence this has in turn promoted the realisation among the community that the solution of their problems as per their requirement surely mends ways for their development.

Source: <http://www.ids.ac.uk>

Reviving Traditional Knowledge – The Barefoot College Promoting Productive Employment for Youth in India

A hundred years ago, when villages in India had no urban-trained professionals with impressive paper qualifications, what did the villagers do? They developed their own knowledge, skills and wisdom to solve their basic problems of drinking water, health, education and employment. The Barefoot College has been reviving and giving more respect and dignity to knowledge, skills and wisdom that have been devalued and discarded by modern-day planners and 'experts'. The idea is to apply traditional, indigenous knowledge and skills to solving these basic problems, and thus to reduce villagers' dependency on the expertise from outside which is so often inappropriate and irrelevant. Villagers are encouraged to depend more on their own common sense, on their indigenous institutions, and on their own practical skills and ability to judge what is possible.

The skills taught at the Barefoot College are aimed at providing the basic services villagers need: safe drinking water, sanitation, education, and health care. The College is a non-formal training institute where young men and women are taught practical skills by village teachers, many of whom have no formal qualifications. Teaching and learning are based on the day-to-day needs of villagers. The approach has given the College a grassroots base, made the training low-cost, and demonstrated the sustainability of community skills that have never been endorsed by any recognized university or college. Up to now the practice of using village knowledge and skills has only been paid lip-service; it has never really enjoyed real confidence or been given a full opportunity.

The College has over 400 staff members working full-time in various activities related to basic services. They have no formal

qualifications for the job they are doing. With the help of a cadre of barefoot engineers, doctors, teachers, designers, chemists, accountants and traditional communicators, communities are using expertise they acquired from their ancestors. The concept of communities depending on themselves has revived. Indigenous institutions and decision-making processes have been activated, and villagers have gained new confidence. They increasingly recognize their own strengths and assign value to their own skills—something that was never felt before.

All changes emerge from a conflict of ideas, approaches and methods. The Barefoot approach has challenged the urban-based, 'paper-qualified' experts in the belief that this totally non-violent conflict will be beneficial to the communities over the long term. Already the benefit has been amply demonstrated.

The use of traditional (indigenous) knowledge, skills and wisdom promotes active community involvement because people depend more on each other. The use of traditional knowledge has an ethical dimension. It encourages transparency and accountability. This is not the case with urban-based skills, which encourage secrecy and dependency, and which offer no guarantee that the service is either competent or reliable. The use of traditional knowledge demystifies the local technologies that will be the basis for sustainable solutions in the future. The more people who understand and try out a technology, the greater the chance of the technology being accepted. Other types of sustainability are achieved by using traditional media, such as puppet and street theatre, to convey messages on social issues (minimum wage, gender equality, etc.).

Private Sector Initiative towards Urban Waste Management in Pakistan

Rotting garbage creating a health hazard is a common sight in many parts of Karachi. It is also a civic menace for city-dwellers. Municipal authorities have failed to address the issue of solid waste disposal due to lack of capacity. Once it leaves the house, waste is often dumped on any vacant plot of land, or on streets, for want of a proper neighbourhood dumpsite. Where a site exists-usually a low four-wall structure open to the air-waste is more likely to be found lying outside rather than within this makeshift “receptacle”. Scavengers rummage there for recyclables, but a large part of garbage remains because there is no regular waste collection service to ensure that the waste is cleared away daily. Waste Busters, a private enterprise has now become active to offer a solution to the poor.

Waste Busters began life three years ago as the Lahore Sanitation Programme. They aimed at providing solid waste disposal services through recycling. They are now called Waste Busters and have branches in Islamabad and Karachi. For Rs100 a month, Waste Busters provide a daily collection service to households who share a concern for the environment. In Lahore, Waste Busters service 10 000 eco-conscious households in Gulberg, Shadman, Model Town, Muslim Town and Cantonment areas. They employ 200 people and an average 50 tonnes of waste is collected and disposed of daily.

In order to manage waste properly, collection isn't enough. Waste Busters now sorts out materials like plastic, glass, paper and organic waste retrieved for recycling purposes. The enterprise divides the city into zones and each zone requires a transfer station where the waste is taken after being collected, for sorting.

In Lahore, organic waste is being efficiently sorted and turned into compost which is sold to farmers and nurseries to be used as fertilizer. The sorting is done at transfer stations set up by Waste Busters at sites allocated by the local municipal administration.

Unfortunately, sorting at source, the mode employed in the West, doesn't work in Lahore. The Waste Busters tried getting households just to separate the organic waste from other household waste but it didn't happen.

