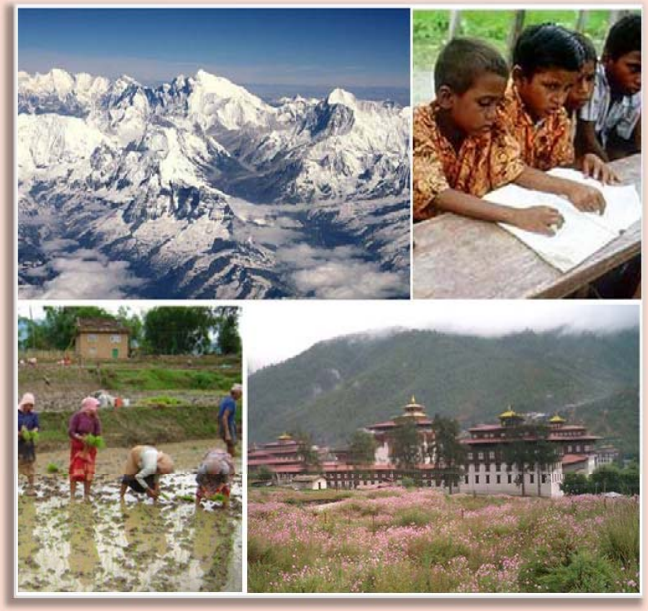
Sustainable Development Strategy of South Asia (SDS SA) identifies the common and trans-boundary goals of South Asian States to achieve SD, mainly, Afghanistan, Bangladesh, Bhutan, Nepal, Maldives, Pakistan, Sri Lanka. The document serves as a long term policy planning tool and identifies 3 main goals, mainly: eliminating poverty and creating national security, conserving the natural resources endowments and securing economic base and strengthening institutional system. SDS SA set priorities for cooperation of the SA states with innovative approach. The document was prepared in a participatory process in consultation with the concerned Line Ministries of respected countries, intergovernmental organizations, international organizations, and civil society organizations.



Sustainable Development Strategy for South Asia

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Development Alternatives

SUSTAINABLE DEVELOPMENT STRATEGY FOR SOUTH ASIA

DISCLAIMER

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FOREWORD

The Sustainable Development Strategy for South Asia, which UNEP helped to elaborate, outlines the present status of and challenges for sustainable development in the subregion. It identifies key priorities and provides a long-term strategic direction for achieving sustainable development in South Asia.

The Strategy was prepared through a consultation process with the participation of governments and non-governmental organizations from Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, and intergovernmental organizations, including the South Asia Association for Regional Cooperation (SAARC), the South Asia Cooperative Environment Programme (SACEP), and the International Centre for Integrated Mountain Development (ICIMOD). The stakeholders identified common and transboundary issues to address in the strategy.

Three key challenges for South Asia are highlighted in the document: eliminating poverty and addressing national security; conserving natural resources; and securing the region's economic base. The report identified the following measures to achieve durable human development: managing population growth; generating employment for the under-privileged; improving agricultural productivity; water management; health security; energy resources and services; developing trade initiatives; protection against natural disasters; and preventing trafficking of women and children. Transboundary resource management can be achieved through waste and chemical management, conserving biological wealth, and addressing air pollution and climate change. The strategy says the region can secure its economic base through technological cooperation, the development of a sub-regional trading bloc, the growth of indigenous institutions and the promotion of diversity as a tourism asset.

I hope this publication will be useful for intergovernmental organizations, governments and non-governmental organizations as well as the private sector and other groups in seeking responses to sustainable development challenges at regional, national and local levels. UNEP gratefully acknowledges the technical support provided by Development Alternatives, India, and the Bangladesh Centre for Advanced Studies (BCAS), and the funding support provided by the Government of Norway in the preparation of this report.

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

ACKNOWLEDGEMENTS

Sub-regional Sustainable Development Strategy for South Asia (SSDS SA) presents a common vision and understanding of all participating countries, sets up common goals to achieve sustainable development with innovative approaches.

The NSDS (National Sustainable Development Strategies) Project Secretariat of the Regional Resource Center of Asia and the Pacific United Nations Environment Programme (UNEP) at the Asian Institute of Technology (AIT/UNEP RRC.AP) acknowledges contributions of Governments, Ministries of the Environment, other line Ministries, intergovernmental and non-governmental organizations as well as business groups of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, for their significant inputs in preparation of the Strategy at consultation process.

Special thanks to Development Alternatives, India, and namely to Dr. George C. Varughese, Dr. K. Vijaya Lakshmi, Mr. Anand Kumar, Ms. Ridhima Sud, for the enormous work done in incorporation of the ideas and suggestions of partners and stakeholders in South Asia. Special thanks for intergovernmental institutions and their valuable proposals, namely, SACEP, SAARC, ICIMOD and others.

The NSDS Project Team expresses deep appreciation to the Royal Government of Norway for the technical and financial support and cooperation in the consultation process for development of the SSDS SA. We wish the sound and dynamic implementation progress of the Sub-regional Sustainable Development Strategy in South Asian countries and further serious commitments to tackle the challenges of sustainable development.

NSDS Project Secretariat at the AIT/UNEP Regional Resource Center for Asia and the Pacific

Surendra Shrestha
Subrato Sinha
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PREFACE

The South Asian Sub-region (SAS) comprises of eight countries - Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka - is one of the fastest growing sub-regions of the world. It is blessed with rich and diverse natural resource base, which has historically supported economic development and sustained rural livelihoods and stands severely endangered as of now. It is therefore essential to focus on diverse response options and instruments for possible solutions.

Ensuring sustainable development and growth of the SAS is beyond the scope of individual countries. This is especially true in vulnerable countries that face multiple stresses such as: poverty and unequal access to resources; weak institutions; and food and water insecurity, in spite of rapid advances in technology and economic resources. Therefore, due emphasis must be placed on increasing responsibilities of all stakeholders and collaborative efforts towards ensuring a healthy environment for the future. Given the commitments associated with Agenda 21, the MDGs and JPOI, there is express need for developing a SSDS for SAS.

In July 2003, the Norwegian Agency for Development Cooperation (NORAD) and UNEP Regional Resource Centre for Asia and the Pacific (UNEP RRC.AP) finalized a project on NSDS, SSDS and Action Plans towards Mainstreaming Sustainable Development in the Decision Making Process. The purpose of the project is to strengthen the capacity of and assist national governments in formulating National Sustainable Development Strategy and Action Plans (NSDSAP) towards mainstreaming sustainable development in the decision making process that has spanned over two years.

Accordingly, preparation of this SSDS document for the SA has been spearheaded by Development Alternatives (DA), India in cooperation with the various stakeholders through a participatory process. The document, addresses sustainable development challenges in South Asia, focusing on diverse response options and instruments for possible solutions. SSDS is expected to define a collective long term vision, goals and targets for SAS. Promoting a multi-stakeholder mechanism at the sub-regional level would ensure the participation of all relevant stakeholders in decision-making and implementation of SSDS.

PURPOSE OF THIS DOCUMENT

This document is expected to provide the strategic direction for the pursuit of sustainable development in the SAS. It is important to note that this document addresses the issues at the sub-regional level, building upon national level issues and policies but particularly addressing those transcending and common to the countries in the SAS.

It is expected that the document will be used by policy makers in the SAS countries as well as the officers and decision makers in the regional and international organizations active in the development process of the SAS. It is hoped that the various ideas and proposals made in this document are taken up by the concerned officials and policy/decision-makers for necessary follow-up and implementation in order to realize the vision of sustainable development in SAS. As this document builds on the respective national sustainable development strategies (NSDS), it provides an opportunity to compare the regional priorities with respective NSDS and possibly make necessary adjustments in the national policies to be consistent with sub-regional objectives.

PROCESS FOR SSDS DEVELOPMENT

Sub-regional Sustainable Development Strategy report for South Asia is a result of sustained and concerted efforts of all countries of the sub-region, in a process spanning over seven years.

This SSDS document is an outcome of a participatory process amongst all the relevant stakeholders. Development Alternatives undertook the role of co-ordinator and Sub-regional Focal Point (SFP) under the support and guidance from UNEP.RRC. A number of meetings and interactive sessions were organized to ensure an effective participatory process so that the SSDS reflects the concerns and aspirations of all the South Asian countries, and of both government and non-government stakeholders. The participatory process adopted for developing this SSDS can be demonstrated by numerous multi-stakeholder review and consultation meetings that were periodically organized and are listed in the table below. Apart from the numerous expert consultation meetings, the document has gone through rigorous review processes at various stages of its development and has drawn heavily upon learning's and conclusions froma number of earlier documents prepared for the region.

MULTI-STAKEHOLDERS PROCESSES BEHIND SSDS-SA

No.	Activities	Time Frame
1	**Stakeholders Consultation in South Asia for the World Summit on Sustainable Development (WSSD)** ? The stakeholders' meeting for South Asia in Preparation for the World Summit on Sustainable was attended by 45 representatives of major groups from seven South Asian countries and Iran, besides 26 observers representing multilateral and bilateral agencies. ? Development Alternatives presented a draft strategy paper for South Asia ? The meeting endorsed the report prepared for South Asia and recommended set of issues for incorporation in the report.	**27th September 2001, Sri Lanka**
2	**Sustainable Development; Priorities for South Asia** ? A report *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.	**2004**
3	**Prepare an outline for the Sub-regional Sustainable Development Strategy (SSDS) by SFP** ? Review SSDS from Asia, Europe and other regions ? Review relevant information on SD priority issues and SD policy frameworks from SA countries ? Review common and trans-boundary issues of SAS ? Prepare the first draft SSDS outline	**22nd September 2004 - 8th December 2004**
4	**Consultation Workshop for Finalising Outline of sub-regional Sustainable Development Strategy (SSDS) for South Asia*** ? Provide an overview of SSDS, get feed back on the paper, agr ee upon the framework of SSDS; develop an outline on vision, goals, objectives and targets, and means of implementation for SSDS ? Build a consensus on implementation plan for preparing the SSDS; and discuss the institutional mechanism for preparing the SSDS. ? Circulation of the draft SSDS outline by SFP to selected experts and national focal points. ? Finalize the outline for preparation of SSDS on consultation with UNEP ? Prepare the first draft of SSDS report	**9th December 2004, India**

MULTI-STAKEHOLDERS PROCESSES BEHIND SSDS-SA

No.	Activities	Time Frame
5	**Preparation of draft SSDS by SFP** ? Identify common and trans-boundary issues within the sub-region; ? Review existing policies, strategies, action plans and institutions relating to common and trans-boundary issues; ? Review existing main policies, strategies and action plans in order to assess the impacts on existing conditions; ? Review existing policies in order to evaluate the level of integration of sustainable development objectives; ? Develop an SSDS, with long term vision, goal and clear priority of sustainable development in the sub-region, linking all the existing policies, strategies and mechanisms; ? Address the need in terms of capacity building and institutional mechanism, in order to pursue sustainable development policies and strategies	**10th December 2004-20th August 2006**
6	**First Consultation meeting on the Process and Content for South Asia Sub-regional Sustainable Development Strategy (SSDS)*** ? Sub-regional multi-stakeholders consultations to review the first draft of the SSDS for South Asia and to identify common and trans-boundary issues within the sub-region; ? Presentation of the draft SSDS during the consultations ? Review existing policies, strategies, action plans and institutions relating and provide recommendations and guidance that could be used in the formulation of the second draft. ? Compilation of all comments, and incorporate the comments to produce the 2nd draft SSDS	**21st- 22nd August 2006, Nepal**
7	**Second Consultation Meeting on the 2nd Draft of South Asia Sub-Regional Sustainable Development Strategy (SSDS)*** ? On the basis of the inputs received from the group, the Sustainable Development Strategy for South Asia was revised by Development Alternatives which led to the finalization of the present report	**8th June 2007, Nepal**
8	**Submission of Final report by SFP to UNEP**	**August 2008**

EXECUTIVE SUMMARY

The South Asian Sub-region (SAS) comprises of eight countries - Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka – is one of the fastest growing sub-regions of the world. It is blessed with rich and diverse natural resource base, which has historically supported economic development and sustained rural livelihoods and stands severely endangered as of now. It is therefore essential to focus on diverse response options and instruments for possible solutions.

Ensuring sustainable development and growth of the SAS is beyond the scope of individual countries. This is especially true in vulnerable countries that face multiple stresses such as: poverty and unequal access to resources; weak institutions; and food and water insecurity, in spite of rapid advances in technology and economic resources. Therefore, due emphasis must be placed on increasing responsibilities of all stakeholders and collaborative efforts towards ensuring a healthy environment for the future. Given the commitments associated with Agenda 21, the MDGs and JPOI, there is express need for developing a SSDS for SAS.

In July 2003, the Norwegian Agency for Development Cooperation (NORAD) and UNEP Regional Resource Centre for Asia and the Pacific (UNEP RRC.AP) finalized a project on NSDS, SSDS and Action Plans towards Mainstreaming Sustainable Development in the Decision Making Process. Accordingly, preparation of this SSDS document for the SA has been spearheaded by Development Alternatives (DA), India in cooperation with the various stakeholders through a participatory process.

Sustainable Development Strategy of South Asia (SDC SA) identifies the common and trans-boundary goals of South Asian States to achieve SD, mainly, Afghanistan, Bangladesh, Bhutan, Nepal, Maldives, Pakistan, and Srilanka. The document serves as a long term policy planning tool and identifies 3 main goals, mainly: eliminating poverty and creating national security economic base and strengthening institutional system. SDS, SA set priorities for cooperation of the SA states with innovative approach. The document was prepared in a participatory process in consultation with the concerned line Ministries of respected countries, intergovernmental organizations, international organizations, and civil society organizations.

This document is expected to provide the strategic direction for the pursuit of sustainable development in the SAS. It is important to note that this document addresses the issues at the sub-regional level, building upon national level issues and policies but particularly addressing those transcending and common to the countries in the SAS. It is expected that the document will be used by policy makers in the SAS countries as well as the officers and decision makers in the regional and international organizations active in the development process of the SAS.

Section – I *reviews the sustainable development perspective in the face of rapid globalization and its articulation in global deliberations. From here it leads to regional initiatives, contributing to global commitments. The region stands united to resolve the present day challenge, of a holistic and integrated development, aimed to enhance human welfare. In this direction the South Asian Association for Regional Cooperation (SAARC) Development Goals (SDGs) were endorsed by the SAARC leader during the Thirteenth Summit in November 2005. A set of monitor-able and do-able indicators were adopted in January 2007 and efforts are on for developing a blueprint for credible monitoring and evaluation mechanisms, at national and subregional level. This section attempts to reinforce the resolve of the South Asian region towards the attainment of the commitments stated in the SDGs and Millennium Development Goals (MDGs)*

Section – II *focuses on the challenges that threaten to cripple the efforts towards holistic development of the South Asian region. The section begins by tracking the performance of the South Asian countries in achieving the MDGs. The challenges encountered enroute' can be broadly categorized as those of – eliminating poverty and creating human security; conserving the natural resource endowments and securing the economic base.*

Section – III *provides a framework for action in South Asia. Recognising that the challenges and priorities of sustainable development clearly extend beyond national boundaries, the document strongly emphasizes enhancing regional cooperation in specific areas of high potential, as highlighted under the SDGs. Some of the focus areas which require enhanced regional cooperation include livelihoods, health, education and the environment. 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*
- ***Sharing and managing natural resources effectively by***
  - *a. South Asian Biodiversity Conservation Agreement*
  - *b. Formation of a South Asian Energy Alliance*

Section – IV *reiterates the need for strengthened institutional systems to cater to the emerging priorities and implementation of the MDGs and World Summit on Sustainable Development (WSSD) plan. The section emphasis the general understanding that 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 level and scale. It calls for effective national governance, responsible global systems, cooperation at the sub-regional and global scale apart from having technology transfer and resource mobilization arrangements in place along with adequate financial systems and efficient monitoring and evaluation systems. The section also provides action points for cooperation along with the proposed implementing institutions.*

Section – V *provides the case studies based on the good practices from South Asia countries.*

Finally **Section – VI** *gives the list of annexure.*

SECTION – I

Sustainable Development Perspective

This section reviews the sustainable development perspective in the face of rapid globalization and its articulation in global deliberations. From here it leads to regional initiatives, contributing to global commitments. The region stands united to resolve the present day challenge, of a holistic and integrated development, aimed to enhance human welfare. In this direction the South Asian Association for Regional Cooperation (SAARC) Development Goals (SDGs) were endorsed by the SAARC leader during the Thirteenth Summit in November 2005. A set of monitor-able and do-able indicators were adopted in January 2007 and efforts are on for developing a blueprint for credible monitoring and evaluation mechanisms, at national and sub-regional level. This section attempts to reinforce the resolve of the South Asian region towards the attainment of the commitments stated in the SDGs and Millennium Development Goals (MDGs)

Global Outlook

The global commitment to sustainable development in the face of rapid globalization was reaffirmed at the outset of this decade with two major events: the United Nations Millennium Declaration; and the World Summit on Sustainable Development (WSSD), Johannesburg 2002. An important outcome was the consensual declaration that eradication of poverty remains a formidable challenge and an indispensable requirement for sustainable development, particularly for developing countries. It was also agreed that human rights and responsibilities towards the environment are pivotal to the core of sustainability; and that sustainable development is increasingly being viewed in terms of solidarity between generations and communities.

United Nations Millennium Declaration

The Millennium Development Goals (MDGs) are an outcome of the global community's commitment to urgent challenges in sustainable development. A total of eight goals and eighteen targets to be achieved by 2015, were formulated, along with indicators for each of the identified targets. The task of coordinating global efforts was assigned to multilateral agencies. Meeting the targets agreed under these goals, requires action be taken at various levels of inter and intra country programme development, as well as corporate policies, procedures and culture in order to influence institutions, policies, day-to-day practices and expenditures.

The achievement of mainstreaming MDGs into policy planning is contingent upon bringing together capacity building and long-term commitment while remaining people-centric; and must be based on an understanding of the motivating forces operating within the countries of the sub-region as well as the constraints that these forces place on the process.

World Summit on Sustainable Development (WSSD)

The outcome of the World Summit on Sustainable Development (WSSD) held at Johannesburg, in September 2002 – characterized by the preparatory processes of stakeholders including governments, inter-governmental agencies and civil society groups – was the reaffirmation of commitment to the Rio principles and the Millennium Declaration, resulting in the formulation of a plan of implementation to further build upon the achievements since United Nations Conference on Environment and Development (UNCED). This reinforced the commitments in the MDGs and it aims at the following:

1. Reinforcing the MDGs, including:
   - A) Poverty eradication
   - B) Changing unsustainable patterns of consumption and production
   - C) Protecting and managing the natural resource base of economic and social development
   - D) Health and sustainable development
2. Sustainable development in a globalizing world
3. Sustainable development in regions
4. Devising means of implementation
5. Institutional frameworks for sustainable development

The 2002 Johannesburg Plan of Implementation (JPOI) that emerged from the WSSD emphasized the need for the development, enhancement and implementation of agreed regional or sub-regional sustainable development strategies and action plans reflecting national and regional priorities. Such strategies should integrate economic, social and environmental dimensions of sustainable development

JPOI called upon countries to take immediate steps to make progress in the formulation and elaboration of NSDS, and begin their implementation by 2005. JPOI also encouraged sub-regional, regional and international organizations to assist in the preparation of SSDS.

The Development Assistance Committee of OECD has defined NSDS as “a coordinated set of participatory and continuously improving process of analysis, debate, capacity-strengthening, planning and investment, which integrates the economic, social and environmental objectives of society and seeks trade-offs where such integration is not possible.” NSDS is a process which involves situation analysis, formulation of policies and action plans, implementation, monitoring and regular review. It is a cyclical, interactive and adaptive process of planning, participation and actions in which the emphasis is on managing progress towards sustainable goals

JPOI identified the lack of coordinated and holistic institutional mechanisms as a barrier to implementation of sustainable development. It also highlighted the need to formulate a more holistic sustainable development strategy at the sub-regional level to address common and trans-boundary issues. Hence, development of SSDS that builds upon individual NSDSs has been recommended.

Global Ministerial Forum

Subsequent to WSSD, 2002, Global Ministerial Forums were held in March 2004 and February 2006 and both focused on four key and inter-related themes – highlighted at WSSD – water, sanitation, environment and human settlements.

Regional Concerns

South Asia: State of Environment

The key environmental concerns that emerged from the State of Environment (SoE) process include:

1. **Ensuring livelihood security** – including food, water, energy and income security.
2. **Combating environmental disasters** – floods, droughts, cyclones, earthquakes, landslides, forest fires, industrial disasters and cultural or ethnic conflicts.
3. **Preventing industrial pollution** – identifying specific needs of large, medium and small enterprises; impacts of restructuring; and relationships with communities.
4. **Managing urbanisation** – Tackling migration, employment opportunities, urban poverty, consumerism, stressed infrastructure and management systems.
5. **Conserving biodiversity** – Directing efforts towards economic valuation of biological wealth while countering commercial and other perceived threats to biodiversity.

Sustainable Development: Priorities for South Asia

According to Agenda 21, agreed at the Rio Conference, the prevailing systems for decision-making in many countries tend to separate economic, social and environmental factors at the policy, planning and management levels.

Agenda 21 states that countries should adopt national strategies for sustainable development which "should build upon and harmonize the various sectoral economic, social and environmental policies and plans that are operating in the country". Regional strategies for sustainable development are much broader than national environmental action plans and SoE reports. The strategy for South Asia should:

- **Be People-centred:** Strategies should have long-term beneficial impacts on disadvantaged and marginalized groups. They should also integrate economic, social and environmental objectives accompanied by gains in poverty reduction without ignoring environmental issues.
- **Invite high-level political commitment and influential institution:** Participation and leadership from the heads of state and governments are required to overcome the resistance for change.
- **Be capacity consistent:** It should incorporate the awareness of availability of human resources and constraints in implementing them.
- **Build on existing processes and strategies:** A strategy for sustainable development is not intended as a new planning process and therefore must build on what already exists by way of policies.

SAARC Development Goals – 2005-2010

SAARC Development Goals (SDGs) are a product, as mandated by the Twelfth SAARC Summit in January 2004, at Islamabad that directs the Independent South Asian Commission on Poverty Alleviation (ISACPA) to prepare a comprehensive and realistic blue-print, setting out SDGs. In addition to the SAARC mandate, two other sources of inspiration have guided their preparation – the regional imperative for galvanizing a popular imagination, which allows zero tolerance for continuation of the inhumanity of poverty; and the international imperative of achieving the MDGs by 2015. There are 22 SDGs for the period 2005-2010 in the areas of livelihood, education, health and environment.

The SDGs were endorsed by the leader of SAARC during the Thirteenth Summit. As advised by the Council of Ministers, elaboration of SDGs began during the year 2006-2007 and indicators for the SDGs and monitoring and evaluation mechanisms at national and regional levels, were discussed.

ISACPA also agreed during August 2006, that SDGs would be achieved in the next five years starting from 2007, since time was required to complete benchmarking of SDGs. It also agreed to undertake a mid-term review on the attainment of SDGs, towards the end of the third year.

In January 2007, recommendations were finalized and a report “Taking SDGs forward” was prepared. Monitorable and doable indicators now exist for each SDG, and ISACPA suggested a blueprint for credible monitoring and evaluation mechanisms at national and regional levels.