Waste Busters are not keen to incur the wrath of the big waste dealers, nor do they want to rob scavengers of their livelihood. “In fact, in Lahore they invite the scavengers to their transfer stations to sort the waste for them and buy it off them.”

Eventually the Waste Busters would like to progress from a self-sustaining to a profitable operation. That has already begun to happen in Lahore where the daily production of an average 500 bags of the organic fertilizer, along with the sale of other recyclable material to recycling industries, has brought Waste Busters out of the red.

Source : State of Environment Asia and the Pacific – 2000, Pg. 188, UNESCAP and ADB

Cleaner Production at a Toddy Distillery in Sri Lanka

Background

The case study describes the environmentally sound improvements achieved in the Seeduwa Distillery, involved food processing to produce alcohol. Seeduwa Distillery is part of Distilleries Company of Sri Lanka Ltd. And probably the largest coconut arrack distillery in the country. It is a member of the Stassens group of companies. The facility employs approximately 200 people and produces around 6,750 litres of absolute alcohol per day when enough toddy is available.

Reasons for action and environmental issues addressed

- The production of coconut arrack harnesses the natural formation of alcohol in the nectar of the coconut flower. Toddy tappers climb the coconut trees to collect the toddy, in the traditional manner, in coconut plantations along the tropical shores of the Indian Ocean.
- Toddy is lowered to the ground, placed into traditional wooden barrels and transported to the distillery. The fermentation occurs due to naturally occurring yeasts that find their way into the toddy. By the time the toddy arrives at the distillery, the fermentation is complete.
- At the distillery, toddy is stored to form a suitable batch and then fed to one of a range of stills, depending on the quality and quantity of product required. Following distillation, the alcohol is aged in wooden (halmilla) vats to improve its flavour. Some high quality alcohol products require a double distillation. After ageing, the product is blended and filtered prior to bottling and sale.
- The cleaner production initiative came at an opportune time for the distillery's owners, as it capitalised on and focused the company's own progress in the area of production efficiency.
- The environmental issues addressed in this case are mainly air emissions of greenhouse gases generated by fuel use, the alcohol load in effluent stream and the production of solid waste.

Measures and solutions adopted

- **Environmentally Sound Technologies:** Housekeeping; Process modification; New technology

Actions taken

- A cleaner production study of the distillery and bottling hall highlighted the benefits of a number of potential changes. Current modifications include improvements to the continuous French Patent Still, heat recovery from effluent, reduction in bottle breakage, more efficient bottle washing and reduction in extraneous matter in the delivered toddy.
- A joint company/UNIDO cleaner production project team was formed to analyze the production process and equipment.
- A four-step approach was agreed upon to develop modifications and implement them without severely disturbing the production process.
 - In the first phase, the operating practices and equipment were examined in detail. Designs were drawn up and implemented for upgrading the stainless steel still and optimising its process

parameters. Also, several housekeeping improvements could be implemented. These included sorting of bottles prior to washing and a reduction in handling breakages.

- In the second and third phases, the French Patent Still will be further enhanced. More new equipment, including a degassing column and a thermocompressor (for the recovery of heat) will be installed.
- In the fourth and last phase, an effluent treatment facility will be built. The biogas produced in this facility will replace part of the fuel. The capacity will depend on how successful the plant has been in reducing its effluent stream by cleaner production methods.
- As the second stage has not yet ended, only the results from the first phase will be discussed.
- Modifying the bubble caps and downcomers in the distillation column still optimised the mass transfer characteristics of the stainless steel.
- More accurate flowmeters were also introduced.
- Better housekeeping was instituted as well.

Results

- The improvements resulted in fuel savings of 22 percent, leading to a similar reduction in SO₂ and CO₂ emissions. The amount of alcohol leaving the process in the spent wash has been reduced by 95 percent, resulting in a 7 percent reduction in BOD load in the effluent stream. By avoiding the breakage of bottles, both

resource requirements (glass) and the volume of solid waste were reduced.

- On the basis of operating figures since implementation, the 22 percent fuel savings mentioned above has yielded a US\$ 25,000 savings annually.
- Reductions of 95 percent in alcohol loss to the drain saved US\$ 34,000 worth of recovered alcohol annually. Reductions in breakage during handling, bottling and loading, saved US\$ 22,600 annually.
- Major quality improvements in the alcohol produced that reduce the ageing time by two years will result in US\$ 70,000 in savings on interest payments. (Alternatively, by not reducing the ageing time, the company could market a better quality product and realise a higher margin.)
- Not taking into account the potential for extra earnings or savings on product quality improvements, the financial gains are as follows:
 - US\$ 27,820 was invested and US\$ 88,900 (on an annual basis) was saved
 - The payback time was three months.

Conclusions

- The cleaner production audit has generated a large number of other options that show potential economic benefits. These are being prioritised and implemented or further investigated. The current results of cleaner production initiatives have added to the benefits of other operational initiatives to the point where the production cost of arrack decreased from 132 to 92

Sri Lanka rupees per litre between 1992 and 1995 (that figure includes excise duty), i.e. a 30 percent reduction.

- In the same period, output from the plant increased by over 40 percent.

Cleaner production has allowed the company to attain more efficient production, reduce energy costs, reduce wastage and pollution and improve the quality of the product.

Annex 4. List of Major Agreements and Co-Operations in South Asia

I. South Asian Association for Regional Cooperation

Much has been achieved since the formation of SAARC, even though much more remains to be done. Lack of information on SAARC and associated regional matters is a major problem. When even the embassies of member countries lack the address of the SAARC Secretariat, there is little hope for members of the public, and many opportunities for regional cooperation are missed.

Integrated Program of Action (IPA)

The IPA is the key component of the SAARC's functions. It now includes 11 areas of cooperation. They are as follows: Agriculture, Communications, Education, Culture and Sports, Environment and Meteorology, Health and Population Activities, Prevention of Drug Trafficking and Drug Abuse, Rural Development, Science and Technology, Tourism, Transport, Women in Development. A Technical Committee manages each of the above-mentioned areas.

Male declaration on Control and Prevention of Air Pollution and its likely trans-boundary effects for South Asia. This was endorsed by the Ministers of Environment of South Asia in April 1998.

Trade and Economic Cooperation (Agreement on SAPTA)

Agreement on **SAPTA** (South Asian Preferential Trading Arrangement) signed during the Seventh SAARC Summit in Dhaka.

SAPTA entered into force on 7 December 1995 when all Member States met the necessary conditions. Under this agreement, the gradual reduction and eventual elimination of tariffs within SAARC is envisaged.

SAPTA is considered to be a step on the road to creating a SAFTA (South Asian Free Trade Area), which is still at the discussion stage.

Initiatives taken towards promoting trade cooperation within SAARC include:

- Cooperation in the fields of Handicrafts and Cottage Industries.
- Study on Transport Infrastructure and Transit Facilities.

Member countries have also implemented bilateral and multilateral initiatives to promote economic cooperation.

Poverty Eradication

1991 :

Sixth SAARC Summit (Colombo) decided to establish an Independent South Asian Commission on Poverty Alleviation (ISACPA).

1993 :

Seventh SAARC Summit (Dhaka) adopted consensus on poverty eradication. Poverty remains a defining feature of the SAARC region. However, the establishment of SAARC has at least helped to get governments talking on plans to alleviate and eradicate poverty.

Promoting People-to-People Contact

1986 :

Second SAARC Summit (Bangalore) laid special emphasis on promoting people-to-people contact in the region and approved the following five initiatives

- SAARC Audio-Visual Exchange (SAVE) Program.
- SAARC Documentation Center (SDC).
- SAARC Scheme for Promotion of Organizing Tourism.
- SAARC Chairs, Fellowships and Scholarships Scheme.
- SAARC Youth Volunteers Program (SYVOP).

Other initiatives include :

- SAARC Visa Exemption Scheme (initiated in 1988)
- South Asian Festivals (9-24 October 1992, India)
- Non-Governmental Organizations (NGOs)
- Association of SAARC Speakers and Parliamentarians.
- SAARC Chamber of Commerce and Industries (SCCI)
- SAARCLAW

The easing of travel and business restrictions within the SAARC region is a visible and enduring achievement of SAARC. This has directly and indirectly resulted in increased economic and social benefits to people in all member countries.

SAARC Regional Institutions

- SAARC Agricultural Information Center (SIAC), Dhaka/Bangladesh
- SAARC Tuberculosis Center (STC), Baktapur/Nepal

- SAARC Meteorological Research Center (SMRC), Dhaka/Bangladesh
- SAARC Documentation Center (SDC), New Delhi/India

Regional Conventions/Agreements

- Agreement on Establishing the SAARC Food Security Reserve (SFSR) – Third SAARC Summit (Kathmandu, 1987).
- SAARC Regional Convention on Suppression of Terrorism – Third SAARC Summit (Kathmandu, 1987).
- SAARC Convention on Narcotic Drugs and Psychotropic Substances – Fifth SAARC Summit (Male', 1990).
- Agreement on SAARC Preferential Trading Arrangement (SAPTA) – Seventh SAARC Summit (Dhaka, 1993) has been ratified by all Member States.