Integrated development

South Asia's journey of transformation is well underway to resolve the present day challenge, of a holistic and integrated development, aimed to enhance human welfare. The success of this journey demands active, intelligent, innovative and persistent engagement of all: governments, development agencies, the private sector, NGOs, community organizations, media, academia, and above all, the people of South Asia, themselves. The purpose of the SDGs in this context is to sharpen the focus and the message, wherein engagement is a priority, not just policy planning. It is as importantly an engagement for results, for inclusion, for imaginative solutions, and ultimately an engagement with hope.

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SECTION – II

South Asian Challenges : Status and Trends

This section focuses on the challenges that threaten to cripple the efforts towards holistic development of the South Asian region. The section begins by tracking the performance of the South Asian countries in achieving the MDGs. The challenges encountered enroute' can be broadly categorized as those of – eliminating poverty and creating human security; conserving the natural resource endowments and securing the economic base.

Eliminating Poverty and Creating Human Security

Current Economic Trends in South Asia

South Asia has witnessed strong and steady economic growth since the 1990s. The factors contributing to this include many years of economic reforms with pro-growth government policies; public investment in strategic areas; and increasing volume of exports from several countries of the region. Some countries have maintained and even increased their shares in the international market place. However, With respect to most Millennium Development Goals (MDG) targets, South Asia is the poorest performing sub-region in Asia, as well as one of the poorest performing regions globally.

Progress towards Attaining the Millennium Development Goals

Underachievement of MDGs is the most compelling indicator of the effects of growing inequalities against the background of pervasive social exclusion, which jeopardizes equitable implementation of government-led pro-poor and social inclusion policies. The Human Development Index (HDI, Table 2), comprising of results-oriented outcome indicators such as incomes, life expectancy at birth, and literacy, shows that MDG targets are unlikely to be met with a few exceptions, as reflected by Table 1.

Table 1 : MDG Achievements in South Asia by Target and GDP Growth Rates

		MDG Target/Indicator	AFG	BGD	BHU	IND	MDV	NEP	PAK	SL
Goal 1	1.a.	$1 Poverty		↓		↓		↓	●	↓●
	1.b.	Underweight Children	↓	●		●	↓		●	●
Goal 2	2.a.	Primary enrolment		↓		↓	↓	↓	↓	●↓
	2.b.	Reaching grade 5		↓	↓	↓		●		
	2.c.	Primary completion rate		↓		↓	●	↓		
Goal 3	3.a.	Gender primary	●	●		↓	●	↓	●	●●
	3.b.	Gender secondary	↓	●		↓	●	↓	↓	●↓
	3.c.	Gender tertiary	↓	↓		●	●	●	↓	↓
Goad 4	4.a.	Under-5 mortality	●	↓	↓	●	●	↓	●	●●
	4.b.	Infant mortality	●		●	●		●	●	●●
Goal 6	6.a.	HIV prevalence		↓	↓	↓		↓	↓	↓↓
	6.b.	TBC prevalence	●	●	●	●	●	●	●	●●
	6.c	TBC death rate	●	●	●	●	●	●	●	●●
Goal 7	7.a.	Forest cover	↓	↓	●	●	↓	↓	↓	↓↓
	7.b.	Protected area	↓	●	●	●		●	●	●●
	7.c.	CO_2 emissions	●	↓	↓	↓	↓	↓	↓	↓↓
	7.d.	ODP CFC consumption	●	↓	●	↓	●	●	↓	●↓
	7.e.	Water urban	●	↓	●	●	●	●	●	●
	7.f.	Water rural	↓	●		●	↓	●	●	↓
	7.g.	Sanitation urban	●	↓		↓	●	↓	●	●
	7.h.	Sanitation rural	↓	↓		↓		↓	↓	●
GDP Growth rate 2005, in percentage			**14**	**6**	**6**	**9**	**-4**	**2**	**8**	**5**

- ● *Early achiever – Has already met the target*
- ↑ On tract – Expected to hit the target by 2015
- ■ Off tract – Slow – Expected to hit the target, but after 2015
- ↓ Off tract – Regressing – Slipping backwards, or stagnating

Source: UNESCAP 2006

Table 2 : Human Development Index in South Asian Countries

Rank		Country	HDI in 2005 (published in 2007)
2005 data (published in 2007)	Change compared to 2004 data (published in 2006)		
99	▼ (6)	Sri Lanka	▼ 0.743
100	▼ (2)	Maldives	▲ 0.741
128	▼ (2)	India	▲ 0.619
133	▲ (2)	Bhutan	▲ 0.579
136	▼ (2)	Pakistan	▲ 0.551
140	▼ (3)	Bangladesh	▲ 0.547
142	▼ (4)	Nepal	▲ 0.534
-	(1993)	Afghanistan	? 0.229

Source: UNDP 2007

Poverty remains a major hindrance towards achievement of the sub-regional sustainable development goals. The status of poverty, especially in rural areas, remains glaringly high. Rapid population growth rates have exacerbated the predicament. Also, while economic inequality within regions varies little from the poorest regions to the more fortunate, the Gini coefficient does not capture the persisting gender and social inequalities. These inequalities severely constrain the extent to which certain groups in the population are able to participate in and benefit from the process of economic growth, thereby, further exacerbating the challenge towards attaining human security. The increase in inequality in different parts within a country has further contributed to the increase in the region as a whole.

Table 3 : Poverty and Inequality in the South Asia Region

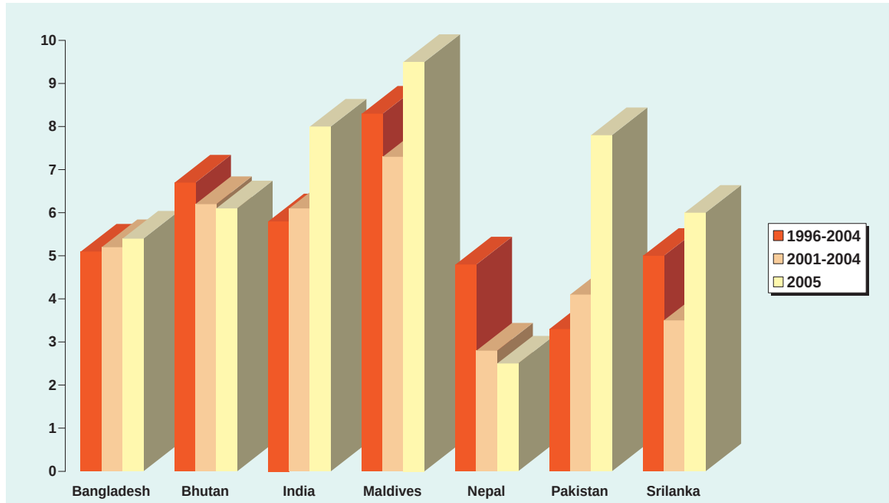
Periods	Inequality (Gini coefficient)				Poverty headcount rate
Start --- End year	Start	End	Start		End
Bangladesh (1)	91/92 --- 2000	25.9	30.6	58.8	49.8
India (i) (2)	93/94 --- 99/00	29.0	32.0	29.2	22.7
India (ii) (3)	93/94 --- 99/00	n/a	33.0	36.0	28.6
Nepal (4)	95/96 --- 03/04	34.2	41.4	41.8	30.9
Pakistan (5)	01/02 --- 04/05	28.0	30.1	34.4	29.2
Sri Lanka (6)	90/91 --- 2002	32	40.0	26.1	22.7

Source: World Bank 2006

Note: Poverty lines are defined differently across countries; so poverty headcount ratios are not comparable on a general basis.

Despite several efforts that have resulted in poverty *rate* reductions, more than 400 million people live below the poverty line in South Asia. This region continues to house almost 40 per cent of the world's poor. Most of the poor face multiple disadvantages – the majority tends to comprise women or children, primarily from socially excluded groups (SAARC 2005). South Asian countries are also experiencing growing income inequalities, with the benefits of economic growth being unequally distributed to the destitute, socially excluded and marginalized. Over the last decade, in several countries such as Nepal and Sri Lanka, the Gini-coefficient has increased by one-quarter or one-third.

Figure 1 : GDP Growth in South Asia (Average Annual Percentile Increase)



Source: World Bank 2006a

As can be seen in Figure 1, GDP growth has been strong and steady in South Asia. Factors contributing to this growth include the fruits of many years of pro-growth government policies and economic reforms; public investment in strategic areas; and strong export market growth in several countries of the region, some of which, notably India, have maintained or increased their shares in the growing export market of developing countries.

Table 4 : Trade in Merchandise Exports, US Dollars at Current Prices in Millions

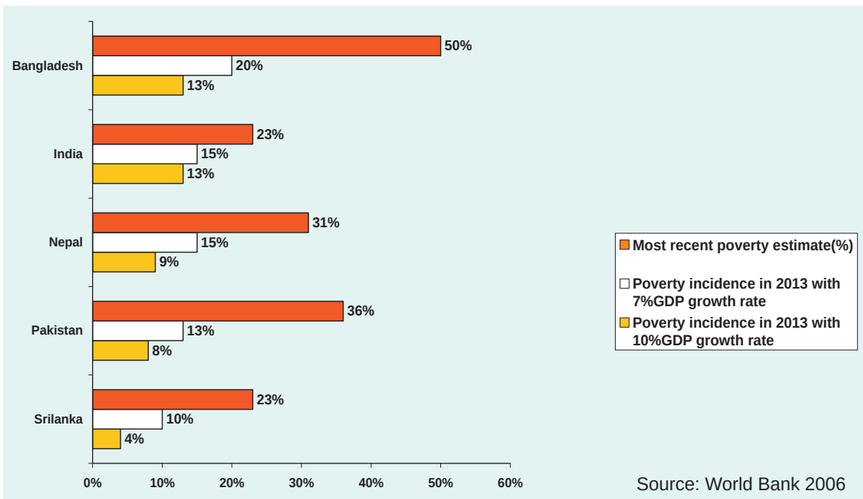
Exports	2000	2001	2002	2003	2004	2005	Percentile change in 2005/2000
Afghanistan	185	100	250	350	420	540	192%
Bangladesh	6399	6085	6102	7050	8151	9294	45%
Bhutan	103	106	113	154	183	215	109%
India	42379	43361	49250	57085	71786	85925	103%
Maldives	106	110	132	152	181	103	-5%
Nepal	804	737	568	662	756	822	2%
Pakistan	9028	9238	9913	11930	13379	16090	78%
Sri Lanka	5430	4816	4699	5125	5757	6347	17%

Source: UNCTAD 2006

Using growth to tackle inequality

Growth can generate political space. It is an opportunity for government to make trade-offs through strategic prioritization. Once these tradeoffs are made, growth also makes it possible for redistributive programs to be sustainable. Growth coupled with more effective redistributive programs can help mitigate reform-related losses and enhance the political acceptability of broader, pro-growth and pro-poor second-generation reforms. So, rapid growth can create the political will to redistribute while generating demand from those who have not benefited.

Figure 2 : Poverty reduction in South Asia associated with higher growh rate



Source: World Bank 2006

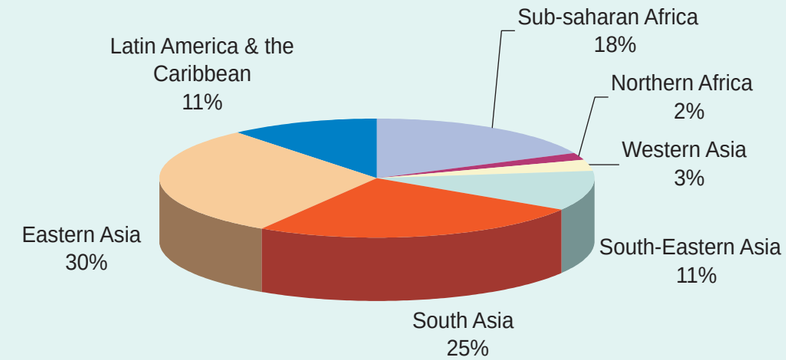
Rapid economic growth can generate additional fiscal resources for redistribution, social protection education, health, and infrastructure services.

Making growth more inclusive requires actions in three areas: expanding opportunities and the capacity to participate on fair terms in a thriving economic environment; improving the effectiveness and coverage of social programs to protect the vulnerable; and reducing civil and political conflict by using rapid growth to tackle the underlying disparities that create marginalized minorities or political factions in deep conflict. The region has made progress on all fronts, but the problems that lie ahead are quite stubborn and the solutions not always evident, requiring greater effort, boldness, and innovation to navigate them to further improve performance.

Generating Employment

In the context of the MDGs, the enormous challenge of halving the existing world poverty by 2015 will simply be unachievable if GDP growth is not accompanied by sustainable growth in productive employment. The ability to absorb an approximate 514 million additional people expected to enter into world labour markets between 2003 and 2015 depends on the efforts of the policymakers to prioritize employment policies and to fully integrate them into macroeconomic policies. Continuing youth unemployment represents a tremendous waste of the world's human capital resources.

Figure 3 : Youth Labour force by region (percentage of world total)



Sources: ILO 2003

Women represent a small proportion of the labour market in South Asia, accounting for 18 per cent of wage employment in the non-agricultural sector, in contrast to 39 per cent in East Asia and the Pacific region. This percentage is the lowest in Pakistan, at 8.6 per cent (Figure 3). The low ratio of women in wage employment in the non-agricultural sector in Pakistan has only increased two per cent over 14 years. In Nepal, the feminization of agriculture. combined with the recent conflict, have contributed to greater vulnerability among women in the farming sector, with women replacing the outgoing men in subsistence agriculture.

Table 5 : Percentage of Women in the Labour Market

Region	1990	2002
World	35	37
Low and middle income	33	34
High income	43	46
South Asia	13	18

Source: World Bank 2006

Employment-to-population ratios in South Asia have traditionally been very low because of the low labour force participation rates of women. They continue to be an untapped potential in the region. In 2007, only 3.5 out of 10 women of working age actually worked, and over the last ten years this share has decreased slightly. The situation of women is made even worse since, despite their low participation, they have a higher risk of becoming unemployed; the female unemployment rate in 2007 was 5.8 per cent as compared to 4.8 per cent for men (ILO 2008).

Ensuring Food and Nutritional Security

Food security is among the most pressing challenges faced by South Asia. It is of prime importance in the present-day scenario—in view of the high rate of population growth, high concentration of poor households and low per capita income—in spite of a reasonable rate of GDP growth prevalent in South Asian countries. In order to meet the food security needs, it is imperative to identify the various factors that hinder the appropriate implementation of policies and programmes that aim at increasing food access. In order to understand the challenges facing these countries in achieving food security, it is important to review the current status of food production in the region. Evaluating past solutions in the region for their impact is important in refining and redefining the appropriate approaches for food security interventions.

Table 6 : Proportion of under-nourishment in South Asia (In Percentage)

1990 - 92	1995 - 97	2002 - 04
26	23	21

Source: FAO 2008

In South Asia, 430 million people live on less than US$1.00 per day (World Bank, 2005). South Asia, with its GNI per capita at US$594 in 2004, is home to 47 per cent of the world's poor. Most of the poor in South Asia are dependent on agriculture for their livelihood and survival. Approximately, 60 per cent of the labour force is involved in agriculture and this sector accounts for 23 per cent of GDP (IFPRI, 1997). The national food security status of South Asian countries also reveals a positive trend. The countries have transformed themselves from food-deficient countries in the 1960s and 1970s to food surplus countries in the 1980s and 1990s. However, increased food production has not been fully translated in terms of household and individual food security. This is partly due to a high level of poverty that coexists with nutritional and food insecurity. Furthermore, malnutrition remains a challenge even in urban areas, where there has been a relative increase in income among the households. Higher prices paid to farmers for their produce have been partly responsible for a growth in the food grain reserves at the national level. Lower food prices have increased accessibility to food and enhanced the prospects for exports of food. Yet, food insecurity continues to be a major development challenge because of the low purchasing power of the majority of the population, which is below the poverty line. Economic reforms and market liberalization in the food and agriculture sector in South Asia have spurred private investments in high value agriculture such as fruits, vegetables, livestock and fisheries. However, as yet, it is not clear whether investments in high value crops will result in reducing food insecurity of the vulnerable sections of the population.

Key Determinants of Food Security

Per Capita Income

Low per capita income is one of the reasons for under nourishment. While, economic growth reduces malnutrition and starvation, evidence (based on cross-section data across countries) reveals that the decline is modest—the percentage decline in malnutrition is roughly half the rate at which GNP per capita grows. Thus, it is known that economic growth alone cannot reduce malnutrition. For example, economic growth in India was 6 to 7 per cent per annum during the period 1992–93 to 2005–06; however, malnutrition among children declined from 52 per cent to 47 per cent—less than 0.5 percentage points per annum, during the same period. In fact, the percentage of underweight children (below three years) declined by only one percentage point from 47 per cent in 1998–99 to 46 per cent in 2005–06 (IFPRI 2007). Income poverty is considered another reason for under nourishment and child malnutrition, but studies have shown that malnutrition among children exists even after the removal of poverty. For example, income poverty in India is 26 per cent, while child malnutrition is 46 per cent. The data for Bangladesh, India and some other countries shows that malnutrition levels are surprisingly high even in the richest income quintile. Urban areas, which will increase in size in the future, have high levels of under nourishment and child malnutrition. Urban outcomes, particularly metropolitan areas, are poorer than rural areas in social sector outcomes in Bangladesh.

Adequate intake of Micronutrients

Micronutrient deficiency is another reason for malnutrition. Micronutrient malnutrition, especially Vitamin A deficiency, Iodine deficiency disorders and Iron deficiency anaemia poses a serious public health problem and affects millions of people. Of the four methods used to reduce micronutrient malnutrition—diet diversification, food fortification, medicinal supplements and disease control—only the first two are food based. Many micronutrient programmes rely too heavily on health interventions and do not fully exploit the potential of food-based actions. Food processing and preservation, nutrition education and food fortification are considered viable means of increasing micronutrient levels in the diet. Age-specific interventions up to five years are important in reducing child malnutrition; however, institutional arrangements for age-specific nutritional programmes is lacking. Improvement in incomes of poor, proper health services and quality environment are important for reduction in malnutrition. However, in the short term, direct nutritional programs should be the priority.

Infrastructure and Delivery Systems

Agrarian structures in South Asian countries are dominated by small and marginal holdings. On the other hand, the delivery systems or institutions for input supply, credit, marketing, and extension serve medium to large farmers rather than those with small farms. The transaction costs of these institutions rise the moment their operations service marginal farmers. This makes them bypass the small farmers. The congruence between the recipient system, characterized by the small and marginal farmers, and the delivery system that is geared to the requirements of large holdings, does not exist.

The widespread neglect of the rural infrastructure undermines the entire agricultural enterprise: it reduces farm profitability, increases farmers' risks, and prevents significant productivity. Poor roads, weak market structures and lack of proper credit facilities have greatly increased the costs of farm inputs such as fertilizers and reduced farm output prices, severely reducing incentive farming. At the same time, the existing social structures—inequitable land ownership and tenure systems—have discouraged sustainable land use practices.

Impact of Climate Change on Food Production

Climate change impacts not only primary production

but also food manufacturing and trade. Emerging hazards in primary production can influence the design of the safety management systems required for their effective control. Furthermore, increasing average temperatures can increase hygiene risks associated with storage and distribution of food commodities.

It is important, therefore, that the food industry is vigilant and is able to modify hygiene programmes as per the needs of the region. Periodic self-audits and external audits to 'test' the validity of hygiene programmes form a part of 'good practice'. Governments often develop guidelines to assist the industry in implementing appropriate hygiene management programmes. These should pose a factor in any emerging risks. Reduced availability and quality of water in food handling and processing operations will also give rise to new challenges in hygiene management.

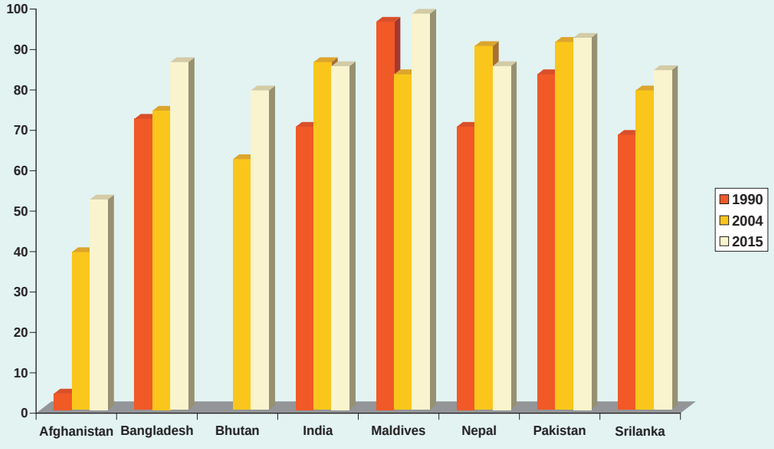
It is anticipated that these risk management measures and adaptation strategies will pose the greatest challenge for South Asian countries.

Access to Water and Sanitation

Improved Water Sources

Significant progress in increasing access to improved drinking water and sanitation has been made, but South Asia's sanitation coverage remains among the lowest in the world. Between 1990 and 2004, the number of people with access to safe drinking water increased from 222 million to 326 million. Currently, 94 per cent of the urban population and 80 per cent of those living in rural areas have access to an improved water source. India and Nepal have already met the MDG water target, and Pakistan has nearly achieved the same. Only Bangladesh and Maldives are unlikely to achieve their targets, based on their current progress. (Figure 4)

Figure 4 : Percentage of urban and rural population with access to improved drinking water source



Source: UNICEF 2006

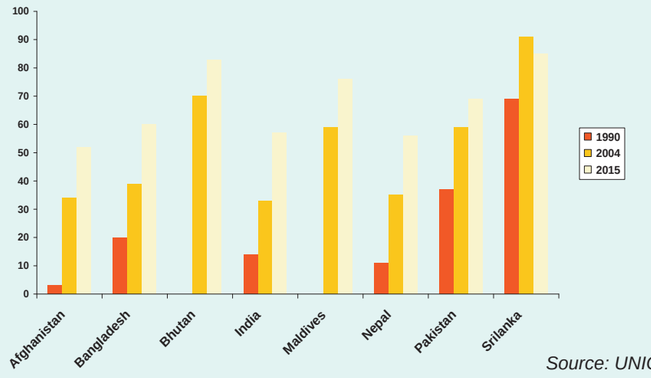
Maldives' slow progress is due to the population's dependence on shallow wells for their access to the islands' freshwater resources, which are highly susceptible to pollution. Although the national policy has been to shift the dependence from well-water to rainwater in many islands, 30 per cent of the atoll's population has reported water shortages in 2004. Bangladesh's water shortage is caused by the presence of arsenic in its groundwater. The target of ensuring an almost 100 per cent coverage by 2015 means that almost 25 million people must gain access to safe, arsenic-free water over the next 10 years. While the access rate in Afghanistan is 39 per cent, which represents 75 per cent of the 52 per cent MDG target, it still has the third-lowest access to improved drinking water sources in the world. In addition, the rapid increase in urban population may not permit improving access to safe drinking water beyond the current rate. Furthermore, the water management system presents the additional challenges of contaminated groundwater and inadequate water treatment, which have caused a significant deterioration in the sanitary conditions.

Improved Sanitation

South Asia has witnessed vast improvements in sanitation; more than doubling the percentage of the population with access to improved sanitation from 17 per cent in 1990 to 37 per cent in 2004. However, this coverage is still among the lowest in the world. More than 921 million people, including 106 million children, live without access to improved sanitation in South Asia, which is one-third of the global total.