SAARC Funds

- SAARC Fund for Regional Projects (SFRP) – established in 1991.
- SAARC - Japan Special Fund – established on 27 September 1993, Kathmandu.
- South Asian Development Fund (SADF) – approved by the Fifteenth Session of the Council of Ministers (New Delhi, 1995).

Designated SAARC Years

- 1989 – SAARC Year of Combating Drug Abuse and Drug Trafficking.
- 1990 – SAARC Year of the Girl-Child.
- 1991 – SAARC Year of Shelter.
- 1992 – SAARC Year of Environment.
- 1993 – SAARC Year of Disabled Persons.
- 1994 – SAARC Year of the Youth.
- 1995 – SAARC Year of Poverty Eradication.
- 1996 – SAARC Year of Literacy.

- 1997 – To be announced
- In addition, 1991-2000 AD has been designated as the "SAARC Decade of the Girl-Child".

II. South Asia Co-operative Environment Programme (SACEP)

Since its establishment in 1982, SACEP has initiated a number of projects that are building up national capacity in a variety of environmental issues. The overall focus of SACEP's activities includes capacity building and institutional strengthening, conservation and sustainable use of bio-diversity, ecosystem conservation and management, environmental information and management and education and awareness raising.

SACEP addresses these issues through the following programmes:

- a) SACEP South Asia regional seas programme
- b) Improvement of legal and institutional framework,
- c) Private and public co-operation initiatives

III. Developments in South Asia Sub-regional Cooperation

It is important to extend assistance for sub-regional cooperation in South Asia, where there is a growing momentum of such cooperation. Following are developments that has taken place in the field of sub-regional economic cooperation :

- Enhancement of the transit facility from Nepal to Bangladesh through the eastern corridor in India
 - Signing of the Ganges Water-Sharing Agreement between India and Bangladesh
 - Signing of the India-Sri Lanka Free Trade Agreement
 - Activities initiated under the Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Cooperation (BIMSTEC) initiative
 - Formation of the South Asia Growth Quadrangle (SAGQ)
- Chukha Hydel Project for power delivery from Bhutan to India
 - Signing of the Mahakali Treaty between India and Nepal

Annex 5. List of Contributors and Reviewers

Ashok Khosla

President, Development Alternatives

George C Varughese

Vice President, Development Alternatives

K VijayaLakshmi

Manager, Development Alternatives

Charu Jain

Environmental Scientist, Development Alternatives

Atiq Rahman

Director, Bangladesh Centre for Advance Studies (BCAS)

R Rajamani (Retd IAS)

Ex. Secretary, Ministry of Environment and Forests, GoI

Surendra Shrestha

Regional Director and Representative

Subrato Sinha

Programme Specialist, UNEP RRC.AP

Achira Leophairatana

Research Associate

Annex 6. UNEP Asia - Pacific Civil Society Meeting

Participants From South Asia in UNEP Asia-Pacific Civil Society Meeting in Bangkok, 12-13 November 2003

No.	Country	Name & Organisation
1.	Bangladesh	Dr. Muhammad Eusuf Senior Fellow Bangladesh Centre for Advance Studies (BCAS) House No. 10, Road No. 16A, Gulshan-1 Dhaka – 1212, Bangladesh Tel : +880-2-8851237 Fax : +880-2-8851417 Email : muhammad.eusuf@bcas.net http:// www.bcas.net/
2.	Bhutan	Ms. Tshering Lham Communications Coordinator Royal Society for Protection of nature Post Box 325, Thimpu, Bhutan Tel : 975-2-326-130, 322-056 Fax : 975-2-323-289 Email : rspn@druknet.net.bt
3.	India	Mr. George Varughese Vice President Development alternatives B-32, TARA Crescent, Qutab Institutional Area New Delhi – 110016 Tel : 91-11-2685-1158 Fax : 91-11-2686-6031 Email : gcv@sdalt.ernet.in
4.	Iran	Mr. Amir Farmanesh Iran Centre for Future Researches No.32, Golden Street Africa Ave 19668 Tehran Tel : +98-911-2996896 Fax : +98-21-204-3233 Email : Amir.farmanesh@yahoo.com

5.	Pakistan	<p>Dr. Shaheen Rafi Khan Executive Director #3 UN Boulevard, Diplomatic Enclave – 1, Sector G-5 Islamabad Tel : 92-51-227-8134 Fax : 92-51-227-8135 Email : shahen@sdpi.org</p>
6.	Nepal	<p>Ms. Kamala Kumari Dhungel President Women in Environment Putali Sadak, New Plaza -32 Kathmandu Tel : 977-1-441-1303 Fax : 977-1-441-5619 Email : wome_in_environment@hotmail.com</p>
7.	Nepal	<p>Mr. Vinod Prasad Shrestha President Society for Legal and Environment Analysis and Development Research Putali Sadak, Ramshah Path, Radha kuti Arcade Kathmandu Tel : 977-441-9091 Fax : 977-1-441-9091 Email : leaders@wlinkcom.np</p>
8.	Sri Lanka	<p>Ms. Pamoda S. Rajakeeya Legal Officer Environmental foundation ltd./ Friends of Earth Sri Lanka No. 3 Campbell Terrace Colombo -10 Tel : 94-11-2697226, 94-74-616434 Fax : 94-11-2697226 Email : efl@efl.lk</p>
9.	UNEP/ROAP/ RRCAP	<p>Mr. Surendra Shrestha Regional Director and Representative UNEP/ROAP Tel : (662) 280-1870 Fax : (662) 280-3829 Email : surendra.shrestha@rrcap.unep.org</p>

10.	UNEP/ROAP/ RRCAP	Mr. Timoth Higham Regional Information Officer Tel : (662) 288-2127 Fax : (662) 280-3829 Email : higham@un.org
11.	UNEP/ROAP/ RRCAP	Mr Mahesh Pradhan Environmental Affairs Officer Tel : (662) 288-1873 Fax : (662) 280-3829 Email : pradhan@un.org
12.	UNEP/ROAP/ RRCAP	Ms. Piyachatr Pradubraj UNEP/ROAP Infoemation Assistant Tel : (662) 288-1873 Fax : (662) 280-3829 Email : piyachatr.pradubraJ@rrcap.unep.org or unep-information-assistant@un.org
13.	UNEP/ROAP/ RRCAP	Tim Kasten Chief Policy Branch, UNEP Headquarter,P.O.Box 30552, Nairobi, Kenya Tel : 254-20-623861 Fax : Tim.Kasten@unep.org
14.	UNEP/ROAP/ RRCAP	Denis Ruysschaert UNEP headquarter Email : Denis.Ruysschaert@unep.org
15.	UNEP/ROAP/ RRCAP	Subrato Sinha RRC.AP Email: Subrato.sinha@eecap.unep.org
16.	UNEP/ROAP/ RRCAP	Purna Rajbhandari RRC.AP Email : Purna.Rajbhandari@rcap.unep.org
17.	UNEP/ROAP/ RRCAP	Achira Leophairatana RRC.AP Achira.Leophairatana@rrcap.unrp.org
18.	UNEP/ROAP/ RRCAP	Twinkle Chopra RRC.AP Twinkle.Chopra@rrcap.unrp.org

Annex 7. List of Contributors and Reviewers

South Asia Co-operative Environment Programme (SACEP) Governing Council Meeting
in Trans Asia Hotel, Colombo, Sri Lanka on 4-5 November 2003

Participants

No.	Country	Name & Organizations
1.	Bangladesh	Mr. Md. Ormar Ali Deputy Chief (Planning) Ministry of Environment and Forests Government of the People's Republic of Bangladesh Room # 1301, Bhaban #6 Bangladesh Secretariat Dhaka, Bangladesh Tel : 8802-7167-912 Fax : 8802-7169-210/7160-166 Email : dycmoef@sdnbd.org
2	Bangladesh	Mr. Ashud Ahmed Counsellor High Commission of People's Republic of Bangladesh 47, Sir Ernest de Silva Mawatha Colombo 7, Sri Lanka Tel : (94-11) 2681-310-12; Fax : (94-11) 2681-309 Email : bdootlanka@eureka.lk
3.	Bhutan	Mr. Karma Lodey Rapten Technical Division National Environment Commission Royal Government of Bhutan P.O. Box 466 Thimphu, Bhutan Tel : 975-2-325-856/324-232 Fax : 975-2-323385 Email : kraptent@hotmail.com/karma@nec.gov.bt