Among the larger countries, Afghanistan, Bangladesh, India and Nepal lag far behind the countries with smaller populations, and their populations' access to improved sanitation is well below the regional target of 60 per cent. An exception is Pakistan, which has achieved almost 60 per cent coverage of its estimated population of 166 million. While access to improved sanitation in India has increased from 14 per cent in 1990 to 33 per cent in 2004, two-thirds of the population, numbering 730 million, remains uncovered. India has managed to provide 59 per cent of its urban population—as compared to 22 per cent of its rural population—with access to sewage and sanitation by 2004, However, adequacy and equitable distribution remain serious problems. The poor living in slums and squatter settlements have inadequate access to even these basic services. In Bangladesh, an indifferent sanitation service in different districts is a major challenge. While 43 per cent of urban households use water-sealed toilets, only 14 per cent of slum dwellers have access to sanitary toilets, and more than 85 per cent of them use toilets (Figure 5)

Figure 5 : % of population with access to improved sanitation



Source: UNICEF 2006

For these areas to meet the overall MDG sanitation access target of 59 per cent by 2015, the pace of improvement must be accelerated to reach a further 24 million persons each year, with an emphasis on improving access in rural areas, as South Asia's urban–rural disparities in sanitation are the worst in the world – urban access being 64 per cent and rural access, 23 per cent in 2002.

Water Management: Strategies and Solutions

Access to safe water remains an extremely important global health issue. More than 2 billion people live in dry regions of the world and suffer disproportionately from malnutrition, infant mortality and diseases related to contaminated or insufficient water (WHO 2005a).

The impacts of climate change on freshwater systems and their management are mainly due to both observed and projected increases in temperature, sea level and precipitation variability. Climate change is likely to exacerbate the declining reliability of irrigation water supplies leading to increased competition for water for industrial, household, agricultural and ecosystem uses. In coastal areas, a rise in sea level will extend the salinization of groundwater, resulting in a decrease in freshwater availability (Kundzewicz al., 2007). Water scarcity may lead to multiple adverse health outcomes, including water-borne diseases, exposure to chemicals, vector-borne diseases associated with water-storage systems, and malnutrition. Climate change will have an impact on the right to water, which is closely linked to the right to food. By 2080 it is estimated that 1.1 to 3.2 billion people will experience water scarcity, 200 to 600 million will go hungry, and an annual 2 to 7 million more will be affected by coastal flooding (Yohe et al., 2007).

Health Services

In South Asia, policies and budget allocations often reflect what is expedient, a factor that results in acute inefficiencies in healthcare, inadequate and inefficient resource allocation, and correspondingly poor service delivery, leaving the poor and much of the lower-middle class—women and children in particular—at the mercy of disease and ill health.

Longevity and susceptibility to disease often have less to do with infections and genetics than with the social determinants of health, including factors such as income, education and occupation, and access to services such as sanitation, good medical treatment, and decent housing. In South Asia, the interlocking relationships between economic achievements, social investments, and health outcomes are yet to be truly understood.

Infant and Child Mortality

Table 7 : Infant and Child Mortality Rates in the South Asian Region

	Under - five mortality rate		Infant mortality rate		Immunization rate, measles	
	per 1,000		per 1,000 live births		Percentage of children in the age group of 12 - 23 months	
	1990	2005	1990	2005	1990	2005
World	**95**	**75**	**64**	**51**	**73**	**77**
Low and middle income	103	82	69	56	72	75
South Asia	**129**	**83**	**86**	**62**	**56**	**64**
Afghanistan	..	..	..	..	..	..
Bangladesh	149	73	100	54	65	81
Bhutan	166	75	107	65	93	93
India	123	74	80	56	56	58
Maldives	111	42	79	33	96	97
Nepal	145	74	100	56	57	74
Pakistan	130	99	100	79	50	78
Sri Lanka	32	14	26	12	80	99

Source: World Bank 2007

High under-five mortality (100 per 1 000 live births) indicates that South Asian Region (SAR) needs to improve overall child health outcomes and reduce girls' health disadvantages. Among the South Asian countries, Bhutan has made strong progress recently, lowering its under-five mortality rate from 166 per 1000 births in 1990 to 75 in 2005, projecting an annual decline of 5.3 per cent. In Bangladesh, children in the poorest quintile are showing a faster average annual reduction in child mortality (3.3 per cent) than the population as a whole (Table 7).

Maternal Health

The World Bank estimates show that most countries in South Asia are seriously off track. South Asia had an estimated 564 maternal deaths per 100,000 live births in 2000, as compared to 10 in 100,000 in developed countries. In 2004, skilled health personnel attended to only 37 per cent of the births.

In South Asia, a woman dies every three minutes from complications in pregnancy and childbirth, and not just because of poverty. These 200,000 deaths do not include women who die on the way to health facilities or at home, or whose deaths are never registered. For every woman who dies, another 30 experience complications resulting in permanent disabilities and debilitating conditions. Every year, 29,000 women die from unsafe, often illegal abortions in Bangladesh, India, Nepal, Pakistan and Sri Lanka.

Table 8 : Comparative Study of the World and South Asia Maternal Mortality Rate

	Maternal mortality ratio	Births attended by skilled health staff
	per 100,000 live births Modelled estimates	Percentage of the total
	2000	2000 - 2005
World	**410**	**63**
Low and middle income	450	61
South Asia	**564**	**37**
Afghanistan	1,900	14
Bangladesh	380	13
Bhutan	420	51
India	540	43
Maldives	110	70
Nepal	740	15
Pakistan	500	31
Sri Lanka	92	96

Source: World Bank 2007

Gender discrimination is a huge problem in South Asia. Right from birth, women are given a lesser share of food, a larger share of work and little or no say in their own health care. This combination of factors contributes greatly to the high maternal mortality rate in South Asia.

In most South Asian countries, the majority of births occur at home, especially in rural areas, and families and communities are not well prepared to make quick decisions to seek care for mothers with obstetric complications, and often lack resources to arrange for timely transportation. Lack of adequate resources and knowledge not only results in preventable maternal deaths, but severely impacts the children who are left motherless. Some studies suggest that these children are 10 times more likely than their peers to die within two years of their mothers' death. These orphans, along with the 2.3 million infants in South Asia who die each year can be saved along with their mothers if obstetric care is given a higher priority.

Between 2 and 3.5 million people in South Asia are living with HIV and AIDS. High-risk practices such as prostitution and drug abuse give an upward boost to the epidemic in the region. HIV prevalence among the vulnerable and often marginalized groups is high throughout the region and increasing even more rapidly in some places.

HIV/AIDS

In India alone, approximately 2.5 million people are estimated to be living with HIV and AIDS. India's HIV epidemic is highly heterogeneous and appears to be stable or diminishing in some parts of the country while it is growing in others. The majority of reported HIV infections are concentrated in six states where HIV prevalence is higher than in other states. These areas include: the Mumbai-Karnataka corridor; the Nagpur area of Maharashtra; the Nammakkal district of Tamil Nadu; coastal Andhra Pradesh; and parts of Manipur and Nagaland. Recent data suggest that high levels of condom use in the context of sex work may have played a role in reducing HIV prevalence among young women in some southern Indian states, but not in north India.

Women account for a growing proportion of people living with HIV in India, particularly in rural areas. A large proportion of women afflicted with HIV appear to have acquired the virus from regular partners who were infected during paid sex. Although HIV prevention efforts targeting sex workers and their partners are being implemented, the law enforcement context of sex work often acts as a barrier.

In countries such as Bangladesh, Nepal, Pakistan and Sri Lanka, HIV prevalence is low among the general population but significantly higher among those who engage in high-risk behaviour such as injecting drugs with contaminated needles and engaging in the selling and buying of sex. These concentrated epidemics are extensive and affect a large proportion of vulnerable high-risk populations. As a result, HIV is spreading rapidly in some parts of the region. Significant structural and socioeconomic factors across the region have put many people at risk of HIV infection.

- More than 35 per cent of the population below the poverty line
- Low levels of literacy
- Porous borders
- Rural to urban and intrastate migration of male populations
- Trafficking of women and girls into prostitution
- Stigma related to sex, sexuality and HIV
- Structured commercial sex and casual sex with non-regular partners
- Male resistance to condom use
- High prevalence of Sexually Transmitted Infections (STIs)
- Low status of women, leading to an inability to negotiate safe sex

Table 9 : Prevalence of HIV and AIDS in South Asia

	Contraceptive prevalence rate	Prevalence of HIV	Prevalence of HIV	Incidence of tuberculosis	TB cases detected under DOTS	Prevention use of treated bednets
	Percentage of married women ages 15-49	Percentage of the population ages 15-49	Female ages 15-24 percentage of female population ages 15-24	per 100,000 people	Percentage of estimated cases	Percentage of children under age 5
	2000-2005	2005	2005	2005	2005	2000-2005
World	**60**	**1.0**	**..**	**136**	**60**	**..**
Low and middle income	60	1.1	..	158	61	..
South Asia	**46**	**0.7**	**..**	**174**	**58**	**..**
Afghanistan	10	<0.1	..	168	44	..
Bangladesh	58	<0.1	..	227	59	..
Bhutan	31	..	..	103	31	..
India	47	0.9	..	168	61	..
Maldives	39	..	..	47	94	..
Nepal	48	0.5	..	180	67	..
Pakistan	28	0.1	..	181	37	..
Sri Lanka	70	0.1	..	60	86	..

Source: World Bank 2007

Tuberculosis

South Asia is only second to Sub-Saharan Africa in tuberculosis prevalence rates. The success in Bhutan and Maldives is largely attributed to Directly Observed Treatment Short courses (DOTS) implemented under the national tuberculosis control programme, which has enabled reliable information on case detection and success rates. Similar programmes, however, have been less successful in other countries.

The increase in cases of tuberculosis is alarming in Afghanistan and Bangladesh. While little analysis has been done to determine the gender-related causes of this diseases, it can be assumed that one factor is the generally low access of women to healthcare services and facilities, along with the low availability of female medical staff, which may impede women from availing themselves of health services. Tuberculosis incidence is closely linked with the incidence of HIV/AIDS; and failing to halt the latter will also prevent the tuberculosis reduction and the reversal target from being met. The situation in the region is all the more disquieting as most South Asian countries have few reliable statistics about the incidence of HIV/AIDS, especially among children. According to recent estimates, 0.7 per cent of the population between 15 and 49 years are living with HIV/AIDS (Table 9).

Education for All

Education is the foundation of all societies and globally competitive economies. It is the basis for reducing poverty and inequality, improving health, enabling the use of new technologies, and creating and spreading knowledge. In an increasingly complex, knowledge-dependent world, primary education, as the gateway to higher levels of education, must be the first priority.

Quality of Education

Monitoring Learning Outcomes

Since 2000, Bangladesh, India, Maldives and Pakistan have conducted at least one national learning assessment to monitor education quality. National assessments tend to focus more on grades 4 to 6 than on grades 1 to 3 or 7 to 9, and are predominantly curriculum-based and subject-oriented.

School and Learning Environment

Retention and learning are hampered when the students attend school in dilapidated or overcrowded buildings or in noisy or unsafe environments. In conflict-ridden countries or areas hit by a natural disaster, damage to education infrastructure may be acute, if often transitory. In Afghanistan, the burning and bombing of schools and the killing of teachers and students have severely affected education provision in some provinces. In 2006, the president of Afghanistan's had stated that 100,000 children who had gone to school in 2003-04 were no longer in attendance.

Table 10 : Literacy Rates for 15-24 Year Olds in South Asia

Country	Percentage
Bangladesh	50.3%
India	74.8%
Maldives	99.2%
Nepal	63.8%
Pakistan	59.6%
Sri Lanka	97.2%

Source: World Bank 2005

Good-quality teaching and learning remains a major challenge for all countries in South Asia. Teacher shortages are especially high in Afghanistan and Bangladesh, with Pupil Teacher Ratios (PTRs) of 83:1 and 51:1, respectively. In almost all countries under study, primary PTRs have declined since 1999, with the notable exception of Afghanistan, where PTR increased by 130 per cent, from 36:1 in 1999 as compared to 2005. The total primary teacher workforce rose by 96 per cent, but this was not enough to meet the need generated by a 350 per cent rise in enrolment, including the influx of girls, who had been previously excluded from school (Table 11).

Table 11 : Pupil / Teacher Ratio in South Asian Countries

Country	Percentage of total trained teachers	Pupil/teacher ratio	
	2005	1999	2005
Afghanistan	36	36	83
Bangladesh	48	56	51
Bhutan	94	42	31
India	-	35	-
Maldives	64	24	20
Nepal	31	39	40
Pakistan	86	-	38
Sri Lanka	-	-	22

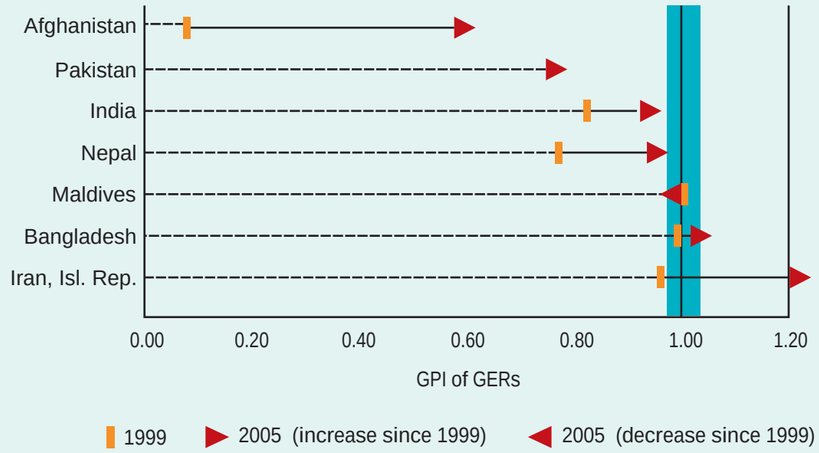
Source: UNESCO 2007

National averages often mask large in-country disparities in the distribution of teachers. While data on geographic variations within countries are scarce, recent data indicate that they are wide in India and Nepal. The share of trained primary teachers varied greatly, from almost 100 per cent in Bhutan to less than 40 per cent in Afghanistan and Nepal. As a consequence, the ratios of pupils to trained teachers were exceedingly high (above 100:1) in Afghanistan and Nepal, and high in Pakistan (45:1). One fifth of the population in South Asia was between the ages of 15 and 24. India alone has some 200 million young people.

Women's Literacy

Women's literacy is of crucial importance in addressing the wider issues of gender inequality. Striking gender disparities prevail in Afghanistan, India, Nepal and Pakistan, where literacy rates for women and children were less than two-thirds of those for males. However, the situation has been improving in some countries, particularly India and Nepal, as well as Bangladesh. Besides gender, key correlates of illiteracy include poverty and place of residence. In general, illiteracy rates are highest in the countries with the greatest poverty. The link between poverty and illiteracy is also observed at the household level, with the literacy rates of the poorest households substantially lower than those of the wealthier.

Figure 6 : Changes in Gender Disparities in Primary Education Gross Enrolment Ratios : 1999 to 2005



Source: UNESCO 2007

All countries in the area under study show improved access for girls to primary education. Progress was particularly noteworthy in India and Nepal where the GPI of the GIR increased from 0.76 to 1.00 between 1999 and 2006. Significant gender disparities in access continue to affect girls in Afghanistan and Pakistan (GPIs of 0.70 and 0.81, respectively).

Narrowing the gender gap in education does not automatically translate into equality between women and men. Salary gaps, differential access to particular occupations and political representation are evidence of enduring gender inequality. Overall, gender equality remains elusive: sexual violence, insecure school environments and inadequate sanitation disproportionately affect the girls' self-esteem, participation and knowledge retention. Improving school environments to target girls' needs can help increase the demand for education among girls:

Financing Education for All

National Financial Commitments to EFA

In half of the countries in the region (Table 12), the share of public education expenditure of GNP was below 3.6 per cent in 2005, far from the median value of 4.7 per cent for all developing countries. The percentage of GNP devoted to education varied greatly, with low shares in Bangladesh and Pakistan (both 2.4 per cent) and a relatively higher share in Maldives (7.5 per cent). While the share of public education expenditure in national income increased in Bangladesh and Nepal, declines were reported in India and Pakistan.

Table 12 : Public Expenditure on Education in South Asia

Country	Education Finance		
	Total public expenditure on education as percentage of GNP		Total aid to basic education (constant 2005 US$ millions)
	1999	2005	2004 - 2005 annual average
Afghanistan	-	-	162
Bangladesh	2.3	2.4	399
Bhutan	-	-	1
India	4.0	3.8	182
Maldives	-	7.5	1
Nepal	2.9	3.4	100
Pakistan	2.6	2.4	169
Sri Lanka	-	-	24

Source: UNESCO 2007

The priority on education in government expenditure was relatively low in 2005 throughout the region, with education's share of the total government expenditure below 15 per cent in two-thirds of the countries (available data). Total government expenditure towards education in 2005 was modest in India and Pakistan (both 11 per cent). Since 1999, shares have increased quite substantially in Nepal, but have fallen in Bangladesh and India. Households accounted for a significant share of the total expenditure at all levels of education. In India, the share of household spending in total expenditure on education is reported to have increased sevenfold between 1998 and 2003, to 27 per cent. While some households can cover the expenses associated with school attendance, many poor families cannot (World Bank 2007).

Conserving Natural Resource Endowments

Natural resources, especially land, forests, air, wetlands and biodiversity play a significant role in economic development. South Asia has natural resources in abundance. However, the uneven distribution of these resources has impeded this region's balanced development.

The major question regarding South Asian natural resources management is how to manage the land, forest and water resources in order to maintain both their productive capacities and ecological functions. A coordinated approach is indispensable in this regard.

Diversities in Landforms

South Asia occupies 4.8 per cent of the world's total land area, displaying an extraordinary diversity of landforms due to climatic regimes, latitudes, altitudes and topography. Land in the sub-region is under immense pressure as agriculture, urban land and wild areas all compete for the same resources. The demand for land has increased, along with the intensity of land use, and this combination

culminates in environmental damage and the degradation of land quality.

Land Degradation

Land degradation processes include erosion; compaction and hard setting; acidification; declining soil organic matter and soil fertility depletion; biological degradation: and soil pollution. Land degradation is a major problem in all South Asian countries. Degradation caused by water is perhaps the greatest challenge facing this region, as many areas have periods of high rainfall and steep mountainous regions. Modern methods of agriculture have contributed to land degradation, with practices such as overuse of fertilizers and pesticides, excessive irrigation of saline lands and shifting agriculture.

Recent estimates indicate that in South Asia, 42 per cent of the land is affected by one or other factors that cause land degradation. Half the region's dry lands face the threat of desertification, with as much as 63 million hectares of rain-fed cropland and 16 million hectares of irrigated land having been lost due to it, especially in India and Pakistan; and the land degradation was higher in India. Other countries have also been badly affected. It is estimated that nearly one-third of the land in Sri Lanka has been subjected to soil erosion. One-fourth of Pakistan's total land area is facing serious threats of water and wind erosion. In parts of Bangladesh and northern India, soils have become acidified and saline. The steep terrain of Nepal is susceptible to soil erosion and landslides. As per the Global Assessment of Soil Degradation (GLASOD) estimates, six per cent of Afghanistan's land is severely affected and ten per cent is harshly affected due to anthropogenic activities. An area of about 75 per cent is affected by the loss of topsoil due to both water and wind, the former being more serious. Extensive erosion of riverbanks, leading to silting and the loss of valuable farmland, is also increasing due to the loss of the tree roots that hold the soil in place.

A UNDP/UNEP/FAO study has estimated that the land degradation cost of these countries in the region amounts to more than US$10 billion per year, which is quite a high value for the Asia-Pacific region. This amount is equivalent to seven per cent of the region's combined agricultural GDP. Bhutan, due to its low population density, has not yet suffered severe land degradation, but deforestation—often a precedent to degradation—is a concern and ten per cent of the agricultural land has been affected by soil erosion. The principal causes of land degradation are erosion by water, followed by the wind, along with biophysical and chemical degradation. Humid zones in Bangladesh, Nepal, India and Sri Lanka are mostly affected by water erosion.

Dry Lands

When soil is dry and denuded of vegetation, the topsoil becomes vulnerable to loss and movement due to the wind. In Afghanistan, the phenomenon of land desertification has been observed in several zones of the country and has emerged as an important component of land degradation. It is estimated that 80.7 per cent of the country's area is vulnerable to desertification, of which 67.4 per cent is classified as very highly vulnerable, 6.7 per cent as high, 6.1 per cent as moderate and 0.5 per cent having low vulnerability (Eswaran et al., 2001).

Livestock density in dry lands is a crucial factor in terms of spreading desertification The Government of India estimated that over 434 million livestock animals were in the hot arid regions in 2001 (UNCCD 2001). This is approximately 40 per cent of the entire Indian livestock.

Salinity

In desert and dry lands, salinity is a problem due to the high rate of evaporation that causes water to be drawn up from saline aquifers. Salinization occurs in areas with wetter climates. Bangladesh, India and Pakistan are all affected by considerable salinization. In Afghanistan, about five per cent of the country's land mass is affected by salinization and it is predominant in the irrigated fields of Helmand Valley (CEPA 2005).

Salinity in coastal areas is caused by saltwater intrusion resulted by over-extraction of groundwater, upstream extraction or damming of rivers and by the post tsunami effects or other natural processes.

Land Use Practices

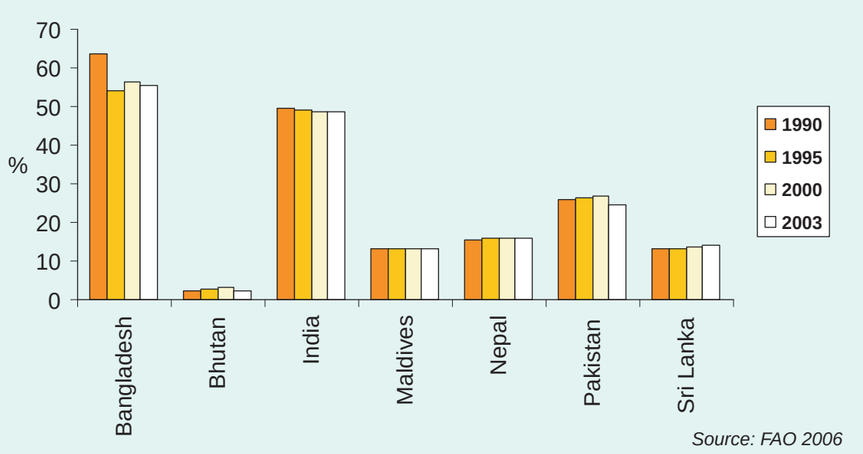
South Asia has the largest area under crops among the five sub-regions of Asia and the Pacific, and poorer sections of its population depend on agriculture for subsistence. The population of South Asia is increasing at a rate of about 1.8 per cent per year. This increases the demand on food production to meet their indigenous requirements without resorting to imports. However, a comparative increase in the amount of agricultural land is not noticeable; and there is a slight decrease in some parts of South Asia.