4.	India	<p>Ms. Meena Gupta Additional Secretary Ministry of Environment and Forests Government of India Room No. 412, Paryavaran Bhavan CGO Complex Lodhi Road, New Delhi 110003 India Tel : 91-11-243-62281; Fax: 91-11-243-62281 Email : asmg@nic.in</p>
5.	India	<p>Ms. Bina Bahri Under Secretary International Co-operation & Sustainable Development Ministry of Environment and Forests Paryavaran Bhavan (Room No. 928) CGO Complex Lodhi Road, New Delhi 110003 India Tel : 91-11-243-68843/ mob: 9891220635 Fax : 91-11-243-62387/ 2612 Email : binabahri@indiatimes.com bina@menf.delhi.nic.in</p>
6.	India	<p>Mr. V. Ashlok Counselor-Economic and Commercial High Commission of India 36-38, Galle Road Colombo 03, Sri Lanka Tel : (94-11) 2421-605, 2422-788-9, 2430-560 (Direct) Fax : (94-11) 2446-403/2448-166 Email : slcomind@sri.lanka.net/ hicomind@sri.lanka.net</p>
7.	Maldives	<p>Mr. Aslam Rasheed Director General Ministry of Home Affairs, Housing & Environment Haravee Building, Ameeru Ahmed Magu Male 20-05 Republic of Maldives Tel : (960) 313-039 Fax : (960)322-286 Email : env@environment.gov.mv</p>

8.	Maldives	<p>Mr. Amjad Abdulla Coastal Engineer Ministry of Home Affairs, Housing & Environment Huravee Building, Amerru Ahmed Magu Male 20-05 Republic of Maldives Tel : (960) 324-861; Fax: (960) 322-286 Email : amjad.abdulla@environment.gov.mv</p>
9.	Nepal	<p>Mr. Deependra Bikcram Thapa Joint Secretary- Environment Division Ministry of Population and Environment His Majesty's Government of Nepal Singha Dubar Kathmandu, Nepal Tel : 977-1-424-1588 Email : deependrathapa@yahoo.com/ info@mope.gov.np</p>
10.	Pakistan	<p>Mr. Zahir Shah Mohmand Deputy Secretary Ministry of Environment Government of Pakistan CdA, Block No. 4 Civic Center, G-6 Islamabad, Pakistan Tel : (92-51) 920-5871 Fax : (94-11) 920-2211 Email : zahirshahmohmand@hotmail.com</p>
11.	Pakistan	<p>Mr. Tanveer A. Kahskheli Actioning High Commissioner High Commission of the Islamic Republic of Pakistan 211, De Saram Place Colombo 10, Sri Lanka Tel : (94-11)-2-696-301-2; Fax: (94-11)-2-695-780 Email : parepcolombo@slt.net.lk Fax : 662-516-2125/ 2-524-6233 Email : Subrato.Sinha@rrcap.unep.org</p>

12.	Sri Lanka	<p>Mr. Thosapala Hewage Secretary Ministry of Environment and Natural Resources 82 Rajamalwatta Road Samapathpaya Battaramulla, Sri Lanka Tel : (94-11) 2-877-291 Fax : (94-11) 2877292 Email : thosapalahewage@hotmail.com</p>
13.	Sri Lanka	<p>Dr. B.M.S. Batagoda Director-Economic Commercial and Global Affairs Ministry of Environment and Natural Resources 82, Rajamalwatha Road Sampathpaya, Battaramulla Tel : (94-11)2-887-456; Fax: (94-74)410-236 Email : envcom@sltnet.lk</p>
14.	Sri Lanka	<p>Mr. W.R.M.S. Wickramasinghe Additional Secretary (Environment & Policy) Ministry of Environment and Natural Resources 82, Rajamalwatha Road Sampathpaya Battaramulla, Sri Lanka Tel : (94-11)-2-875-327 Fax : (94-11)-2-879-834 Email : addsecep@slnet.lk</p>
15.	Consultant-SACEP Strategy	<p>Mr. Raghunathan Rajamani Consultant 8-2-585/A/, Road No. 9 Banjara Hills Hyderabad 500 034 India Tel : 91-40-2-335-8320 Fax : 91-40-2-335-5480 Email : rraja9@vsnl.net</p>
16.	UNEP-ROAP (Regional Office for Asia and the Pacific)	<p>Mr. Surendra Shrestha Director UNEP-ROAP UN Building Rajdamnern Avenue Bangkok 10200, Thailand Tel : 662-288-1873 Fax : 662-280-3829 Email : Surendra.Shrestha@rrcap.unep.org</p>

17.	UNEP-ROAP (Regional Office for Asia and the Pacific)	<p>Dr. Subrato Sinha Programme Specialist UNEP.RRC.AP c/o AIT 3rd Floor, Outreach Building P.O. Box 4 Klongluang Pathumthani 12120, Thailand Tel : 662-524-6496 ext. 6496 Fax : 662-516-2125/ 2-524-6233 Email : Subrato.Sinha@rrcap.unep.org</p>
18.	Development Alternatives	<p>Dr. George C. Varughese Vice President Development Alternatives B-32, Tara Crescent, Qutab Institutional Area New Delhi- 110-016 India Tel : 91 (11) 2696-7938/ 2656-5370/ 2685-1158 Fax : 91 (11) 2686-6031 Email : gcv@sdalt.ernet.in URL : http://www.deval.t.org</p>