Between 1960 and 2000, the share of agriculture in national GDPs has decreased by 20 per cent, while the population dependent on agriculture has remained the same. This has led to unemployment, underemployment and migration to urban areas. The region's agriculture is characterized by small landholdings in the alluvial lowlands, where too many people depend on too little land and production is largely for subsistence. The high rates of tenancy combined with the lack of new technologies compounds the problem.

Diminishing Arable Land

Between 1900 and 2003, the amount of arable land in India reduced from 163 million hectares to 161 million hectares. The arable agricultural land mass in Afghanistan, which is one of the most important sources of livelihood, is about eight million hectares, a 12 per cent of its total land mass However, only six per cent of the usable agricultural land is under cultivation (World Ecologist 2001). Arable land production is largely land per capita, which is decreasing in South Asia, though many economies in the region are still dependent on agriculture. Urbanization, population growth and industrialization are the main causes for the decrease in arable land availability. Land degradation has also negatively impacted the quality and quantity of arable land and the reduction in arable land per capita has a negative impact on agricultural production, posing a threat to food security of countries in the region.

Figure 7 : Percentage of total larable land



Source: FAO 2006

The percentage of land under agriculture in South Asia is unclear, though it appears to be increasing in some areas. While the amount of land may not show an obvious change, the way in which agricultural land is being used is changing. There was an increase in irrigation – from 28 per cent to 37 per cent – of the total agricultural land, between 1990 and 2003. This increase in irrigation can result in water logging and salinization. It will also wash away the topsoil and micro-nutrients (FAO 2006)

Enhanced Agricultural Intensity

Between 1990 and 2002, the amount of fertilizer use in agriculture has also increased from 15.09 to 20.88 million tonnes. The amount of cereal production has also increased from 25.1 million tonnes in 1990 to 31.0 million tonnes in 2003 (FAO 2006). These figures demonstrate the increase in the intensity of arable agriculture production. This places pressure on the land's ability to cope, as more water is used, more physical disturbance is created and more chemicals are applied.

Degradation Due to Livestock

Non-arable agriculture has also intensified and the numbers of cattle, goats, chicken and ducks have all increased, along with their stocking density. Between 1990 and 2003, the absolute number of livestock has almost doubled from about 1 billion animals to about 1.9 billion. The density of cattle has increased from 0.63 cattle/hectares in 1990 to 0.67 cattle/ hectares, in 2003, and the density of goats has increased from 0.54 goats/hectares in 1990 to 0.79 goats/ hectares in 2003 (FAO 2006).

Livestock densities have a large impact on land quality as they affect a range of factors, such as physical disturbance and use of vegetation. Animals are often sent out to pasture in marginal or depleted areas, causing the loss of remaining vegetation and increasing the exposure of the land to erosion.

Increasing Urban Areas

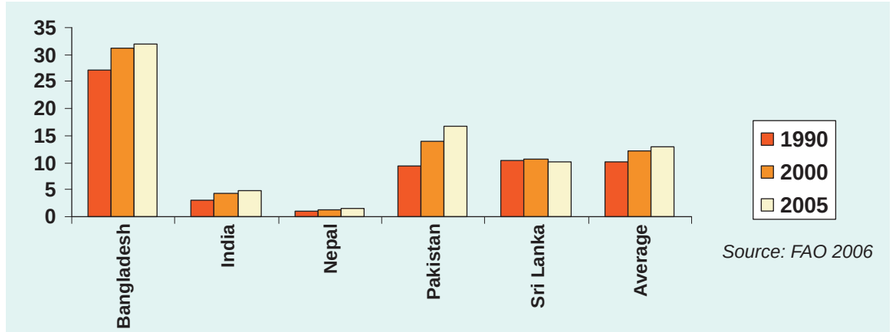
The growth of urban areas has seen a marked increase in the last ten years, a trend that is projected to continue in the future. The population density of South Asia in 2006, was 4.4 people/hectares, ranging between 10.1 people/ hectares in Bangladesh and 0.2 people/ hectares in Bhutan (PRB 2006). The ratio of urban to rural population in South Asia has increased from 20 per cent to 25 per cent in the period 1990 - 2005. The population of South Asia is growing at a rate of 1.8 per cent (PRB 2006), but its urban population is growing at a rate of 3.7 per cent (WRI 2000-2005). The increase in urban population will have a notable impact on land use. It is often argued that because agricultural areas are being converted into urban areas, farmers are forced to access more marginal land that was earlier left fallow. This marginal land may not be very productive and its change to agriculture use may affect other linked environmental services.

Forests

With different kinds of forests, ranging from the Himalayan forests to mangrove habitats, South Asia is home to extremely diverse ecosystems. Increasing populations, clearing of forests for agriculture and human settlements have put substantial pressure on the forest cover. However, the effective forestation and reforestation programmes of governments have resulted in the forest cover remaining constant in Bhutan and Maldives, while there has been an increase of the same in Bangladesh, India and Pakistan, over the previous decade. Bhutan is the only country in the region with more than 50 per cent of its land under forest cover. Two-thirds of Bhutan's land is under forest cover and the country has been making determined efforts to preserve its natural environment through the promulgation and implementation of strict environment conservation laws. The dense forest cover of the country reflects the success of the programme. Between 1990 and 2005, the total forest cover has increased from 77.6 million hectares to 79.2 million hectares (FAO 2005). The maximum forest cover loss was reported in Nepal, where the forest cover has decreased from 4.8 to 3.6 million hectares between 1990 and 2005, in comparison to India, where the green cover has increased from 63.9 to 67.7 million hectares (FAO 2005).

The type of forestry has also changed. The increase in plantations and forests can change a wooded areas' influence on the environment. The amount of plantation forest in South Asia has increased from 2.7 million hectares in 1990 to 4 million hectares in 2005, a percentage increase from 10 to 13 per cent of the total forest cover.

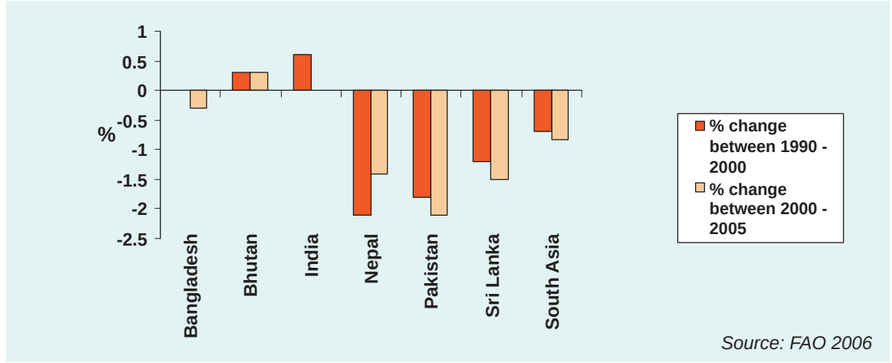
Figure 8 : Plantation forest in Bangladesh, India, Nepal Pakistan and Sri Lanka (in percentage)



Source: FAO 2006

Deforestation is a threat to land quality. The average decrease in forests was 0.7 per cent between 1990 and 2000 and 0.8 per cent between 2000 and 2005 (FAO 2005). This loss occurred in countries such as Bangladesh, Nepal, Pakistan and Sri Lanka, while there was an increase in Bhutan, India and Maldives. Deforestation is a serious and widespread problem in Afghanistan. Figure 9 depicts the change in the total area of forest cover between 1990 to 2000 and 2000 to 2005.

Figure 9 : Annual percentage change in forest area



Source: FAO 2006

The sub-region appears to have been successful in lowering the rate of deforestation in the previous decade, even though it suffers from pressures including scarcity of forestland, poverty and high population levels. The cause of deforestation includes clearing of forest lands for shifting cultivation; permanent agriculture or settlements; use of firewood as fuel for cooking and heating; timber for construction and furniture; and development of roads. However, the land under the forest cover is less than two per cent of the world's total, leading to a crippling shortage of timber and forest resources.

Human-induced degradation of forests and other natural resources ultimately threaten the sustainability of life, livelihoods and long-term development. The countries in the sub-region are striving hard to lower the population growth rate and increase the economic growth rate to provide alternative employment and income for its citizens.

In Afghanistan, in recent years, the forest cover has diminished due to community demands for fuel wood and illegal logging. It is estimated that deforestation rates are exceeding the annual growth rates, leaving a deficit of about 30,000 hectares of forest per year. If nothing is done, Afghanistan will have very little of its natural forests or associated wildlife left within the next 15 years.

Air

Pollution

Air pollution is a major environmental concern in South Asia with high levels of pollution negatively affecting the population's health and productivity. Urban growth and industrialization in South Asia have caused air pollution to become a problem of real concern. This is especially true of urban areas, where transport is the largest source of pollution; others issues include energy generation and industry. With continuing migration from rural to urban areas, air pollution will affect an increasing percentage of the urban population in the coming years.

Most countries have partially addressed the issue by legislation. Further action has not been taken because there is a dearth of studies that explore the linkages between observed pollution levels and established health effects. As a result, the “precautionary principle” has not come into play as yet, in this field, due to the imperatives of “growth” and lack of conclusive evidence to establish the existence of the effects.

Indoor air pollution is often a more severe health hazard than outdoor air pollution. Most rural inhabitants in the region use twigs, grass, dried animal dung, crop residue, wood, charcoal and kerosene oil as household fuels. Coupled with inadequate ventilation, this results in highly contaminated indoor air. Given the high levels of harmful emissions and the number of people using traditional cooking fuels - Asia produces nearly half of the world's wood fuel - the scale of exposure is large (FAO 2001).

In India, household solid fuel use is estimated to cause about 500,000 premature deaths a year in women and children under five. There are indications that tuberculosis and blindness may be associated with indoor air pollution. Indoor air pollution is blamed for five to six per cent of the national burden of diseases in women and children in India (Holdren and Smith 2000).

High levels of urban air pollution have attracted the growing attention from the government, civil society, and industry in South Asian countries. Poor air quality threatens human health and causes other forms of environmental damage. Solid fuel use in industry and household cooking as well as for heating in winter can become a significant source of airborne fine particulate matter. This can especially become true in cities with cold winters that require heating-mainly in northern India, Nepal, and Pakistan-precisely in the season when ambient concentrations from all sources are elevated on account of thermal inversion.

Atmospheric Brown Cloud

The most visible impact of air pollution in the region is the Asian haze - a brownish layer of pollutants and particles from biomass burning and industrial emissions - that particularly pervades most regions of South Asia. The discovery of the Atmospheric Brown Cloud by INDOEX scientists is evidence of the magnitude of the air pollution problem. The haze consists of sulphates, nitrates, organics, black carbon, fly ash amongst several other pollutants.

Particulate Matter

Particulate matter is the most prevalent cause for concern in terms of urban air pollution. The health dangers associated with prolonged exposure to high levels of particulate matter include an increased occurrence of acute respiratory syndrome, chronic obstructive lung disease, worsening of asthma, cardiovascular diseases and lung cancer (World Bank 2003).

The pollutant of special concern in South Asia is small particulate matter due to its high ambient concentrations and documented impact on morbidity and premature mortality. The level of particulate matter in a number of cities in South Asia with an aerodynamic diameter of less than 10 microns (PM10) exceeds the internationally accepted standards by several times, Two major contributors to high ambient concentrations of PM10 in the transport sector are two-stroke engine gasoline vehicles and heavy duty diesel vehicles. Large cities in South Asia suffer from serious particulate air pollution.

Measurements of particulate matter are made across major cities in South Asia. However, comparative data sets over periods of time are hard to come by. Measurement is also complicated by the difference in levels at different locations, at different times of the day, at different times of the year, and with varying measurement periods and processes.

Colombo, the largest city in Sri Lanka has recorded lower levels of air pollution than the other South Asian mega cities, although particulate levels are still moderately elevated. Outdoor pollution is an emerging concern in major urban centers in Bhutan, especially during winters, as also Maldives.

Greenhouse Gases

Global warming is potentially the most serious environmental threat facing the planet today. If climate change predictions are realized, then it will result in a catastrophic impact upon the survival and prosperity of large numbers of the people. South Asia's high level of economic and industrial growth

Table 13 : Ramsar Sites in South Asia

Country	ISO	2005
Bangladesh	BGD	2
India	IND	19
Nepal	NPL	4
Pakistan	PAK	19
Sri Lanka	LKA	3

Source: The Bureau of the Convention on Wetlands 2005

Biodiversity

South Asia's geographical expanse and topography include several diverse ecosystems that harbour a rich variety of faunal and floral species. The Sunderbans, in India and Bangladesh, form the largest contiguous mangrove swamp in the world. There are magnificent coral reefs and atolls in the Lakshadweep-Maldives chain of islands. The Thar Desert and other arid areas occupy north-western India and southern Pakistan. High altitude cold deserts are found in the upper Himalayas and Deosai plains of Kashmir. Three rich biodiversity hotspots are: in the eastern Himalayas in Nepal, north-eastern India, and Bhutan; the Western and Eastern Ghats of India and Sri Lanka; and the Indo-Burma hotspot in India and Myanmar. There are dense and virtually untouched virgin forests in Bhutan and the Sinharaja, an UNESCO World Heritage Site, is an ancient rain forest in Sri Lanka. India has been ranked among the world's 12 mega-diverse countries and Sri Lanka is also among the most biologically diverse countries in the world.

Biological Wealth

The Himalayas are an important ecosystem, with the Hindu Kush Himalayan belt being home to about 25,000 major plant species, comprising 10 per cent of the world's flora. The Sundarbans, found in the Brahmaputra delta, are among the world's most significant mangrove forests and also the habitat of the Royal Bengal Tiger.

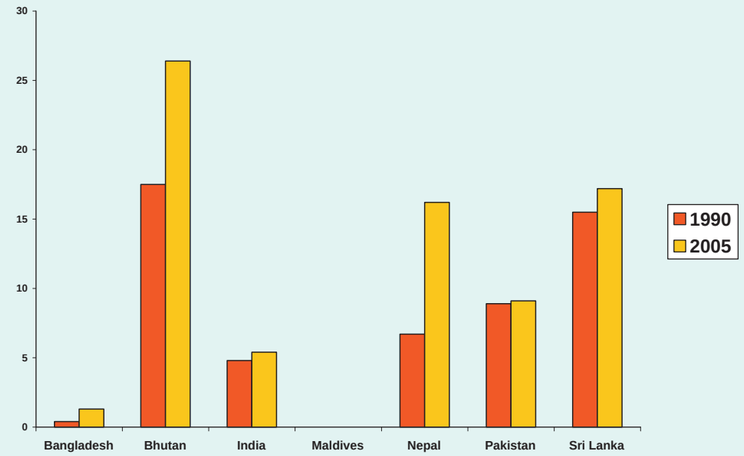
Protected Areas

Apart from numerous biosphere reserves, national parks and wildlife sanctuaries, three biodiversity hotspots have also been identified in South Asia. These areas are extremely rich in species, have high endemism, and are under the threat of extinction. They are not only rich in terms of in flowering plants but also in reptiles, amphibians and some mammals.

Variance in Protected Areas

Protected areas encompass an area of roughly 211,000 sq km in the region. The percentage of protected area coverage varies greatly among countries with Bhutan deigning over 28.3 per cent of its territory as protected, whereas in Bangladesh the area is extremely low (Figure 10). The legal status of all protected areas in Afghanistan is currently in question, and there is no management to protect and conserve their ecological integrity and wildlife.

Figure 10 : Changes in Protected Areas between 1990 and 2005



Source: FAO 2005

Marine Ecosystems

The South Asian Seas region has some of the largest and biologically rich marine ecosystems, such as the Gulf of Mannar, Atolls of Maldives and Mangroves of Sundarbans. The presence of perennial rivers such as the Brahmaputra, Ganges, Godavari, Indus, Kelani and Magna has contributed to large networks of backwaters, estuaries, salt marshes and mangroves.

The SAS also provides habitats for endangered marine turtles, for example the Green and Olive Ridley turtles. Some of the largest coastal lagoons of the world such as Chilka Lake in India and Puttalam lagoon in Sri Lanka are located within the region. It has one of the world's finest coral ecosystems, with atolls constituting the entire country of Maldives. About six per cent of the world's coral reefs are found in South Asia and these provide food and livelihood sustenance to an estimated 400 million people. The Maldives comprise perhaps one of the world's most complex reef systems with 1 300 low coral islands and sandbanks, while the Chagos Archipelago has the largest and some of the most diverse undisturbed reefs in the Indian Ocean including the world's largest atoll - the Great Chagos Bank - and many areas of endemic coral. The tiny Lakshadweep Islands are built on top of coral reefs and covered by coral sand.

Marine Protected Areas

The South Asian region was ranked the lowest in the world in terms of declared Marine and Coastal Protected Areas (MCPAs) in the 2003 United Nations List of Protected Areas, making the Indian Ocean perhaps the most poorly protected coastline. As a result, the degradation of coastal and marine resources continues at an unprecedented rate. Despite current protection measures, between one-third and half of coral reefs in South Asia are effectively dead, and a further percentage threatened.

Climate Change and Biodiversity

Tsunamis and earthquakes are natural stresses that damage reefs and have affected coral reefs over millions of years. As a result, coral reefs have evolved, as have volcanoes, tropical storms,

freshwater inundation, plagues of predators and diseases. They normally recover naturally if the stresses are not too severe, repetitive, or compounded by other threats.

In all Indian Ocean countries, tsunamis have caused less damage to coral reefs than the cumulative direct anthropogenic stresses such as over-fishing, destructive fishing, sediment and nutrient pollution, and unsustainable development on or near them. Moreover, many of the coral reefs in these countries were extensively damaged during the El Niño global climate change event of 1998, when coral bleaching destroyed about 90 per cent of the world's corals.

Tsunamis have compounded the damage from 1998 by killing some newly settled corals and hurling around the coral rubble produced after much of the live coral was killed by coral bleaching. Other climate change factors, including a potential increase in storm strength and frequency and an increase in ocean acidity, pose greater threats to reefs in the future than natural disturbances.

The most important conclusion from most countries was that there was insufficient awareness of the value of ecosystem goods and services and management capacity to conserve the coral reefs and mangroves from ongoing human damage. While the tsunami in 2004 resulted in some severe impacts, ongoing human pressures, such as deforestation and destructive fishing practices, prior to the tsunami caused more damage than the tsunami. All countries recommended stronger conservation and protection of their coral reefs and other coastal resources to guarantee the sustainable provision of goods and services and also to enhance their resistance and resilience against natural disturbances.

Species on the Verge of Extinction

The number of threatened bird and mammal species has increased over the years in all the regions of South Asia, despite an increase in protected areas. This may be attributed to an increase in illegal trade of animals and hunting and degradation and fragmentation of the habitat due to increasing urbanization and consumerism pressures, due to the rapidly increasing population. There is a general consensus that the natural resources of Afghanistan, as also the biodiversity, are in poor shape. The natural wildlife heritage of the country is also under threat. For example, flamingos have not bred successfully in Afghanistan for four years, and the last Siberian crane was seen in 1986.

Economic Activity and Biological Losses

Most forms of sustained human activity result in some modification of the natural environment. This will affect the relative abundance of species and, in extreme cases, may lead to extinction. Contiguous populations of species will become small sub-populations and this could further increase the probabilities of species extinction, within a relatively short time. A major, though at present, largely unpredictable change in natural environments is likely to occur within the next century as a result of large-scale changes in global climate and weather patterns. The probability that these will cause greatly elevated extinction rates is highly probable, although their exact effects are currently unknown.

Impacts

Loss of biodiversity will impact the ecosystem services, which will affect the benefits people receive directly as well as indirectly. These include:

- Provisioning services such as food, clean water, timber, fibre, and genetic resources
- Regulating services such as the regulation of climate, floods, disease, water quality, and pollination
- Cultural services such as recreational, aesthetic, and spiritual benefits
- Supporting services such as soil formation, and nutrient cycling.

Biodiversity plays an important role in the way ecosystems function and in the services they provide. Species composition matters as much or more than species richness in ecosystem services, since the functioning of an ecosystem - and its ability to provide services to humans - is strongly influenced by the ecological characteristics of the most abundant species, and not by the number of species.

Harnessing Traditional Wisdom

Value addition to native knowledge is the confirmation by western scientists of the properties of the resource, often known to local communities for years. Unlike the social system in which this knowledge evolves, each of the commercial system obtains a profit-oriented monopoly to exploit the product from its origin to the end. Most often, it is the pharmaceutical or agro-chemical companies who market the finished product, that secure the patents, irrespective of the fact that the product may have had its origin in traditional knowledge. This can be used to prevent the original inventor from exercising any control over the resource, in question. The issue of protection of traditional knowledge involves preventing unauthorized persons from obtaining rights that are detrimental of the real innovators.

As governments realize the commercial value of genetic resources, they wish to exercise control over them so as to restrict access to these resources. The long history of state control over resources in forest areas and other areas prevents unhindered access to biological resources by the local communities.

Natural Disasters

In the past decade, the South Asian region has been subject to some of the world's worst disaster situations, causing immense loss of life and tremendous damage to property. Increasingly, the links between poverty, ill-planned development and increased risk to disasters, has become apparent. And yet, despite the increasing regularity and severity of hazards like cyclones, earthquakes and flood, disasters are still viewed as separate phenomenon, removed from the mainstream development agenda and isolated from poverty reduction strategies and policies.

Natural hazards do not respect country or regional boundaries. In a region that shares many geographical features such as the Himalayan mountains, rivers, deserts and floodplains, it is inevitable that South Asian countries will also share the disasters. Many of the recent disasters in South Asia have affected more than one country and state. The impact of the 2001 earthquake in Gujarat was strongly felt across northwest India, in much of Pakistan, in western Nepal and even in Bangladesh. The December 2004 tsunami devastated coastal areas in India, Sri Lanka and the Maldives. In 2005, one of the worst earthquakes in history racked through the Kashmir regions of India as also Pakistan (NIDM 2001).

Disasters leave in their wake a huge burden of rehabilitation. For many decades, the response of countries was hinged on relief provision and ad hoc rehabilitation, which only included compensation and rebuilding infrastructure. People affected by disasters found themselves trapped in a recurring cycle of poverty due to loss of livelihood, capital assets and health. Efforts to rehabilitate disaster-hit communities did not take in to account their exposure to future risks to disasters, nor the need to broad base their livelihood options so that they would be more resilient to face hazards and vagaries of weather (Practical Action 2008).

In Pakistan, officials report that more than 530 people died in the northern and southern areas due to heavy snowfall and rain. Several hundred thousand people were stranded in areas of Pakistan-administered Kashmir due to heavy snow and avalanches. In Afghanistan, at least 267 deaths were reported due to avalanche.

Climate-induced Disasters

The impact of global climate change includes: rises in sea levels affecting coastal areas and island states; greater intensity of cyclones; and probably enhanced precipitation in monsoon areas. These have a reinforcing feedback mechanism.

Increasing trends in climate-induced disasters in South Asia have added to the overall damage in the region. Windstorms and cold or heat waves affected the region badly during the last year; in 2005. Windstorms in Afghanistan, Bangladesh, India and Pakistan resulted in 519 deaths, 1796 injured with a total of 124,656 people reported as affected. In South Asia, after earthquakes and floods, windstorms affect the largest numbers of people.

Cold and heat waves are also emerging as severe risks for certain social groups in South Asia. For example, 715 deaths were reported last year due to cold and heat waves affecting Bangladesh, India and

Pakistan. An onslaught of snow and avalanches took thousands of lives across India, Pakistan and Afghanistan. In India-administered Kashmir, a series of snow avalanches left at least 230 people dead and hundreds more missing.