Annex 8. List of Contributors and Reviewers

Inception Workshop for the UNEP Project on National and Subregional Sustainable Development Strategies for South Asia in Bangkok on 23-24 June 2004

No.	Country	Name & organisation
1.	Bangladesh	<p>Mr. Syed Tanveer Hussain Secretary, Ministry of Environment & Forest Government of Bangladesh Building No 6 Room no 1309 Bangladesh Secretariat Dhaka - 1000, Bangladesh Tel : (880) 2-7160481 (Off.); (880) 2-885-4602 Fax : (880) 2-761 9210, 761 0166 Email : thussain@bangla.net; secretary@moef.gov.bd</p>
2.	Bhutan	<p>Mr. Ugen Tenzin, Deputy Director, National Environment Commission (NEC) National Environment Commission Secretariat P.O. Box 466 Thimphu, Bhutan Email : utenzin@nec.gov.bt</p> <p>Ms. Tenzin Wangmo, Planning Officer, Department of Planning Ministry of Finance, Thimphu, Bhutan Tel : (office): +975-2-322-503/325-192/321-053/325-741; Tel : (home): +975-2-351-104 Fax : +975-2-322928 Email : tenzy_wangmo@yahoo.com</p>
4.	India	<p>Dr. S. K. Khanduri Director (Forestry) Planning Commission, Yojana Bhavan, Sansad Marg New Delhi – 110001, India Tel : 91-11- 2309-6732 Fax : 91-11-2309-6602 Email : khanduri@yojana.nic.in</p>

5.	Maldives	<p>Mr. Amjad Abdulla Coastal Engineer Ministry of Home Affairs and Environment Huravee Building, Ameeru Ahmed Magu, Male'20-05, Republic of Maldives Tel : (960) 324861 Fax : (960) 322286 Email : env@environment.gov.mv, amjad. abdulla@environment.gov.mv</p> <p>Ms. Najfa Shaheem Razee, Research Officer Ministry of Planning and National Development Ghazee Building, Male', Republic of Maldives Tel : 960 323919 Fax : 960 327351 Email : spr@planning.gov.mv, URL: www.planning.gov.mv</p>
7.	Nepal	<p>Mohan Bahadur Karki Secretary, Ministry of Population and Environment Office: Singh Durbar, Kathmandu, Nepal Tel : (977 1) 4241 586 / 7, 4245 368 Fax : (977 1) 4242 138 Email : secretary@mope.gov.np</p> <p>Mr. Bhagabati Kumar Kafle Joint Secretary, National Planning Commission Secretariat Local Development, Physical Planning and Works, Population and Environment Division Singh Durbar, Kathmandu, Nepal Tel : 00977-1-4227657; Res.: 977-1-443-1009, 443-1681 (P.O. Box No. 12312) Fax : 00977-1- 4226500 Email : bk_kafle@hotmail.com</p>
8.	Pakistan	<p>Mr. Abdul Waheed Chief, Environment Section Planning Commission Government of Pakistan Islamabad. # 9/5 Cat. III St. 19, G-10/2 Islamabad Tel : (office): 92-51-9219396; Tel. (home): 92-51-9266656 Fax : + 92-51 9210227</p>

		<p>Mr. Bashir Ahmed Wani Inspector General Forests/Member Secretary (NCCW)/ Sub-Programme Director (NEAP-SP3) Ministry of Environment, Government of Pakistan CDA Block IV, Near Civic Center, Islamabad, Pakistan Tel : ++ 92 51 9202142, 9203726; Tel : (Res): ++ 92-51-9266012 Fax : ++92-51-9201122 Email : igfspd3@isb.comsats.net.pk, wani48@hotmail.com</p>
9.	Sri Lanka	<p>Ms. Nelum Gunasekara Senior Assistant Secretary Ministry of Environment and Natural Resources “Sampathpaya” 82 Rajamalwatta Road Battaramulla, Sri Lanka Tel : (office): +94-11-287-5326; Tel : (Res.): +94-11-2851433 Fax : + 94-11-287-5326 Email : enprom@slt.net.lk</p> <p>Mrs. Indrani Ranasinghe Deputy Director Department of National Planning The Secretariat (1st Floor) Colombo 01, Sri Lanka Tel : 94-11 2484574 Fax : 94-11 2448063 Email : indrani442004@yahoo.com, inran@npd.slt.lk, dgnp@npd.slt.lk</p>
10.	BCAS	<p>Dr. Atiq Rahman Executive Director, Bangladesh Centre for Advanced Studies (BCAS) House No. 10, Road No. 16 A Gulshan 1, Dhaka - 1212, Bangladesh Tel : +880-2-8851237, 8851417 Fax : +880-2-8851417, Email : atiq.rahman@bcas.net</p>
11.	DA	<p>Mr. George C. Varughese Vice President, Development Alternatives B-32, Tara Crescent, Qutab Institutional Area, New Delhi – 110016, India Tel : +91-11-2696-7938, 2656-5370, 2685-1158 Fax : +91-11-26866031, 2614-0339 Email : gcv@sdalt.ernet.in</p>

12.	ICIMOD	Mr. Basanta Shrestha, Division Head, IKM-MENRIS G.P.O. Box 3226 Kathmandu, Nepal Tel : (office): +977 1 525 316, 525 313 Fax : +977 1 5524509, 5536747 Email : basanta@icimod.org.np
13.	IUCN	Mr. Gul Najam Jamy, Head, Islamabad office IUCN Islamabad Programme Office House No.38, Street 86, Main Embassy Road, Sector G-6/3, Islamabad, Pakistan. Tel : + +92 51 2270 686, 2270 687, 2270 689 Fax : + 92 51 2270 688 Email : Address: gulnajam.jamy@isb.iucnp.org Dr. Ranjith Mahindapala IUCN Asia Regional Office 63 Sukhumvit Soi 39 Sukhumvit Road, Wattana Bangkok 10110, Thailand Tel : 662- 662 4061 Extn.141 Fax : 662- 662 4388 Email : ranjith@iucnt.org
14.	SAARC	Mr. Kesang Wangdi Director, SAARC Secretariat G.P.O. Box 4222, Tridevi Sadak, Kathmandu, Nepal. Tel : +977-1-4228929, 4221785 (EXT. 209) Fax : +977-1-4227033, 4223991 Email : dirbhu@saarc-sec.org
15.	SACEP	Mr. Mahboob Elahi Director General South Asia Cooperative Environment Programme #10 Anderson Road, Colombo 5, Sri Lanka Tel : +94-11-2589 787, Fax : No. +94-11-2589369 Email : melahi@eureka.lk
16.	TERI	Mr. Rajeev Kher, I.A.S Senior Fellow The Energy and Resources Institute (TERI) Darbari Seth Block, Habitat Place Lodhi Road New Delhi-110 003 Tel : 011-24682100/2111 (Extn 2108) Fax : 011-24682144/45 Email : rajeevk@teri.res.in Website : www.teriin.org

17.	UNEP-GEF Biosafety	Mr. Nizar Mohamed, Regional Coordinator, Biosafety Project Geneva, Switzerland Tel : (Office): + 41-22-917-8406; Tel : (home): +41-22-734-4710 Email : nizar.mohamed@unep.ch
18.	UNEP	<p>Mr. Surendra Shrestha Director UNEP ROAP UN Building Rajdamnern Avenue Bangkok 10200, Thailand</p> <p>Dr. Subrato Sinha Programme Specialist UNEP RRC.APc/o AIT 3rd Floor, Outreach Building P.O. Box 4, Klongluang, Pathumthani 12120, Thailand Tel : 662-524-6496. ext. 6496 Fax : 662-516-2125/ 2-524-6233 Email : Subrato.Sinha@rrcap.unep.org</p> <p>Ms. Achira Leophairatana Research Associate UNEP RRC.APc/o AIT 3rd Floor, Outreach Building P.O. Box 4, Klongluang, Pathumthani 12120, Thailand Tel : 662-524-5391 ext. 5391 Fax : 662-516-2125/ 2-524-6233 Email : Achira.Leophairatana@rrcap.unep.org</p> <p>Ms. May Ann M. Bernardo Senior Programme Officer Capacity Building and Servicing UNEP RRC.APc/o AIT 3rd Floor, Outreach Building P.O. Box 4, Klongluang, Pathumthani 12120, Thailand Tel : 662-524-6235 ext. 6235 Fax : 662-516-2125/ 2-524-6233 Email : May.Bernardo@rrcap.unep.org</p>

		<p>Ms. Kritiya Gajaseni Administrative Secretary UNEP RRC.APc/o AIT 3rd Floor, Outreach Building P.O. Box 4, Klongluang, Pathumthani 12120, Thailand Tel : 662-524-6245 ext. 6245 Fax : 662-516-2125/ 2-524-6233 Email : Kritiya.Gajaseni@rrcap.unep.org</p>
--	--	---