Policies and interventions aimed at increasing adaptive capacities of vulnerable communities towards climate change in the region are what are critically missing in current disaster management thinking. Although South Asian governments are signatories to most of the climate-related treatise, declarations and protocols, commitments are yet to be translated into reality.

Disaster Management: Policies, Processes and Performance

Existing disaster management regimes within South Asian countries vary in terms of policy thinking, strategic planning and actual implementation. Arguably, Bangladesh and India have a substantial base of documented learning and relatively better policy frameworks. In these two countries, disaster preparedness and risk reduction approaches are being placed in the centre of policy formulation. For example, the country strategy to achieve Millennium Development Goals (MDGs) in Bangladesh commits to ensuring comprehensive disaster risk management, environmental sustainability and mainstreaming of these concerns into the national development process. In India, the High Power Committee (HPC) constituted in 2000 developed an exhaustive report recommending disaster-related institutions at different tiers - the centre, state and district. The National Institute of Disaster Management (NIDM) was established under the Ministry of Home Affairs. The NIDM now hosts a newly established SAARC Centre for Disaster Management.

In relation to implementation, however, there are some crucial gaps in Bangladesh and India that are linked, like in other countries of the region, with structural forms of governance. These gaps are predominantly related to a top-down approach, lack of community participation, and low levels of transparency and accountability in administrative functioning.

This is echoed in Sri Lanka following the 2004 tsunami. The disaster sharpened policy thinking towards disaster risk reduction in the country and pending legislation on disaster management was finally brought onto the statute book. New institutions were established, amended and finally merged within one year of the disaster. Implementation, however, did not happen in line with the guiding principles, leaving many questions related to subsidiarity, transparency, accountability and community participation unanswered.

Pakistan and Nepal remain the slowest in recognizing and responding to national and international calls for reforming disaster management systems and strategies. Reactive policies dominate disaster response management in these two countries. In Pakistan, the absence of an effective civilian-based disaster management policy remains a matter of particular concern for many.

Table 14 : Mortalities as a Result of Natural and Manmade Disasters in the South Asian Region

	Afgha - nistan	Bangla desh	India	Nepal	Pakistan	Sri Lanka	Total
Earthquake	2	0	1	0	1	0	**4**
Epidemic	1	0	5	0	2	0	**8**
Extreme Temperature	1	2	2	0	1	0	**6**
Flood	9	3	17	2	5	1	**37**
Industrial Accident	0	2	5	0	1	0	**8**
Miscellaneous Accident	2	0	6	0	5	0	**13**
Slides	0	0	2	0	1	0	**3**
Transport Accident	4	8	22	7	10	1	**52**
Wind Storm	1	7	4	0	1	0	**13**
Total	**20**	**22**	**64**	**9**	**27**	**2**	**144**

Source: RDPI; Practical Action 2006

Disaster Policy in South Asia: Some Observations

Disaster management, development planning and environmental management institutions operate in isolation despite the significance of livelihoods to all three. Integrated planning between these sectors is virtually absent, and there are intra-institutional conflicts and lack of coordination within and between organizations.

In some countries, there are no long-term, inclusive and coherent institutional arrangements to address disaster issues with a long-term vision. Disasters are viewed in isolation from the processes of mainstream development and poverty alleviation planning. In fact, there are numerous examples of large-scale development projects bringing new forms of disaster and adding to the vulnerability of already at-risk communities.

State-level disaster preparedness and mitigation measures are heavily tilted towards structural aspects and undermine non-structural aspects such as the knowledge and capacities of local people and the related livelihood protection issues. Applied disaster management policies sometimes carry strategic biases that are aimed at protecting locations and infrastructure of greater economic and political significance, at the cost of areas and communities with less political influence and economic importance.

Despite the fact that South Asian countries share deserts, river basins, mountain ranges and coastlines, there is poor trans-boundary coordination on issues of natural disasters and environmental degradation. Bhutan and Maldives are perhaps the most neglected countries in the region. They are less documented and lag far behind in the process of policy formulation on disasters.

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. The various components of a secure economic base are: an adequate capital base for meeting development and other needs; access to state-of-art technologies; and a fair share in international trade.

Adequate Capital Base

Promoting sustainable development in the region requires huge capital outlays in terms of both physical infrastructure and financial resources. Several attempts are underway to estimate the costs of achieving the MDGs in several countries globally, as well as sectorally. It is estimated that realizing the MDGs at the global level will require at least an extra US$50 billion per year (Source: Zindello Commission). Since South Asia needs to increase its efforts to achieve MDGs, it will also require a substantial part of this amount in order to be assigned for development activities.

Table 15 : Acceleration to Achieve MDGs in South Asia

	Population (millions) 2000	Average Annual Rate of change (1990-1999)	Average Annual Rate of change needed to achieve the MDG (1999-2015)
Poverty (Living on less than $1 a day)	432	-2.0	-3.2
Net primary enrolment rate (Primary age children not in school)	32	1.3	3.0
Under 5 mortality	4	-2.3	-5.8
Maternal Mortality Ratio (Births attended to by skilled health personnel)		-	-
Improved water source (Without access to improved water sources)	225	-4.3	-1.7
Access to improved sanitation services (Without access to sanitation)	944	-0.8	-4.1

Source: World Bank 2002

Current Sources of Capital

To finance the infrastructural, industrial and other development needs, South Asian countries are using three main sources of funds:

1. Domestic financing, which includes domestic private investment, investment by the public sector, domestic debt and deficit financing
2. External investment inflows, which includes short-term investments (foreign institutional investments), medium- and long-term investments, including Foreign Direct Investment (FDIs) and remittances
3. Overseas development assistance

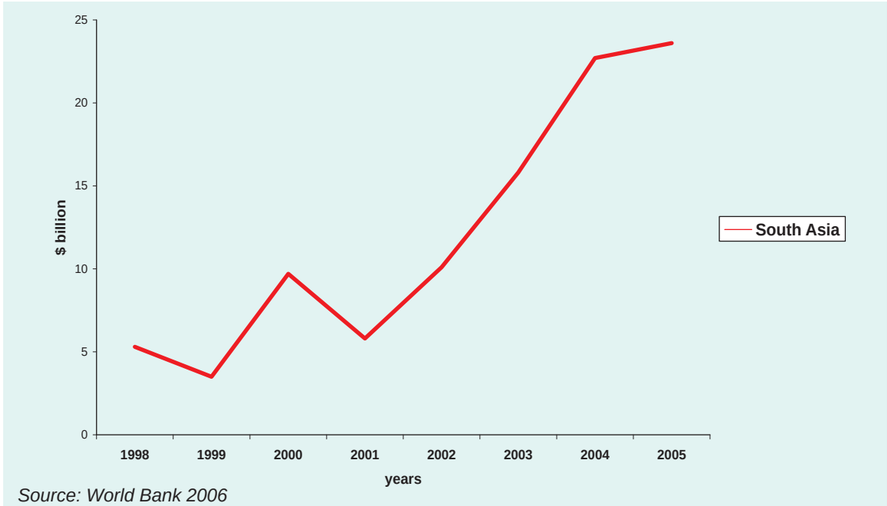
Domestic Financing

In a majority of South Asian economies, domestic resources constitute the bulk of investment expenditures. Since the 1990s, most of these countries have achieved fairly high savings rates. However, demands for resources for infrastructure development and social sectors have resulted in even higher investment requirements, thus necessitating external capital inflows or overseas development assistance. One of the prime reasons for inadequate domestic financing of investment is that the capital markets in most countries are still not very well developed. The banking sector continues to be the major savings and investment conduit in all financial markets in South Asia. In large and medium-sized economies like Bangladesh, India, Pakistan and Sri Lanka, there should be a more diverse financial system with not only banks (and equity markets) but also markets for longer-term instruments such as public and private bonds, along with mortgage markets, as well as institutional investment groups-pension funds, life insurance and mutual funds - and various non-banking financial institutions. For smaller economies such as Bhutan and Nepal, the banking structure might be better complemented with access to capital markets of their more influential neighbours or regional capital markets, as the domestic ones might be too small, too shallow and too thin to be viable.

Investment from Overseas

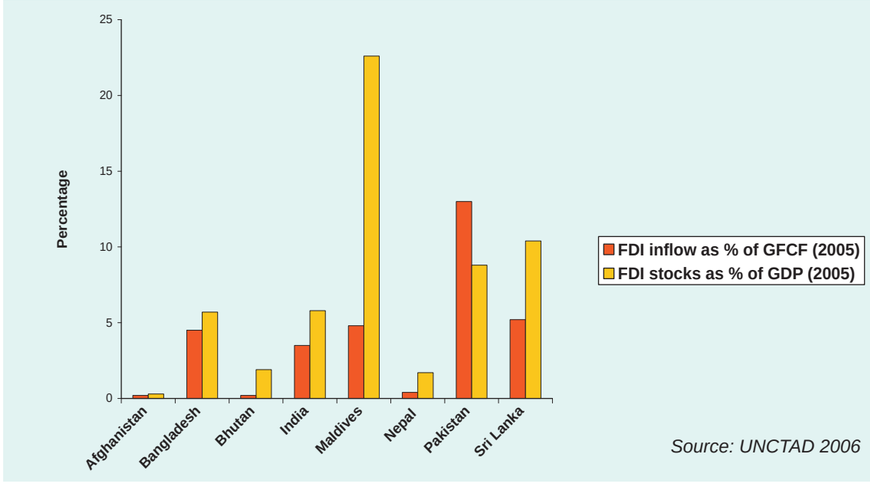
South Asian countries that had very open economies in the immediate post- independence period of the 1940s became some of the most highly protectionist economies by the 1970s. Tariff and, even more importantly, non-tariff barriers were extremely high, state interventions in economic activity had become pervasive, attitudes to foreign investments were negative, often hostile, and stringent exchange controls were in place. In 1977, Sri Lanka initiated a process of policy liberalization, which was followed by other countries in the 1980s. It was from the early 1990s, with the start of a major reform process in India, that the region as a whole began the process of freeing the economy. By the end of the decade, though important policy barriers to trade and foreign investment remained throughout the region, enormous progress had been made in this direction. In recent times, the liberalization process in this region has infused dynamism to the region's economies in several ways. Economies are becoming more open, outward oriented, and more receptive to foreign investment and trade. In the last few years, booming stock markets in some of the South Asian countries have boosted portfolio equity flows to a record US$23.6 billion in 2005. These have fuelled domestic investment in capital formation in a large measure for some of the South Asian countries. However, these capital flows into South Asia remain concentrated in just a few countries, with small economies such as Bhutan and Nepal receiving very little FDI and India receiving almost three quarters of the total. Apart from fuelling domestic investment to an extent, the rise in net inflows of private capital finance a substantial rise in the countries' official reserve assets and increase in the accumulation of foreign assets by private entities.

Figure 11 : Net Private Capital Flows to South Asia



Source: World Bank 2006

Figure 12 : Contribution of FDI to South Asian economies



Source: UNCTAD 2006

Table 16 : Per Capita ODA Received in the South Asia Sub-Region

Countries	Official Development Assistance (ODA) Received [a] (net disbursements)			
	Total (US$ millions)	Per Capita (US$)	As Percentage of GDP	
	2002	2002	1990	2002
Maldives	27.5	88.9	9.8	4.4
Sri Lanka	344	18.2	9.1	2.1
India	1,462.70	1.4	0.4	0.3
Bhutan	73.5	33.5	16.5	12.4
Bangladesh	912.8	6.3	7	1.9
Pakistan	2,143.70	14.3	2.8	3.6

Source: UNDP 2005

In South Asia, there is a clear trend of declining development assistance. Debt relief, together with other special-purpose grants for technical cooperation, emergency and disaster relief, and administrative costs has accounted for a rising portion of Overseas Development Assistance (ODA) over the past few years. In several countries, ODA funds are also being used to finance the growing oil import bills resulting from the increasing oil prices. Although donors have globally made commitments to increase ODA by US$50 billion by 2010, less than half of it is targeted to reach South Asia.

Emerging Trends

The changing trends in current sources of capital mentioned above, establish that:

- Domestic capital markets in the South Asian countries are still not very well developed and further capital market reforms are needed so that more funds can be significantly raised domestically for financing development activities
- External investment flows to South Asian countries are increasingly sharply, but are still well below what other sub-regions receive, and are concentrated in a few countries within the South Asian sub-region
- More and more ODA is being directed into Africa, and South Asian countries will increasingly need to reduce their reliance on this source of funding.

Strengthening the Capital Base

The situation which South Asian countries face makes it imperative to reduce dependence on external funds to the minimal possible. While this is not easy, efforts at both national and regional levels can bear fruit. At the national level, efforts should be made to increase the share of FDI and portfolio equity in the finance mix of external financing. The development of domestic capital markets (with adequate regulatory systems) has shown very encouraging results in several countries. Fiscal policies have to be made more prudent and designed to reduce vulnerability to external pressures such as currency and perceptions. Continued macroeconomic stability is vital to ensure effective management of capital flows that advance long-term investment and growth.

Co-operation at the sub-regional scale can greatly help South Asian countries to strengthen their capital base. Greater financial integration among countries will lead to increasing reserves - with governments and private entities - that can be utilized for capital flows between these countries (south-south flows), particularly in the form of FDI. This FDI can be helpful in fuelling the gap between saving and investment with an ultimate goal of economic development by creating employment, by transferring technology and by achieving a sustained economic growth. Several experts have also proposed the formation of a South Asian Development Bank along the lines of the Asian

Development Bank. The development funds for the bank could be initiated with contributions from member countries, multilateral, bilateral and other private agencies.

Technological Advances in South Asia

With about half of the world's absolute poverty concentrated in South Asia, there is a critical need to choose suitable technologies for poverty reduction. New and efficient technologies will be essential to increase the capabilities of the South Asian countries to achieve sustainable development, sustain the world's economy, protect the environment, and alleviate poverty and human suffering. In doing so, two kinds of technologies will be needed. The first category includes those technologies that directly enhance human capabilities. Many products - drought-tolerant plant varieties for farmers in uncertain climates, vaccines for infectious diseases, clean energy sources for domestic purposes, internet access for information and communications - can directly improve people's health, nutrition, knowledge and living standards, and increase the people's ability to participate more actively in the social, economic and political life of their community.

In the second category are those technologies that impact human development as a result of their impact on economic growth through the productivity gains that they generate. They are the ones that raise the crop yields of farmers, the output of factory workers and the efficiency of service providers and small businesses. They also create new activities and industries, such as the information and communications technology sector, contributing to economic growth and employment creation. A very crucial subset of these activities helps in minimizing damages from natural disasters such as earthquakes, cyclones and floods.

Technological Innovation and Accessibility

Science and technology have been an integral part of South Asian civilization and culture over the past several millennia. Very few people are aware that this region was the fountainhead of important foundational scientific developments and approaches, great scientific discoveries and technological achievements in mathematics, astronomy, architecture, chemistry, metallurgy, medicine, natural philosophy and other areas. The current scenario, however, does not look quite as impressive. Table 17 shows that none of the South Asian countries rank high in the Technology Achievement Index, with some countries such as India and Sri Lanka being what are known as 'dynamic adopters' at best.

Table 17 : State of Technological Achievement

Categories of Technology Achievement Index	South Asian countries in respective categories	Rank in Technology Achievement Index
Leaders	Nil	-
Potential Leaders	Nil	-
Dynamic Adopters	India Sri Lanka	63 62
Marginalized	Nepal Pakistan	69 65

Source: UNDP 2001

Note: *Data not available for Bangladesh and Bhutan, Data available for a total of 72 countries, TAI shows a high correlation with HDI*

It is also important to note that serious efforts towards advances in science and technology are underway within South Asian countries, albeit at different levels and pace. Under the formalized system, India is one of the top-ranking countries in the field of basic research and application of technologies such as the Information Technology. Considerable applied research is also being undertaken by the private sector. Most of the other countries, however, do face constraints such as lack of critical manpower in the fields of scientific and technological innovations, dearth of resources and infrastructure and inadequate financial input.

In the informal system, a number of innovations continue to happen at the community level, in people's homes and through individuals (locally/privately funded) with no official recognition and support. These science and technology advances provide solutions to new challenges faced by the poor. These also have the added advantage of being tailor made for specific situations. They are not officially recognized, with no formal mechanisms through which these can be transferred or scaled up and, therefore, the value given to these advances is limited.

Position in International Trade

International trade is increasingly being recognized as a vital engine for economic development (World Bank 2005a: UNCTAD 2004a). Although South Asia is home to over 22 per cent of the world's population, it accounts for only two per cent of the world GDP and just over one per cent of world trade. The region was one of the most protected until the late 1980s due to the prolonged use of import-substitution policies backed by restrictive trade and industrial regimes. However, since 1990, South Asia has moved in line with changes in world economic trends. It has made progress in deregulation; and liberalization has helped to increase the region's integration with the world economy, achieving higher growth rates.

Multilateral Trade Negotiations: Growing Asymmetries

The express purpose and objective of the Multilateral Trade Negotiations (MTNs) is to liberalize trade so that efficiency gains become available to the world economy at large. However, it has been recognized that there are unequal players in the game and developing countries are constrained by their financial and physical capabilities to undertake equal commitments. The Uruguay Round (UR) placed substantial obligations on developing countries in terms of the liberalization of trade and their policy regimes with respect to intellectual property rights, investments, and trade in services. Developing countries were lured into accepting these substantial commitments with the promise of additional market access by developed countries through liberalization of agricultural trade, textiles and clothing and movement of citizens. Contrary to these claims, it has now been empirically shown that the mercantilist balance resulting from trade liberalization has been in favour of the developed countries and agreements, such as Trade Related Aspects of Intellectual Property Rights (TRIPs) and Trade related Investment Measures (TRIMs), are leading to significant income transfers from developing countries besides reducing the policy space for development. Developed countries, while preaching the virtues of free trade to the developing countries, have been resistant to bringing down peak tariffs, high specific duties and tariff escalation that affect imports from the former.

The fortunate phenomenon in recent years has been the coming together of developing countries on negotiating with the developed countries on issues such as exports subsidies, agricultural subsidies and competition. This was amply demonstrated in the failure of The Fifth Ministerial Conference of World Trade Organisation (WTO) held in Cancun, in September 2003, where developing countries managed to hold together till the end, despite heavy pressure exerted by the world's largest economic and political powers.

Emergence of Regional Trading Blocks

The previous decade has seen the emergence of strong regional trading blocs in different parts of the world. In the present scenario, nearly 60 per cent of the world trade is being conducted through these regional trading blocks on a preferential rather than on an MFN basis. Most of the major economies of the world are a part of one trading block or the other.

While most of the developed countries are either part of the North American Free Trade Association (NAFTA) or the European Union, several developing countries in Latin America, Africa, and Asia have formed their own regional trading blocks. The box below provides a listing of the existing trading blocks in the developing countries.

Regional Trading Arrangements in Developing Countries

In Africa, there are some 14 regional trade agreements, including the Arab Maghreb Union (UMA) in North Africa and in sub-Saharan Africa, the ones in force include Central African Economic and Monetary Community (CEMAC), Common Market for Eastern and Southern Africa (COMESA), Eats African Community (EAC), Indian Ocean Commission (IOC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), West African Economic and Monetary Union (UEMOA), Southern African Customs Union (SACU) and Southern African Development Community (SADC). These sub-regional groupings are expected to constitute a continental scale African Common Market under the auspices of the African Union by 2028.

In the Asia-Pacific region, there exist 10 groupings, including the Association of South-East Asian Nations (ASEAN), South Asian Association for Regional Cooperation (SAARC), Economic Cooperation Organization (ECO) in continental Asia and Melanesian Spearhead Group (MSG), Pacific Island Countries Trade Agreement (PICTA/PACER) in the Pacific, as also the Bangkok Agreement.

In the Americas, Southern Common Market (MERCOSUR), the Andean Community, Caribbean Community (CARICOM) and Central American Common Market (CACM) operate alongside several plurilateral economic cooperation agreements.

In the Middle East, the Gulf Cooperation Council (GCC) plans to establish an economic union by 2010. Negotiations for the Greater Arab Free Trade Area (GAFTA) were launched with a target date of 2008. Four Mediterranean-Basin countries (Egypt, Jordan, Morocco and Tunisia) have signed the Agadir Agreement as a stepping stone towards a Euro-Mediterranean FTA, to be established by 2010.

Composition and Direction of Trade

Data presented in Table 18 tends to suggest that the export basket of the South Asian countries is primarily dominated by manufactures. This indicates a shift from primary commodities exports to manufacturing, which has important positive implications for income and employment generation opportunities in these countries. In this respect, Bangladesh and Sri Lanka have performed better than other countries. It is also to be noted that in most of the South Asian countries, manufactured exports comprise commodities like textile and clothing. Hence, the need for diversifying into other manufactured goods cannot be over emphasized. However, primary commodities still have an important role in South Asian countries' exports. Some of the notable primary products include jute in the case of Bangladesh, tea for India and Sri Lanka, rice for India and Pakistan, and iron ore for India. The import structures of the South Asian countries show that manufactured goods account for more than 50 per cent of imports in all the countries.

Table 18 : Major Non-Bulk Exports

	ASEAN	European Union	NAFTA
India	Vegetables	Fish, Vegetables, Textiles	Fish, Vegetables, Textiles
Bangladesh		Textiles	Textiles
Nepal	Textiles	Textiles	Textiles
Pakistan	Vegetables	Textiles	Textiles
Sri Lanka		Vegetables, Textiles	Textiles

Source: World Bank 2006

An analysis of the direction of trade suggests that the South Asian countries continue to depend on developed country markets for their exports. However, the importance of the developing countries has also been growing over the past decade (1990-2001), especially in the South Asian region. A large proportion of imports to South Asia are from the Middle East, comprising mostly oil and gas. Overall, it may be stated that the direction of trade, which has undergone a shift in recent times in favour of developing countries and more specifically East and Southeast Asian countries, has been continuing, although do exist country specific variations in this respect.

Trade in Services

In the last decade and a half, the services sector has grown at a phenomenal pace in South Asia. Led by India, the export of commercial service in South Asia reached US$44 billions in 2004, which was 1.5 times higher than in 1999. These services relate to transport, travel and the “other commercial services” category, including Information Technology, softwares and related services. South Asian imports of services have also grown in recent times, with transport services being particularly important. In Bangladesh, India, Pakistan and Sri Lanka, transport services accounts for between 60 and 70 per cent of the total imports of commercial services during the 1990s; and imports of travel services in Nepal have also been high.

Table 19 : Structure of Merchandise Exports

	Merchandise exports $ millions		Food percentage of the total		Agricultural raw materials percentage of total		Fuels percentage of the total		Ores and metals percentage of the total		Manufactures percentage of the total	
	1990	2004	1990	2004	1990	2004	1990	2004	1990	2004	1990	2004
Afghanistan	235	420	..	..	..	..	..	..	..	..	..	..
Bangladesh	1,671	8,150	14	8	7	2	1	0	0	0	77	90
India	17,969	75,595	16	10	4	1	3	9	5	7	70	73
Nepal	204	756	13	21	3	1	..	0	0	4	83	74
Pakistan	5,615	13,379	9	10	10	2	1	3	0	0	79	85
Sri Lanka	1,912	5,757	34	21	6	2	1	0	2	3	54	74

Source: World Bank 2006

Table 20 : Structure of Merchandise Imports

	Merchandise imports $ millions		Food percentage of total		Agriculture raw materials percentage of total		Fuels percentage of total		Ores and metals percentage of total		Manufactures	
	1990	2004	1990	2004	1990	2004	1990	2004	1990	2004	1990	2004
Afghanistan	936	2,300	..	..			..	..	..	..	..	..
Bangladesh	3,618	12,026	19	19	..	..	16	8	3	2	56	62
India	23,580	97,339	3	4	5	9	27	35	8	5	51	53
Nepal	672	1,870	15	17	4	3	9	16	2	4	67	59
Pakistan	7,411	17,949	17	11	7	5	21	22	4	3	54	58
Sri Lanka	2,688	7,973	19	12	4	6	13	15	1	3	65	69

Source: World Bank 2006

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SECTION – III

Strategy for South Asia : Priorities for South Asian Cooperation

This section provides a framework for action in South Asia.

Recognising that the challenges and priorities of sustainable development clearly extend beyond national boundaries, the document strongly emphasizes enhancing regional cooperation in specific areas of high potential, as highlighted under the SDGs.

Some of the focus areas which require enhanced regional cooperation include livelihoods, health, education and the environment.

Sustained Human Security

Eliminating Poverty

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

Since poverty in South Asia is a serious issue, its sustained reduction is crucial for the South Asian sub-region. It is imperative to regularly evaluate and monitor the MDG programmes, and continually formulate effective strategies for poverty reduction. The information should reflect the existing disparities in the development of women, social groups, regions and education.

Addressing Rural Poverty

Since rural poverty is a major problem, any focus on poverty reduction will involve interventions such as: enhancing access of the poor to productive resources (land, water, forests); technology, financial services, and markets; and strengthening the capacity of institutions working on rural poverty reduction. The concentration of poverty in certain geographical locations and within certain groups requires efforts that focus on less-favoured clusters (remote uplands and mountains, marginal coastal areas and unreliably watered dry lands) and socially marginalized groups such as women, as also indigenous peoples. It is particularly important that all strategies should include environmental sustainability and an increased role for women in promoting sustainable development at the local, regional and national levels of government.

Sustained Poverty Reduction

The sustainability of poverty reduction programmes can be ensured by rooting them within local institutions. International agencies encourage partnerships among local government institutions, women's groups, civil society organizations and government agencies. Developing gender-equitable and community managed approaches to sustainable livelihoods and environmentally sustainable natural resource management, including energy management and the provision of basic services, are essential for poverty reduction. Issues such as women's rights to land and their role in the management of common property resources are being explored in India.

Human Security : Variable Aspects

Experiences at different levels in poverty eradication indicate that although food and income security comprises the two essential priorities for human security, water, health and energy are equally critical and need to be addressed. While government and civil society organizations have traditionally played a pivotal role in these efforts, the importance of more proactive action by the private sector is being recognized. Some of the specific actions essential for creating human security in the sub-region include:

- Ensuring food security through accessibility, affordability and well-planned sustainable food production, storage and distribution strategies
- Strengthening research, information accessibility, infrastructure and incentives, especially for small farmers, and promoting co-operative systems for aggregation of small land holdings
- Collaborative action for water conservation to ensure adequate and sustained quality and quantity of water to all
- Provisions for preventive and curative health facilities to reduce poverty, and enhance human development and economic growth in the region
- Ensuring a steady, reliable supply of energy at a reasonable cost
- Protecting local communities from devastation caused by regular natural disasters, as these calamities affect the existing efforts to provide human security
- Preventing, prohibiting and suppressing trafficking in women and children

A) Managing Population Growth

Arresting population growth is a priority for the survival of most countries in the sub-region. While population growth has to be addressed directly, certain indirect measures are practically feasible and effective. 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
- Providing livelihood security through food, water, energy, income and decentralized production systems
- Formulating management approaches that provide for the needs of the urban residents, and also protect the environment
- Setting up or upgrading infrastructure for health, education, drinking water, sanitation, transport, energy and other public systems

B) Generating Employment for the Underprivileged

Economic growth must not only be accelerated but also restructured in such a way that its capacity to alleviate poverty is enhanced for given growth rates of GDP. In this context of achieving pro-poor growth, three sets of measures can be undertaken at the country as well as the regional levels:

- Joint venture projects need to be undertaken to rapidly accelerate the growth of those sub-sectors in agriculture and industry, respectively, which have relatively higher employment elasticities, and which can increase the productivity and generate more income for the poor. These sub-sectors include production and regional export of high value-added agricultural products such as milk, vegetables, fruits, flowers and marine fisheries.
- A regional network of support institutions in the private sector can be facilitated for enabling small-scale industries located in regional growth nodes, with specialized quality control systems and provision of marketing facilities in both the country specific as well as regional economies.
- A SAARC Fund for vocational training may be established to help establish a network of high quality vocational training institutes for the underprivileged. Improved training in market skills will enable a shift of the labour force from a low skill sector to higher skill sectors, and thereby increase the productivity and income earning capability of the poor. It would, at the same time, generate higher growth for given levels of investment by increasing the factor productivity (Hussain, A. 2004).

Employment Policies and Strategies

Alleviating poverty in South Asia through productive employment is a critical factor. Strategies include an employment policy for promotion and generation of employment. Strategies of promoting labour demand include measures to:

1. Promote economic growth, especially growth of labour-intensive sectors such as agriculture, small and cottage industries; community, social and personal services; and also established and newly emerging sectors such as frozen food, leather and leather goods, tourism, agro-based industries and pharmaceuticals.
2. Improve labour productivity and absorption in wage employment.
3. Promote self-employment and employment in the informal sector in general, and introduce special employment programmes for poor, vulnerable and disadvantaged groups. Salient elements for employment policies are: promotion of market-oriented skill formation to overcome the problem of mismatch between supply of and demand for skilled labour in the country; and improvement in the quality of the education system, at primary, secondary and tertiary levels, to address the problem of low quality of labour with irrelevant skills.
4. Develop entrepreneurship qualities, especially among the poor, through training and education and supportive policies to enable them to undertake new activities, upscale the existing activities and raise productivity.
5. Enhance good quality employment opportunities for women through opening up of new employment opportunities, ensuring equal rights and treatment in employment; reducing

skill and education gaps between men and women; and providing appropriate utility, infrastructure and social services.

6. Ensure micro credit and larger size loans to promote productive self-employment.
7. Develop appropriate services for migrant workers.

C) Improving Agricultural Productivity

The countries in South Asia have reached the limits of extensive cultivation, and the scope for further expansion of cultivated area is not very bright. In fact, there is a need to withdraw some of the marginal lands, as cultivation has been extended to areas that are ecologically unsuitable for crops. At the same time, the possibility of encouraging food grain production by raising land productivity is quite critical, primarily because the yield levels of most crops grown in these countries are still fairly low. Countries have used non-price as well as price measures to induce farmers to produce more.

GOOD GOVERNANCE PRACTICES

Good governance is fundamental for increasing access to food and reducing the existing food insecurity. The participation of citizens in decision-making and strengthening of the rule of law are essential for poverty reduction in all its manifestations. It also helps in the efficient functioning of markets which, in turn, create viable opportunities for employment.

Decentralization, accountability and transparency (including anti-corruption strategies) along with the promotion of a culture of service delivery, need to be enhanced in South Asia. The capacity of local governments should be built up to improve service delivery in order to help achieve MDGs. New information technologies could facilitate access to information and enable e-governance. Efficient governance will promote industrial growth, which positively influences gender, social and regional disparities; accelerates the pace of poverty reduction; and sustains both human development and human security.

Pro-poor policies should target the most vulnerable sections of society. Food entitlement should reach the targeted population. Even well functioning programmes such as the Integrated Child Development Services programme (ICDS) do not fully address the problem of food access to vulnerable populations. Ownership rights on land and reduction in income inequality will also serve in terms of improving access to food. Minimum wages to guarantee the right to food as well as easy access to credit and marketing networks are also important for low-income groups.

Institutional Reforms

Institutions play an important role in improving the access to food. Well functioning institutions that facilitate the smooth transfer of produced food to consumers are important. National level institutions such as the Public Distribution System (PDS) in India should have adequate access to remote areas in order to improve food security at the local level. Food insecurity has been high in areas where the PDS does not function effectively. The role of food parastatals as an institution in procuring and distributing food must be revisited because it is becomingly increasingly clear that parastatals who participate in procurement and distribution of food have become inefficient, partly as a result of poor governance and accountability. Reforming these institutions to better serve the poor by reducing cost and increasing benefit to the poor will improve access to food (Rashid et al., 2005).

Policy Reforms

The policy priorities for improving food security and nutrition in South Asia include greater public investment in agriculture as well as in the social sectors. For example, an additional US$50 billion investment in South Asia in the social sector will reduce child malnutrition by 13 million (Smith, et al. 2000).

Improving access to productive resources and employment for vulnerable sections of society is also important. Greater linkage between agriculture research and food policy should be pursued in order to translate agriculture technology into adequate food security. Recent trends indicate that community based targeting programmes work better in improving the access to food. However, policy making should involve poor farmers and vulnerable sections of society to be the direct beneficiaries, in terms of improved access to food. Greater involvement of the private sector is also required in establishing and maintaining food distribution centres in rural areas.

Another area that needs policy attention is improved inter-regional trade liberalization in South Asia. Harmonization of customs and tariffs among the countries in the region to facilitate better food trade is the need of the hour. A multidisciplinary approach is needed for greater involvement of nutritionists in policy making. The early warning systems to forewarn of impending food shortages due to natural disasters should be developed in all of the countries in the region as well as at the regional level so as to increase information sharing among the countries. Effective communication that is user-specific and user-sensitive to various levels of decision making is also important for scientists as well as policy makers towards solving the food security problem in the region. At the international level, global trade barriers and policies have cut the prices of many crops that are critical to the economies of developing countries and their farmers (Leach, G. 1995). Radical reforms and a common position for South Asia on food pricing and trading are required to enable the large increases in production that are needed. The short-term market signals have to be overruled by longer term socio-economic and political considerations.

SAARC Food Bank Measures to Mitigate Food Scarcity

In order to manage emergencies caused by natural and manmade calamities and food shortages, the various leaders of South Asia countries welcomed the signing of the inter-governmental agreement establishing the SAARC Food Bank with the participation of all the SAARC countries. This landmark event sowed the seeds of a South Asian food reserve, the solution to the hungry millions in South Asia. However, problems related to affordability, accessibility of food, ensuring food security through well-planned sustainable food production, storage and distribution strategies must be first dealt with at the national level. The food bank will supplement national efforts in providing food security to the people of the region.

The Third Meeting of the TCARD (New Delhi, September18-19, 2006) revised the original concept of the food reserve, which was further endorsed by the Meeting of SAARC Agriculture/ Food Ministers (Islamabad, December 14, 2006). Later, an inter-governmental expert group met in New Delhi on March 1-2, 2007 and finalized the text of an agreement on establishing the SAARC Food Bank. The Agreement was signed during the 14th SAARC Summit.

The Food Bank will act as a regional food security reserve for the SAARC member countries during normal time food shortages and emergencies; provide regional support to national food security efforts; foster inter-country partnerships and regional integration, and solve regional food shortages through collective action. The Food Bank will commence with a reserve of 241,580 metric tonnes of food grains. Afghanistan's contribution will be added to this quantum.

The scope of the Food Bank has been expanded to reach beyond emergencies. The agreement contains certain broad principles for price determination. The prices, terms and conditions of payment in respect of the food grains will be subject to direct negotiations between the concerned member countries based on the guidelines for price determination to be periodically approved by the Food Bank Board (Article-IX). The agreement seeks to rationalize and improve the provisions on the procedures for withdrawal and release of food grains. It delineates the role of the board to administer functioning of the Food Bank, and its policy making, which will be distinct from the designated Nodal

Point(s) and also responsible for transacting all business at the national level which:

- Can play a preventive role by being instrumental in conducting hunger mapping and generating early warning of food insecurity. During disasters and natural calamities, the regional Food Bank will come into full operation, using its exhaustive network to supply food aid and relief to the affected areas, thereby minimizing the need for foreign external assistance and enhancing self sufficiency, thereby solving the problems of food during emergencies.
- May also help the farmers sell their surplus stock in the international market or help them market cash crops through provisions of sub-regional platforms, by the creation of regional cooperatives. It can, in partnerships with research institutes, increase food production by mobilizing resources and diverting government investments into agricultural research and development. Women, the poor, and the socially excluded will benefit through agricultural extension, agricultural research and development activities.
- Will ensure environmental sustainability at the sub-regional level by sharing and disseminating environmental friendly agricultural practices and help and serve as a regional knowledge hub for exchange of agrarian and technological know how amongst the farmers. It will have a sub-regional impact in communicating basic messages about available technology and better farming systems using mass media. Performing the function of a South Asian agriculture tariff commission, an institution that closely monitors movements in world and domestic prices, this body will take timely and appropriate actions to avoid major shocks.
- As recommended by the ISACPA, a South Asian database on poverty alleviation and hunger reduction, the best practices for integrated development and poverty eradication will be integrated into the Food Bank. For resource mobilization arrangements, the SAARC Development Fund (SDF) is an important pillar, created with the objective of bringing concrete benefits to the people of the region. Resources for SDF will be mobilized both from within and outside the region.

D) Water Management

Human consumption, livestock and farming by poor communities through affordable and socially acceptable technologies and practices need water security. Developing an integrated water management, including sanitation, systems to ensure adequate and sustained quality and quantity of water is imperative; along with forging innovative financing and partnership mechanisms for effective extraction, treatment, storage and equitable distribution.

Area Water Partnerships

Area Water Partnerships (AWPs) provide a platform to various stakeholders to interact in the water sector so as to achieve integrated water resources management (IWRM) at the local level. The AWP concept was a unique initiative in South Asia to move the partnerships to the ground level, in order to move from vision to action. During the period 2001–2004, between 30 and 39 AWPs were formed in South Asia. This number varies in different reports (Table 21).

Table 21 : Number of AWPs in South Asia

Country	Self-Assessment Report	Learning Review GWP-SAS	Information provided by GWP-SAS	From the Evaluation Report on AWP
India	10	10	14	14
Nepal	2	2	2	2
Pakistan	12	6	14 (7 active; 7 inactive)	1
Sri Lanka	4	4	4	4
Bangladesh	11	11	13 (8 active; 5 inactive)	9
Total	**39**	**33**	**47 (12 inactive)**	**30**

Source : GWP 2005

AWPs, developed as independent platforms for promoting IWRM at the local levels, allow the stakeholders to participate in dialogues and decision making, as well as influence the existing policies. The role played by AWPs is documented in Global Water Partnerships (GWPs). The AWP experience in South Asia also underlines the need for local action in order to resolve IWRM problems, to keep the IWRM dialogues alive, and to bring about solutions to the emerging problems, especially at the community level. It has been realized that these inexpensive local actions will help promote mutual trust in order to move towards higher-level dialogues and interventions.

Since IWRM is considered to be best handled in a decentralized mode in a river basin/sub-basin context, the AWPs operating at present are largely located on the basis of natural resource units, i.e., at the river basin or sub-basin levels. However, the AWP concept is not confined to natural basins alone. AWPs are largely but not necessarily partnerships in a natural or ecological basin, often cutting across political boundaries yet remaining within the Country Water Partnership (CWP).

Impact on National Policy

Experiences differ among AWPs in each of the five countries (Table 22). From the Indian experience, Purna River Basin Water Partnership (PRBWP) may be in a position to influence state policies, while other AWPs cannot be evaluated as these early efforts may not be visible. AWPs might not have been effective across all the regions but there could be several other organizations that have influenced policy at the state or national policy level. As a matter of fact, the effectiveness of AWPs has to be judged by the extent of their impact on policy-level issues; project activities are only short-term activities.

Table 22 : Impact of AWP Actions on the National/State Policy

Country	Impacts
India	AWP could influence state policy in: (a) building village water storage tanks; (b) renovating old tanks for groundwater recharge; (c) constructing small bunds and weirs across the Purna river; (d) constructing rainwater harvesting structures; and (e) an employment guarantee scheme awarded to accommodate the AWP programme. The AWP lobbying has brought about a change in the government policy, influencing the improvement of the salinity affected people in the area. It will also have an impact on the national policy.
Nepal	There has been no impact on national policy formulation regarding natural resource management by the AWP.
Pakistan	There was a conflict between the AWP and line-agencies. The latter felt that the AWP was to take over their own roles. The psychological barrier became the problem at the initial stage so that the AWP action could not make an impact on the national policy. Now, government agencies and the AWP have come closer and understand each other. However, there is long way to go for close collaboration and have any influence on state policy.
Sri Lanka	An effort has been mad through a court order prohibiting the mechanical sand mining and clay excavation.
Bangladesh	An attempt is made to include IWRM in the university curriculum. Government officials have also recognized its importance.

Source : GWP 2005

Collaborative Action

During the 13th SAARC Summit, the heads of state underlined the need for collaborative action in the area of the environment, including water conservation, in order to promote sustainable development. They decided to proclaim 2007 as the Year of Green South Asia, devoted to a region-wide aforestation campaign. They also agreed to address the problem of arsenic contamination of groundwater and assistance to affected peoples. On this occasion, they reiterated their deep concern at the continued degradation of environment and reaffirmed the need to further strengthen cooperation towards conservation. The need for adoption of initiatives and programmes: cooperation in early forecasting, warning and monitoring and sharing of knowledge in South Asia was mutually decided.

Trans-boundary Water Quality Monitoring

South Asia has an interconnected network of rivers, freshwater streams and river basins. Activities in one part of the river have consequences on the water quality in the neighbouring countries. At present, the South Asia Trans-boundary Water Quality Monitoring (SATWQM) Project covers Bangladesh, India, Nepal and Pakistan. Initiated in 1998 with the purpose of assessing river water quality and identifying the potential problems that can lead to serious adverse health effects, the project aims to: enhance the technological capabilities of each country's national river water quality monitoring programmes; improve upon the effectiveness of the technology used; and improving the quality and comparability of the data collected. Availability of water quality data across the region will lead to improved ability of policy makers to make informed decisions to address critical water quality issues facing the region.

This network (SATWQM) includes research institutions, universities, and NGOs that collect water quality data in: the border regions of Pakistan - India (on the Ravi River), Nepal - India (on the Bagmati and Narayani Rivers), and Bangladesh - India (on the Ganges River). Comprehensive water quality monitoring across national boundaries enhances the assessment of water resources across an entire watershed and helps identify the potential problems. The six trans-boundary data collection partner organizations are the Bangladesh Unnayan Parishad, Dhaka, Bangladesh; Centre for Environment and Development, Kolkata, India; Department of Biology, Guru Nanak Dev University, Amritsar, India; Environment and Public Health Organization, Kathmandu, Nepal; Environmental Biology Laboratory, Patna University, Patna, India; and the World Wide Fund for Nature, Lahore, Pakistan.

A shared database on trans-boundary river water quality among non-governmental organizations and government organizations in several South Asian countries will do much to create a complementary technical infrastructure that will eventually be adopted by governmental entities.

The long-term interest of similar projects will help develop systems for sharing regional environmental information as a means of building confidence and improving relations among South Asian countries. It calls for collecting and sharing real time water quality data on trans-boundary rivers in South Asia.

E) Health Security Measures

Significant investments in primary health care infrastructure and systems linked to referral systems in towns and cities are essential in South Asia. Health security can only be possible if the poor are able to access health care through affordable and innovative insurance and other financing mechanisms. Promoting private investments to increase the availability of infrastructure and financial mechanisms will decrease the pressure on public systems. Forging regional cooperation for specialized treatment through the use of information technology and promoting the region as a health care destination will increase the size of the sector and also permit the availability of affordable access to the poor.

The majority of the poor in South Asia suffer from diseases, requiring urgent medical care but are unable to afford the same. The high costs of health care for those on the poverty line - who somehow manage to access it - pushes them further into debt. Others, who cannot access health care, suffer from income loss due to reduced productivity or loss of livelihoods resulting from illness. Indeed, any kind of illness in South Asia is a major factor that drives people into poverty, and those who are already poor into deeper poverty. Therefore, provisions for preventive and curative health facilities will be a strategic intervention for poverty reduction, human development and economic growth in the region.

SAARC Initiatives

A SAARC Health Foundation (SAHF) may be instituted, financed primarily by the private sector, with contributions from regional governments and multilateral donor agencies, in the form of a private-public partnership with the following objectives. It can comprise of:

1. **SAHF District Hospitals:** SAHF will establish general hospitals located in relatively low-income regions (districts) and distributed across each of the countries of South Asia, according to agreed upon criteria. Each hospital will set professional standards in medical care and the quality of humanity with which it is given, to be followed by others in the private/public sector. The doctors, nurses, medical technicians and some of the administrative staff of the SAHF hospitals in a particular country can be drawn from other South Asian countries to signify the commitment of the South Asian community to the people of each country in the region. These hospitals will stand as a vibrant symbol of both the promise and fulfilment of South Asian cooperation.
2. **SAHF Community Based Preventive Health Care:** Each SAHF district hospital will initiate community based campaigns for preventive health care. These shall include facilitating community based campaigns for hygienic drinking water, sanitation and inoculation campaigns. They will also design and disseminate information packages on disease control during periods of epidemics, and also vital information regarding hygiene and health measures at the household level.
3. **SAHF Network of Basic Health Units:** Each hospital will have a network of Basic Health

Units (BHUs) to cover the maximum population and convenient access over a modest sized but flexible health care system. The BHUs in the hinterland of the SAHF district hospital will provide initial assessment of the nature of the disease and filter out patients suffering from minor illnesses, treatable at the BHU level, while referring those with more serious medical problems to the SAHF district hospital. The BHUs will also act as conduits for SAHF district hospital initiatives in community action and information dissemination for preventive health care. The BHUs, in spite of the limited scope of their medical service will, like the SAHF hospitals, set new standards of professionalism and humanity in their medical care.

4. **SAHF Mother and Child Health Clinics:** Each hospital will also have a network of ten Mother and Child Health Clinics in its hinterland region. These clinics will provide reproductive health care, pre-natal and post-natal care to mothers and basic paediatric services to infants (Hussain 2005).

Deliberations of the 13th SAARC Summit on Health Care Collaborations

During the 13th SAARC Summit held in Islamabad in 2005, the heads of state or governments recognized the need to collaborate on preparedness in addressing health emergencies, including prevention and control of epidemics like avian influenza, as these outbreaks pose a major global threat that impact health, trade and tourism, involving human mobility. They emphasized on the need to develop a regional strategy for such emergencies as soon as possible; and identify and strengthen collaboration within and beyond the region as well as establish links with other regional organizations. They called for early establishment of a SAARC Health Surveillance Centre and a Rapid Deployment Health Response System, to deal with emerging and re-emerging diseases. In addition, they also welcomed the preparation of a strategy for collective SAARC response to prevent the spread of HIV/AIDS. They noted that the regional response in this regard should be further enhanced to eliminate this scourge from South Asia. In this regard, they emphasized the importance of early implementation of the Regional Strategy of HIV/AIDS. At the same time, they further underscored the need for increasing cooperation to develop regional strategies for the prevention and treatment of Dengue, Malaria and other infectious or communicable diseases, constituting major public health concerns. They also agreed to launch a regional initiative with regard to basic healthcare services and sanitation in the rural areas and encouraged the exchange of experience as also the best practices within the region. They called for speedy elaboration of a SAARC Plan of Action for cooperation in medical expertise and pharmaceuticals, as well as traditional medicine, and availing of affordable pharmaceuticals produced in the region, harmonization of standards and certification procedures and production of affordable medicines. There was also an agreement on promoting traditional medicines and protecting the intellectual property rights as a matter of regional priority.

Source: SATS 2005

F) Energy Resources and Services

Providing energy security to the populations of South Asia will need reliable, affordable, economically viable, socially acceptable and environmentally sound energy services and resources. Promoting various means such as enhanced rural electrification, decentralized energy systems, increased use of renewables, cleaner liquid and gaseous fuels and energy efficiency through national initiatives and regional cooperation are a priority.

A large share of the resources is in hydropower and natural gas, some of the environmentally cleanest forms of energy.

Regional Energy Exchange

Insufficient Power

The steady, reliable supply of energy at reasonable cost is one of the key determinants for industrial competitiveness. Unfortunately, insufficient power generation capacity in most of the countries within South Asia has contributed to lower rates of growth across the region. Chronic energy shortages, coupled with inadequate energy infrastructure and uneven energy distribution, have had a cumulative effect of slowing down the economic growth in a region full of promise. Countries in the South Asian region rely on a number of energy sources to meet their energy needs. Coal, natural gas and biomass are used to fuel the economic activity but these energy resources are insufficient to meet the growing energy requirements. The countries of South Asia do not produce enough oil and gas for their needs and are, thus, dependent upon energy imports. These areas under study have largely remained energy importers and are increasingly facing a serious energy shortfall, characterized by poor quality of energy infrastructure, skewed distribution and inaccessible and expensive energy availability. These energy imports very often come at high cost, and may compromise other domestic requirements in SAARC member states, negatively impacting the economic development of the country and, ultimately, of the region.

Seasonality

There is strong seasonality factor in both generation and demand that is noticeable in the South Asian countries. This seasonality in energy supply and demand is indicative of an energy surplus, which can be harnessed to address the issue of energy scarcity. In India, there exists a clear seasonality in power generation, which becomes particularly becomes clear in the field of hydel power. The peak months for hydro power generation are August-September (monsoon), while the lean period is from January to June. Thermal plant generation has been mostly designed to maintain the balance with appropriate generation in winter and the pre-monsoon season. In Nepal, the peak demand of the Integrated Power System is usually during December and January, when generation from the hydro power plants is low. Power demand is at its maximum during the month of December and minimum in August. The supply capacity, in turn, is the highest during the wet months and minimum during the dry months of February and March.

During this period of hot summer months, the Indian system is starved of energy and capacity. This is where the advantages of cross border power trade emerge. In Bangladesh, a sizable generation capacity of at least 1200 MW remains unutilized during the off-peak hours and, in effect, generation has to be shut during this period. Regional cooperation will ensure that this available capacity can be used for export to neighbouring countries.

Constitute a South Asian Energy Dialogue process, involving officials, experts, academics, environmentalists and NGOs, to recommend specific measures to tap potentials of cooperation in energy sector to provide inputs to the working group on Energy. (Declaration, 13th SAARC Summit, Dhaka)

Energy is a high priority area for cooperation in SAARC. At the 13th SAARC Summit held in Dhaka in November 2005, the Prime Minister of India proposed a South Asia Energy Dialogue, involving experts, academics, environmentalists, officials and NGOs, to recommend measures to tap vast and latent potential for cooperation. Inputs from this Energy Dialogue will be considered for furthering cooperation in the energy sector in SAARC.

In the South Asia Energy Dialogue held in New Delhi on March 5, 2007, the following six themes had been identified for the Dialogue:

- Reforms in the energy sector in the region
- Promotion of various non-conventional sources of energy
- Approach and principle to facilitate the development of grid connectivity and gas pipelines in the region
- Universal access to commercial energy
- Development of hydro potential in the region
- Energy efficiency measures and harmonization of standards

Accessing Surpluses

South Asian countries can improve the situation by accessing surplus energy from other countries in the region where feasible, and by collective imports of natural gas and electricity. Not only will such cooperative, collective action maximize economies

of scale, reduce costs and guarantee a steady supply of energy, but will also encourage the adoption of new, renewable energy technologies for sustainable development in the region.

Hence, a number of opportunities exist for promoting the flow of electricity and natural gas as well as the exchange of energy technology and information between SAARC countries.

Some networks of interconnectivity among South Asian countries are already in place. India's Power Grid Corporation has worked out the requirements, feasibility, cost and benefits to participating countries in the South Asia Growth Quadrangle (SAGQ) region consisting of Bangladesh, Bhutan, North East India and Nepal. Carrying forward the Indian effort, the region could have developed a common grid in the near future. The two generally accepted power trading mechanisms area: (i) Bilateral power trade; and (ii) Pool based.

SAARC Leadership Vision of Energy Cooperation

12th SAARC Summit, Islamabad, January, 2004

A study on creating a South Asian Energy Cooperation including the concept of an energy ring should be undertaken by the working group on energy.

13th SAARC Summit, Islamabad, 2005

The Heads of state or government welcomed the joint statement of the first SAARC energy ministers meeting in October 2005 in Islamabad. They agreed to the recommendation to establish the SAARC Energy Centre in Islamabad; to promote the development of energy resources including hydro power; energy trade in the region; to develop renewable and alternative energy resources; and promote energy efficiency and conservation in the region.

The experts underlined the need to constitute a South Asian Energy Dialogue process, involving officials, experts, academics, environmentalists and NGOs to recommend measures to tap potentials of cooperation in the energy sector to provide inputs to the working group in energy.

Source: SATS 2005

Negotiations are on between India and Pakistan on the possibility of power trading and a gas pipeline from Iran and Central Asian countries passing through Pakistan. With the current demand and supply situation in the sub-continent, it is rational to believe that trade in power and gas will be mutually beneficial, in terms of both economic and political gains.

Interconnection of power systems of contiguously located countries and their coordinated operation provide immense technical and economic benefits by savings on power plant investment and operating costs, as a result of the improved use of the interconnected system. It also contributes to the quality of electricity supplied to customers as well as reduces the resultant environmental damage. The onus in regional cooperation on reducing losses in the power system is often more cost effective than in constructing more generation capacity. Economic gain, based on regional cooperation in the energy sector, is now a firmly established practice across regional groupings. Many developing countries are unable to utilize the inherent economies of scale, being unable to make major infrastructure investments.

Currently, power trading is in its infancy in the South Asian region. Whatever 'trade' takes place—as of today—is basically bilateral exchanges or apportioning of power from surplus areas to temporarily needy regions. Setting up of a South Asian Energy Alliance by SAARC to facilitate sharing of energy and other natural resources will mutually benefit of collaborating countries.

Power Trading

In this context, establishing a Regional Power Trading Corporation (RPTC) would be highly beneficial to launch a market mechanism in South Asia region. This could be called "SAARC-RPTC". The SAARC-RPTC can provide market feedback to individual power producers (agents) as well as consumers. The SAARC-RPTC can maintain and disseminate information on plant structures, avoidable costs of production, plant sales prices, sales volumes, rate of utilization, profits generated, target utilization, market conditions, consumer behaviour, current establishment of plants and future investments. This, in essence, would be pooling of surplus power generated by individual plants in the participating countries and transporting into deficit ones by a coordinated exchange mechanism, depending on demand and consumer categories (estimating consumer surplus).

The creation of a South Asian energy market and cooperative development of the available diverse energy sources in the region can help increase the level of energy security in the region and subsequently contribute to achieving a sustained higher economic growth. This may lead to a South Asian regional power and gas market and competition among power and gas producers, both public and private, that ensure economic and efficient delivery of services to consumer in the region. At the same time, the power system networks of Bangladesh, Bhutan, India, Nepal, Pakistan and even Sri Lanka can be interconnected to achieve greater efficiency and economy in the overall system.

Challenges for Energy Security

- In South Asia, the demand for infrastructure, particularly electricity, is growing rapidly. Improved electricity supply is a key to sustaining economic growth and improving social services.
- Electricity is still not available to about half of the region's population of 1.5 billion people, especially in rural areas, which adversely affects the efforts to reduce poverty and create better opportunities for all.
- The lack of access to modern forms of energy prolongs the widespread traditional use of biomass, with adverse environmental and health impact.
- Electricity services to connected customers, whether businesses or households, are often unreliable and of poor quality, coupled with poor commercial performance of service providers who have high technical and commercial losses
- Advancing electricity sector reforms, aimed at improving the efficiency and quality of electricity service; commercial viability of the power generation; institutional and governance arrangements; accountability of service providers; and the investment climate are all critical to ensuring a sustained growth of the sector and optimal development and use of the energy resources
- National energy systems have weak or non-existent interconnections. There is little cross-border trade in electricity, with the exception of India-Bhutan trade. There is no trade in natural gas within the region
- Consequently, optimal development of the region's internal energy resources is hampered and access to the significant energy resources in neighbouring countries denied, which increases the cost of energy supply and reduces energy security of the individual countries and of the region as a whole

Opportunities

- Economic growth creates opportunities to expand the access to modern and cleaner energy, especially electricity, to both unserved and underserved areas, and strengthens the performance of the energy utilities
- Among the countries in the region and its neighbourhood, differing resource endowments, development needs and demand patterns create significant opportunities for cooperation and trade in the energy sector and, eventually, for creating one of the world's largest integrated energy market
- Win-win opportunities exist for both energy resource surplus and deficit countries. The development of these resources for export will enable the export-led growth of these relatively

smaller economies such as Nepal and Bhutan, who can implement large-scale regional projects that would otherwise not be viable. Afghanistan, India, Pakistan and Sri Lanka will have enhanced energy security, as will the others (e.g., Bangladesh) from improving the energy mix

- Everyone will benefit from reliability support, reserve sharing, cleaner fuels, better investment opportunities and reduced risks for investors, and the associated sharing of knowledge and experience
- A two-track approach: (i) enhancing energy trade through specific projects, whether bilateral or multilateral; and (ii) strengthening regional organizations and institutions, to complement the first track, will help enhance mutual trust and confidence, and create conditions for upward growth
- Some initial regional project opportunities include import of hydro power from Central Asia to Afghanistan and Pakistan; export of hydro-power from Nepal to India; electricity interconnections between India and Sri Lanka, and India and Bangladesh; and gas imports from Central Asia, Iran, and Myanmar
- There will be two regional energy trading hubs initially: the first on the western flank of the region, comprising Afghanistan, Pakistan and north-western India (the importing markets), trading with Central and Western Asia; and the second on the eastern flank of the region, comprising India (as the main importing market), Bangladesh, Bhutan, Nepal and Sri Lanka. Both hubs can develop gradually, with India eventually bridging the two hubs into a region-wide integrated market
- Continued strengthening of the national energy systems, both institutionally and in terms of physical infrastructure, is fundamental for a successful and sustainable regional integration

SAARC can play a major role in helping build mutual trust, develop regional institutions and physical infrastructure, and collaborate in partnerships with development organizations.

G) Developing Trade Initiatives

Reduction of political tensions is critical for improving the environment for regional energy trade and cross-border investment. At the same time, increased cross border investments and trade and associated business interests will help lower political tensions. Entrepreneurial investment initiatives with imaginative financing and risk mitigation strategies - possibly involving in some projects multilateral financing institutions as neutral parties to help build the confidence and mitigate risks - can help strengthen the virtuous circle of trade growth and regional peace. Strengthening regional institutions, both at the policy and technical level, in order to coordinate policy measures, exchange information, coordinate investment planning, develop congruous grid codes and operating procedures, etc., will facilitate regional energy integration. Accession of the South Asian countries to the Energy Charter Treaty 14 (or developing a similar agreement at the SAARC level), can also help improve the investment climate in the sector and also spur regional integration by signalling policy intents, providing a degree of investment protection, and improving dispute resolution mechanisms.

India, with its geographic position and the size and the buoyancy of its economy, plays a unique and critical role in regional integration in South Asia. Bilateral energy trade between India and its neighbours is a key building block of the integrated regional energy market. While it will be useful and perhaps necessary to develop an upfront understanding at the SAARC level as to how such region-wide energy systems (regional electricity and gas grids) and trade can evolve, the pace of regional integration will be largely determined by the pace of development of energy trade with India. In this context, it is very encouraging to see the reforms that are taking place in the Indian energy sector and the efforts that India is taking to strengthen its domestic electricity transmission grid. This should bode well for development of bilateral energy trade with India, as well as for regional integration.

Regional integration will take place through specific investment projects to build cross-country interconnections and export-oriented power plants and gas wells. Selecting and implementing such priority projects will greatly help advance regional energy trade, both in terms of physical infrastructure and energy flows, as well as in terms of improving the policy, institutional, and commercial environment through the debate and arrangements, This provides monetary incentives to reduce the demand and, thus, close the gap between demand and supply.

H) Protection against Natural Disasters

Natural disasters can be averted through preventive action such as large-scale aforestation, rehabilitation of degraded lands, hazard-resistant structures and other long-term measures. Strengthening preparedness for disasters via national and regional risk assessment, mapping, monitoring and vigilance systems is as important as timely relief, recovery and rehabilitation of the victims affected by natural disasters through effective policies and procedures, including regional cooperation. Information sharing and strengthening mechanisms, resource/expertise sharing and decentralized knowledge centres can be established for better information dissemination and experience sharing so as to take control over natural calamities. Implementing a South Asian Disaster Preparedness and Management System to promote regional cooperation can ensure safety from the eventuality of natural disasters. This system will be responsible for:

- Emergency preparedness, including building public awareness
- Risk mitigation investments such as gathering data, mapping risk, ensuring effective land use planning, and putting in place warning and monitoring systems
- Institutional capacity building, including decentralizing emergency management systems, emphasizing upon community participation, training and knowledge sharing, and international cooperation
- Catastrophe risk financing

The implementation of such a system will ensure that timely relief is available to disaster victims anywhere in the sub-region, which includes availability of food in relief operations, necessitating close co ordination between the Food Bank, the South Asia health alliance, South Asian Disaster Preparedness and management systems in a well-integrated manner.

Other roles may involve generating a public knowledge base on the institutions and agencies involved in flood management policy and legislation; facilitating informed decision making; and maintaining and providing information and educational materials on disaster preparedness and management.

A trans-boundary policy on disaster management facilitating informed decision-making needs to be evolved. This includes policies and strategies that guarantee recovery and rehabilitation of victims affected by natural disasters.

Table 23 : Regional Cooperation

1985	Origin of South Asian Association for Regional Cooperation (SAARC)
1990	Study on causes and consequences of natural disasters in South Asia
1995	SAARC Meteorological Research Centre, Dhaka
2004	SAARC Coastal Zone Management Centre, Male
2006	SAARC Comprehensive Framework on Disaster Management
2006	SAARC Disaster Managemnet Centre Delhi

Programmatic Interventions

At the policy level, there is a need to initiate a debate on "disaster proofing" development in South Asia, and adopting risk assessment and reduction as the prerequisites of development planning. It is advocated that disasters in South Asia should be understood within the overall socio-economic context of the region by addressing the capacities and vulnerabilities of hazard-prone countries, areas and communities. It is to be noted that a techno-centric approach to disasters is inadequate, as mere technological and structural interventions become linear with little integration of social linkages and non-structural dimensions of disasters. Similarly, social focus alone in disaster related measures will also be of little use unless a better interface is created between both science and society.

In the light of the Hyogo Framework of Action 2005-15 and in order to support national and regional efforts, there is an emerging need to promote regional programmes that include: technical cooperation; capacity development; development of methodologies and standards for hazard and vulnerability monitoring and assessment; information sharing for effective mobilization of the resources. Some specific points to be considered in disaster management include:

- SAARC and national governments should mobilize multilateral and bilateral bodies to bridge the existing gaps between development and disaster funding. Presently, disaster is dealt with by the humanitarian wings in isolation of development wings of various UN and donor agencies. There is a need to integrate development funding with risk reduction targets at the planning level.
- By re-appropriating the expertise and resources for MDGs, SDGs, poverty reduction strategies, UN Development Assistance Frameworks (UNDAFs), National Adaptation Programmes of Action (NAPAs), and donor country assistance strategies, some programmatic linkages should be developed with disaster risk reduction at regional, national and local levels. The goals of disaster risk reduction include:
  - Hazard minimization
  - Reducing exposure and susceptibility
  - Enhancing coping and adaptive capacity
- Mobilizing the local communities for rights-based disaster risk management at the local level will make the national policies responsive and accountable to disaster-prone communities
- Developing a regional disaster databank, a research pool, and a knowledge base, and devising tools to measure the micro-economic impacts of disasters in South Asia will focus on impacts of disasters on communities and livelihoods
- One should cooperate regionally as well as internationally, to assess and monitor regional and trans-boundary hazards, exchange information, and provide early warnings through appropriate arrangements, such as those relating to the management of river basins, coastlines and mountain ranges
- Initiate and optimize systems for decentralized disaster management in the region by strengthening and involving local government institutions in risk assessment and risk reduction at the local level

With proactive thinking and concerted efforts, people in South Asia need not live under the constant menace of natural and man-made disasters. Internal and external threats to South Asian societies and civilizations demand a regime of peaceful public action with an aim to develop harmony with nature and with fellow human beings.

Five Policy Principles as a Basis For Disaster Risk Reduction

Disasters should be looked at as a part of ecology and should be managed rather than controlled.

Disasters should be treated as issues of development and governance; and states should be made responsive, sensitive and accountable to the demands, needs and rights of disaster-prone communities and areas.

Disaster management policies should be redirected towards poverty and vulnerability reduction instead of mere compensation and relief responses.

Disaster management strategies should integrate structural measures (construction of embankments, dykes, resistant buildings, etc.) with non-structural measures such as enhancing the entitlements and negotiating power of the most vulnerable communities and subordinate social groups.

Disaster-prone communities should be engaged equitably into the process of disaster-related decision-making and development planning, implementation and monitoring.

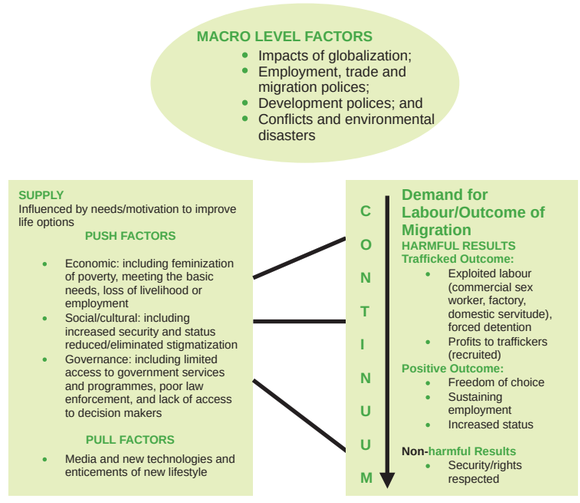
Source: RDPI; Practical Action 2006

Integrated Flood Management Projects

There are certain advantages in implementing, on a large scale, projects on community approaches to flood management, involving and linking up the process with the national emergency response programmes. Regional synthesis of the South Asian project "Integrated Flood Risk Management" can also be implemented through appropriate knowledge sharing and capacity building.

I) Preventing Trafficking of Women and Children

Figure 13 : Dynamics of Human Trafficking



Source: ADB 2003

Trafficking of women and children is rampant across the borders South Asia and regional interventions are required to curb them. There exists a regional consensus on promoting cooperation amongst member states to effectively deal with various aspects of prevention; interdiction and suppression of trafficking in women and children; repatriation and rehabilitation of victims of trafficking; and preventing the use of women and children in international prostitution networks. Particularly, as SAARC member countries are the countries of origin, transit and destination, SAARC member countries have undertaken the following initiatives:

- Conventions like the 'SAARC Convention on Regional Arrangements for the Promotion of Child Welfare in South Asia' and the 'SAARC Convention on Preventing and Combating the Trafficking in Women and Children for Prostitution' necessitate fierce implementation.
- The SAARC member countries have united in their determination to redeem the promises made by them to the South Asian child at the World Summit for Children and various other national, regional and international conferences and successive SAARC summits. The basic aim is to facilitate and help in the development and protection of the full potential of the south Asian child, promote an understanding and awareness of the rights, duties and responsibilities of the children and others, and set up appropriate regional arrangements to assist the member states in fulfilling the rights of the child.
- Implementation of the Social Charter and convening an experts' group meeting to establish a Civil Society Resource Centre will serve as a measure to this end in association with the regional initiatives SAARC Ito prevent and monitor trafficking or women and children.

National-level Activities

To create a favourable climate for regional implementation, some initiatives have to be taken up at the national level. Some activities include:

- Amending the domestic legislation and ensuring efficient implementation and enforcement of legal provisions to protect women and children from being trafficked
- Penalizing offenders, traffickers and other illegal service providers
- Providing education facilities and alternative livelihood opportunities for children and women who are at risk of being trafficked (particularly those who live near cross border or coastal areas and those who belong to scheduled castes and backward classes)

Regional-level Activities

- Promoting awareness across borders—through the use of media—of the problem of trafficking in women and children and severe consequences faced by the victims
- Undertaking actions for the rehabilitation and reintegration of the victims such as establishing protective homes or shelters, provision of healthcare facilities, counselling, etc.
- Establishing collaborate efforts for law enforcement and repatriation of those trafficked
- Implementing actions to prohibit the compulsory or voluntary recruitment of children less than 18 years of age into armed forces, terrorist or political groups and evolving a trans-boundary policy on such issues
- There is a need to further explore the links between poverty, gender, age, displacement, mobility and market factors, and how these create particular vulnerabilities to trafficking. There is a growing need to address, at the level of policy advocacy, the larger socio-economic factors propelling trafficking. The opportunities for regional collaboration created by the SAARC Convention have to be taken forward
- There is an immediate need to define intervention which will allow for the creation of a safety mechanism to minimize / prevent human rights abuse within the sex industry. There is also a growing need to facilitate those processes that will evolve certain rights-based standards for rescue and repatriation of victims. At the regional level, governments and regional bodies must be encouraged to interpret and apply regional and international human rights laws to trafficked persons without discrimination, recognize the rights of all migrant workers and cooperate to locate and prosecute the traffickers

Piloting and supporting efforts that strengthen institutional care and rehabilitation of survivors of trafficking is a vital need. Institutional capacity development to address the mental health need of the survivors needs to be extended. Building an institutional capacity for measuring and evaluating the progress of different anti trafficking initiatives, both regionally and globally, is an urgent priority. The need to look at viable and safer livelihood options for the identified vulnerable and marginalized groups is fast emerging as a critical challenge.

Proactive action is needed to identify and address newer sites of trafficking. Anti trafficking interventions need to increasingly look at and address the issue of migration—legal, illegal and undocumented—through capacity building of vulnerable groups on the supply sites and advocacy at the receiving sites. Interventions facilitating the development of a better legal environment and effective justice delivery mechanisms specific to anti trafficking work are a definite priority. If children are used as witnesses, officials should secure their testimony in a manner which does not cause them to be re-traumatized and ensure their protection throughout the criminal proceedings and ensure their protection throughout the criminal proceedings and even beyond, as necessary.

Trans-boundary Resource Management

A) Waste and Chemical Management

Trans-boundary movements and dumping have increased in South Asia. With spread of industries producing hazardous wastes, and regulations controlling waste disposal becoming tightened, the problems with hazardous wastes have spread and taken on new forms. The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal is the most comprehensive global environmental agreement on hazardous and other wastes. Toxic wastes that are poisonous, explosive, corrosive, flammable, ecotoxic, and infectious abound in the sub-region and are being moved from one country to another. In South Asia, the major fraction (75-90 per cent) of the waste generated by health-care facilities is non-risk and resembles residential and institutional wastes. The remaining fraction (10-25 per cent) is hazardous (risk) and may pose a variety of health hazards. The quantity of healthcare wastes generated in South Asia largely differs within countries, primarily due to their economy. India (330,000 tonnes/year) and Pakistan (250,000 tonnes/day) are on the higher end, while Maldives (146 tonnes/year) and Bhutan (73 tonnes/year) are on the lower end. The threat is more pronounced in south Asia because of the mushrooming unregistered clinics that do not come under legislation of any sort. Most of the countries here lack legislations directly related to healthcare waste management, except for some countries like Bhutan, Nepal and Sri Lanka, where is it just addressed in the national policies. Maldives, for example, does not have such a legislation regarding waste. Pakistan and India have basic legislations and standards related to healthcare waste. However, all these countries lack enforcement of these regulations.

The country governments are also expected to minimize the quantities that are transported, to treat and dispose of wastes as close as possible to their place of generation, and to minimize the generation of hazardous waste at source.

The Basel Convention promotes the minimization of transported quantities; to treat and dispose of wastes as close as possible to their place of generation; and to prevent or minimize the generation of wastes at source. These initiatives can be undertaken at the country level. Regional co-operation for e-waste must be encouraged, as not all countries may have environmentally sound technologies for recycling. Recycling facilities also need a certain amount of investment, which may be difficult to garner for a small country. Small island developing states generally suffer from a lack of trained personnel to handle the environmentally sound management of hazardous waste, as well as from high transportation costs and a shortage of available land. Thus, a regional approach should be developed for trans-boundary movement of these wastes and their treatment and management. With the establishment of a common health alliance, there have to be initiatives to take care of toxic waste from moving across borders. Since there is a trend of cross border health tourism, the concerned stakeholders should play a very important role in this sector of waste management. Polluting industries dealing with toxic wastes must come under the gamut of such an initiative.

Non-incineration-based technologies should be promoted, as incinerators emit toxic chemicals in the air as well are surrounding polluting, land, water and air, having regional implications

The Secretariat of the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal and the Regional Seas Programmes have joined forces in the fight against coastal pollution. The main area of cooperation is the environmentally sound management of hazardous wastes in order to prevent coastal and marine pollution. The two organizations will raise awareness on hazardous waste and marine pollution and support each other with technical and legal training.

One of the key elements of the South Asian Seas Action Plan is to encourage collaboration among regional scientists and technicians and their institutions through the establishment of coordinated regional marine pollution monitoring programmes. The United Nations Convention on the Law of the Sea (UNCLOS) has specific provisions relating to the prevention, reduction and control of marine pollution from land-based activities. In keeping with these provisions, Annex IV of the South Asian Seas Action Plan includes a “Regional Programme of Action for the Protection of the Marine Environment of the South Asian Seas from Land-based Activities”. The BARC in India has initiated two projects in the marine pollution area, involving the use of radiotracers. Pakistan, too, plays an active role in the RCA and its marine-related projects. An example of such Pakistani involvement in the RCA is the workshop hosted by Pakistan in 1999 on a "Review Meeting to Analyze a Regional Database on Marine Radioactivity".

Establish a Basel Convention Regional Centre for South Asia at the SACEP Secretariat

The South Asia Co-operative Environment Programme (SACEP), with the help of its member countries, was able to get the go ahead at the CoP8 of the Basel Convention to establish a Basel Convention Regional Centre for South Asia at the SACEP Secretariat.

The main objectives of establishing BCRC in SACEP are:

- To establish a functional and effective Basel Convention Regional Centre for Training and Technology Transfer in the area of Hazardous Waste Management in SACEP under Article 14 of the Basel Convention.
- To provide services to the countries of the SAARC Region.
- To strengthen the institutional capacity of the countries in the region to address the national and global environmental issues pertaining to handling of hazardous waste.
- To provide linkages with the Secretariat of the Basel Convention (SBC) and other regional and sub-regional centres.
- To Coordinate and cooperate with other related Multi-lateral Environmental Agreements (MEAs) to establish synergies in the region.
- To facilitate in tracking the trans-boundary movement of hazardous wastes within the region.

Knowledge Sharing

Establishing knowledge networks across the sub-region will help tremendously in improving the urban management in cities across the sub-region. It will also serve to enhance learning and institutional memory that can be shared by both the public and private sector. A sub-regional knowledge hub can be established for municipalities and urban knowledge sharing. The following activities can come under its purview:

- Sharing of learning by city practitioners of various countries, involving exchange of know-how and ideas among people doing similar jobs in different settings and joint projects tackling difficult problems. An international database of diverse international practices can be established to draw upon each other's learnings and experiences
- Supporting the formation of an interlinked multi-stakeholder platform in South Asia to identify the wider devolution and decentralisation of municipal decision-making
- Providing mutual support with the documentation and dissemination for upscaling and replication of the knowledge gained through the implementation of the above activities and applying the best national and international urban practices.
- Undertaking capacity building and training of municipal governments in development and preparation of commercially viable 'bankable' projects and service delivery management systems. Also, network local communities with similar problems can train local personnel and community leaders and expose them to national and international experiences
- Enhancing the capacity of urban local bodies by improved financial management, thereby improving the delivery of municipal services, improved access to information, transparency and accountability through conflict resolution and change management strategies
- Promoting public-private and community partnerships for urban service delivery
- Creating partnerships and networks with cities from developed countries and developing an institutional cooperation mechanism

Forming a Regional Technology Advisory Group to resolve technological issues and ensuring

B) Conservation of Biological Wealth

South Asian countries share mountains, deserts, forests, and rivers and oceans with their neighbours. These issues need to be addressed locally, nationally, and regionally. There is tremendous potential for collaborative research, sharing of knowledge and expertise, training, technical assistance, policy dialogue and policy support. The following issues pertaining to biodiversity need to be addressed across the border.

- **Community Participation in Management**: Promotion of participatory management of nature reserves is a way to ensure trans-boundary community participation in ecosystem management. Allowing active participation and involvement of the people in forest conservation and development can best achieve this goal.
- **Developing Eco-tourism**: The immense potential for ecotourism development in the mountain zone spanning across Nepal, India and Bhutan should be harnessed. Eco-tourism can be used to fulfil the twin benefits of conserving these areas and also serving as a source of financing for biodiversity conservation and economic justification for protected areas. It will also provide economic alternatives and livelihoods for local people and reduce over exploitation of wild land and wildlife resources in the protected areas. Opportunities for private biodiversity conservation efforts will be greater in such a set up. An ecosystem approach is also for the greater national good as it promotes constituency building. Effective utilization of the biodiversity products manufactured in the sub-region can be both an asset and a bargaining tool in the international scenario.

The IUCN members in South Asia have considerable expertise in ecosystem management.

- **Trans-boundary Research and Monitoring of Biodiversity:** At present, there is precious little reliable information available on current trends and conditions regarding environmental quality and the health of natural systems for many South Asian countries. There are inadequate arrangements to monitor changes in habitat and species and fewer still on redefining the ecological impact of natural disasters and mitigation strategies. There is also a greater need for environmental information for enhanced transparency and better management decisions by way of integrated environment assessments.
- **Conduct Surveys, Inventories and Mapping of Reserves**: Projects can be undertaken to engage in basic empirical ecological research (including the magnitude, patterns, and rate of biodiversity loss) and empirical research on the ecological impact of human activity (using indigenous knowledge/ interdisciplinary approaches); and build a biodiversity economics capacity and database on land reforms, warding off loss of forests, problems with water consumption and management, and declines in wildlife population.
- **Coastal Resources Management:** Coastal resources management projects in the sub-region can be undertaken in collaboration with IUCN and South Asian Development Bank, firstly for environmental safeguards and secondly for prospective offshore gas exploitation over the following decade. This may be done by strengthening the South Asia Seas Programme at the regional level and initiate steps to formulate a South Asian Biodiversity Action Plan / South Asia Biodiversity Conservation Agreement. This will facilitate detailed assessments, mapping and delineation of the protected areas; reviving traditional conservation knowledge; curtailing bio-piracy; setting up of domestic and joint venture manufacturing units; and facilitating trade in finished products rather than raw materials with assistance from SACEP, UNEP and IUCN.
- **Common South Asian Position on IPRS:** A common South Asian position on IPRS in agriculture and protection of bio-diversity is of paramount importance. Protection of this heritage is closely linked to our food security. Emerging issues relating to copyright, patents and marketing franchises including on food grains, plants and herbs indigenous to South Asia require firm collective responses to preserve these bio-resources from unregulated commercial exploitation by extra-regional interests
- **Trans-boundary Anti Trafficking Initiatives:** South Asia is a major conduit of wildlife products involving billions of dollars worth of illegal trade. There are increasing links of these poaching networks to narcotics, arms, violent insurgencies, etc. At present, there is inadequate trans-boundary coordination expertise to detect and apprehend traffickers. Monitor poaching channels and trade routes is the first step towards a combined trans-boundary anti trafficking initiative in wildlife trade. Implementation in South Asia of the Convention on International Trade in Endangered Species (CITES) for the control of illegal wildlife trade.
- **Develop Integrated Natural Resources Management Committee (INRM):** The need of the hour is to set up a regional network of INRM in every village/ watershed/block to undertake tasks such as soil health care, water conservation and management, integrated gene management with concurrent attention to conservation, sustainable use and equitable sharing of benefits, integrated nutrient supply, integrated pest management and improved post-harvest technology. The benefits of such integrated efforts will have a fall out in the entire sub-region resulting from the sharing of knowledge and resources.

C) Combating Air Pollution

Air pollution is a major environmental concern in South Asia as also across the globe. High levels of air pollution negatively affect a person's health and productivity. In South Asia, air pollution as a local issue has been partially addressed by legislation in most countries. Further action has not been taken because there is a dearth of studies that explores the linkages between observed pollution levels and established health effects in South Asia. As a result, the “precautionary principle” has not come into play as yet in this field due to the imperatives of “growth” and lack of conclusive evidence to establish the existence of effects.

Solid fuel use in industry and household cooking as well as for heating in winter can become a significant source of airborne fine particulate matter. This can especially become true in cities with cold winters that require heating, mainly in northern India, Nepal, and Pakistan, precisely when ambient concentrations from all sources are elevated on account of thermal inversion..

The persistent haze over the Bay of Bengal was traced to emissions from South and Southeast Asian countries. Since there exist various agreements in Europe and America to address the issues of trans-boundary air pollution, the discovery of the Atmospheric Brown Haze clearly reflected the need of collaboration across international boundaries in Asia, especially between the sub regions and cooperation between the various stakeholders (corporations, government departments, people) to better understand the environmental impacts of trans-boundary air pollution and for designing effective mitigation measures.

The most visible impact of air pollution in the region is

the Asian haze—a brownish layer of pollutants and particles from biomass burning and industrial emissions—that particularly pervades most regions of South Asia. The discovery of the Atmospheric Brown Cloud by Indian Ocean Experiment (INDOEX) scientists is the evidence of the magnitude of the air pollution problem. The haze consists of sulphates, nitrates, organics, black carbon, fly ash amongst several other pollutants.

The major causes of air pollution in South Asian countries include rapid industrialization, urbanization, and increased environment-polluting energy production. Regional air pollution, especially from emissions of sulphur and nitrogen compounds, is increasingly becoming a huge problem with fast-growing industrialization in the sub-region. The impacts of these emissions are felt locally, nationally, and regionally. Acid deposition is not just a national concern; it is also a regional environmental problem that transcends national boundaries. Although reports of acid deposition in the region have been few, the damage from acid deposition has been detrimental to biodiversity. Therefore, there is a need for an effective ambient air quality surveillance programme, which will serve as an early warning system to identify the trend of air pollutants and monitor the trans-boundary air pollutants. However, management of these air pollution problems poses huge financial, technical, and logistical constraints for urban and national authorities. Furthermore, current trends in urbanization do not suggest any rapid abatement in the problem posed.

Air quality monitoring is fast becoming an important issue in the countries of the sub-region. As a result, some governments in the sub-region have proposed new air quality initiatives. However, there is a considerable shortfall in national and local governments' capacity to implement an effective pollution control plan, as critical data—such as long-term quality-controlled air-quality monitoring for basic pollutants, an inventory of emission sources, appropriate dispersion modelling, and exposure to information—are insufficient. Systematic air quality monitoring is a relatively new initiative in Bangladesh. The Department of Environment in Bangladesh started collecting data on ambient air quality in 1992 in four divisional towns (Bogra, Chittagong, Dhaka and Khulna). At present, there is no monitoring programme for assessing the air quality in Bhutan. To an extent, air quality monitoring is being conducted in Kathmandu, Nepal. India is the only country with a large number of air quality monitoring stations in urban and industrial areas. The National Environmental Engineering Research Institute in India monitors the ambient air quality in 30 stations covering ten major cities. Currently, there is no monitoring network to monitor the trans-boundary movement of air pollutants and their effects in the sub-region.

Lack of Coordination: The responsibility for AQM is divided between a number of government ministries and local administrations, thus, complicating policy making, systematic air quality monitoring, and enforcement of air quality standards. Lack of coordination has impeded the development of a strategic framework for air quality management systems that will cover all centres of air pollution.

Poor Information Exchange: At the national level, there is a large amount of information on air quality and AQM initiatives, but the information is often not readily available. As a consequence, there is duplication in collection and the available information is not always consulted before to decision making. Poor information exchange on the best practices in AQM and the lack of harmonized air pollution policies in the region have contributed to the absence of regional cooperation in addressing air quality. Although several attempts have been made at regional cooperation to address air pollution in South Asia, much more work needs to be done to deal with the issue of air quality management. Countries will best improve their AQM by working together and exchanging their experiences on common practices. Strong coordinative approaches will be required for effective dissemination of information on air quality issues, collective learning, and the formulation of comprehensive AQM strategies.

Towards a Regional Approach to Air Quality Management: Previous internationally funded initiatives have focused on raising awareness, but they have been localized with limited sharing of information among cities, stakeholders, and across borders. Air management is a relatively new effort for the South Asian countries. There is a need for: (i) sharing of knowledge and experiences on AQM; (ii) improve policy and regulatory frameworks at the regional level and pilot projects; and (iii) encourage innovation. A greater degree of sharing successes and failures in a full range of air pollution control management initiatives should continue and be more rigorously promoted.

Male' Declaration

Thus, though South Asia is at the earliest stage of air pollution policy cycle, but the most significant development in the last decade was the Male Declaration on the Control and Prevention of Air Pollution and its Likely Trans-boundary Effects for South Asia which was adopted at the 7th Governing Council meeting of SACEP (South Asia Co-operative Environment Programme), where policy makers met at Male', Maldives in 1998. It is the only environmental agreement covering all the countries of South Asia. The Declaration encourages inter-governmental cooperation to address the increasing threat of trans-boundary air pollution and its associated impacts. The declaration calls on the countries to assess and analyse the origins and causes of regional air pollution, develop and adopt strategies for minimizing air pollution, cooperate and set up monitoring arrangements, and build up standardized methods to monitor air quality and analyze their impact without prejudice to national activities.

More collaboration needs to be effected with other related activities in South Asia, e.g., Indian Ocean Experiment (INDOEX) and even closer links be forged with major players in the Asia-Pacific region, such as East-Asia Network on Acid Deposition (EANET), Integrated Monitoring Programme on Acidification of Chinese Terrestrial Systems (IMPACTS) and the composition of Asian Deposition and SHARE-Asia (Stations at High Altitude for Research on the Environment in Asia) initiative.

D) Addressing Climate Change

To address the climate change challenge, it is necessary to observe a broad range of measures for both mitigating climate change and adapt to its adverse effects. These include further energy efficiency improvements, new energy and carbon capture and storage technologies, changes to unsustainable patterns of consumption and production and coastal zone management and agricultural practices. While some progress has been achieved supporting mitigation activities, providing adequate funding to support adaptation activities remains a challenge. Adaptation is important for both developed and developing countries and multilateral support to countries that are most vulnerable to climate change is needed. Furthermore, linking the climate change agenda to the broader development agenda and promoting science-based decision making at the global and national levels pose important challenges.

Of immediate importance is the need to integrate climate change policies into national development plans to mitigate the harmful effects of rising temperatures and sea levels to habitats and cultures, in particular for small island states and in low-lying areas of other countries.

Adaptation measures for agriculture, energy, forestry, human settlements, industry and marine ecosystems have to be strengthened in order to reduce the adverse impacts on water resources and coastal zones.

Energy-efficiency technologies offer win-win opportunities to lower the production costs, enhance energy security and reduce air pollution and greenhouse gas (GHG) emissions simultaneously. However, affordability remains a challenge for the poorer developing countries and transferring technology to these countries is often a problem. Governments are critical actors in setting up policies that provide appropriate incentives for more energy efficient, less polluting economic activities and increased access to modern energy services.

Energy efficiency is an immediate and effective way of reducing greenhouse gas emissions, as well as reducing the cost of industrial production. A wide

range of low-cost policy measures have proved their effectiveness in improving the energy efficiency, such as removal of electricity subsidies, peak hour surcharges, and energy efficiency regulations for industrial processes and urban activities. Such policy practices should be promoted and supported by programmes that assist small and medium-sized enterprises so as to improve energy efficiency. Often, low priority is accorded to climate change policies because economic development and energy issues take centre stage in the strategizing for national development plans. Methodologies to promote the integration of climate change action into socio-economic policies for sustainable development should be improved.

Secured Economic Base

The long-term sustainability requires each country in South Asia to strengthen its financial and economic systems while also focusing on poverty eradication and survival issues. With an integrated regional economy, it is possible to rapidly accelerate the economic growth of the member countries by virtue of the advantages offered by geographic proximity, economies of scale in production and infrastructure. At the same time, member countries will leverage these advantages with the global system of finance, investment, trade and institutions.

A) Promoting Technology Cooperation

Countries in the sub-region, like their counterparts in the developing world, have quite naturally looked towards the industrialized 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. This will help the sub-region to build up its capacity to negotiate with the industrialized world for specific technologies where it is critically required. 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

B) Building a Sub-regional Trading Bloc

Though South Asia is among the fastest growing economic zones in the world, it suffers from acute poverty. The large consumer base in the middle class bracket can contribute a great deal to the evolving global economy.

Countries in the sub-region need a much more liberalized trading regime amongst themselves. The South Asian Preferential Trade Agreement (SAPTA) and the South Asian Free Trade Area (SAFTA) are important steps in this direction. Measures that reduce production and trading costs, through sharing of basic resources, need to be pursued. Sub-regional sharing of energy, water and other natural resources are to 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 global trade negotiations, using its rich traditional knowledge and practices; relatively pristine tourism destinations; biological diversity; arts and crafts; industrial products and services; and its pool of trained manpower.

C) Diversity as a Tourism Asset

Cultural and Spiritual Tourism

The current market and consumer trends indicate that the experienced traveller prefers authentic, off-the-beaten-track vacations rather than luxurious holidays. Global trends also indicate the growing demand for nature- and culture-based holidays; and spiritual tourism, which are forecast to double and perhaps even triple in the next 20 years.

South Asia, with its vast and diverse cultural and natural endowments and tourist attractions, is predicted to record an average annual growth of 6.2 per cent in 2020, compared to the world average of 4.1 per cent (CAMAT 2003). The eastern Himalayas, mangrove forests, long beaches and internationally recognized biodiversity hotspots (some of which are World Heritage Sites), along with a rich diversity of ethnic groups with distinctive cultures, potentially position it as a world destination for spiritual tourism and ecotourism. Bhutan and Nepal, in particular, are internationally acknowledged as “eco-tourism pioneers”. An example of an iconic product is the popular “Footsteps of Lord Buddha” circuit, which appeals to ever-growing numbers (estimated at estimated 50,000 visitors annually) of Buddhist pilgrims and spiritual tourists from all over the world.

Another potential product is organized trekking in the Himalayas, similar to the “Great Himalayan Trail” that was developed by Nepal. This concept favours lateral trekking over “up and back” treks, and thus has the potential to bring eco-tourism benefits to the poor. About 40 per cent of natural World Heritage Sites and over 42 per cent of biosphere reserves are located in mountainous areas in the region.

However, potential tourists in overseas widely perceive the sub-region as a “difficult” destination. Security concerns are a threat to tourism in Nepal, a few north-eastern states in India and Sri Lanka. Bangladesh's has been associated with natural calamities in the absence of adequate marketing of its ancient natural and cultural heritage. In Bhutan, a perceived high-end, low-impact tourism policy has resulted in a low volume of tourists. Moreover, until recently, there has been little or no cooperation among the countries in the promotion and development of products and sites. Each country has been trying to carve out a niche in the market without harnessing the complementarities, contiguity, and potential synergies available in the entire sub-region.

The heads of states of the member countries of SAARC have impressed upon the need to take measures to promote South Asia as a common tourist destination through joint efforts in areas such as upgrading of infrastructure, air linkages, simplification and harmonization of administrative procedures and training and joint marketing.

Since 2000, tourism has been a priority sector of the Asian Development Bank (ADB) supported South Asia Sub-regional Economic Cooperation (SASEC) programme, comprising Bangladesh, Bhutan, India, Nepal and, more recently, Sri Lanka. These countries have finally recognized the need to work together to promote the sub-region as a unique tourism destination to maximize the developmental impact of the individual country interventions in tourism. They acknowledge that complementary natural resource endowments, heritage, and culture provide immense scope for sub-regional cooperation in tourism, which can be promoted jointly, thereby saving marketing costs and individual investments in tourism infrastructure.

Countries must work together to plan and develop infrastructure and services in these cross-border circuits and destinations in an integrated manner. Investments are urgently needed for enhanced access and connectivity; destination infrastructure and facilities; and sustainable tourism destination management and service delivery. If properly planned and managed, the tourism sector can have a catalytic impact on poverty reduction. As evidenced in the SASEC countries, the sector generates more jobs than any other sector and thus contributes to local livelihoods. An important feature of the sector is that customers come to the product, thereby providing opportunities for multiplier effects.

Heath Care Tourism

A strong public health system would be the key for responding effectively to the challenge of emerging diseases in South Asia. Strengthening regional cooperation in health care would solve the health problems of South Asia, enhance accessibility to health care within the region and improve the quality of health services.

An analysis of the present situation reveals that the public health care system is overburdened. By establishing a separate high quality system for the financially secure population, this burden can be noticeably lessened. Specialist referrals from the public to the high quality system may well be established to improve the efficiency of health care services. Further, various pockets of South Asia can

be developed as specialized areas focussing on different areas of medicine. When the areas of speciality are clearly demarcated, the full utilization of the health services will see the light of day. Sharing of expertise through use of information and communication technology across the interconnected network of public referral centres across the region can be made possible within this system.

A SAARC Health Surveillance Centre and a Rapid Deployment Health Response System can be set up to deal with emerging and re-emerging diseases. South Asia can be made an attractive destination for health tourists with the availability of a high quality, affordable and efficient health network. A professional atmosphere will call back healthcare professionals who are presently overseas and also ensure the presence of an optimally trained public health workforce in individual countries and act as a feeder route for movement of personnel across the sub-region.

Under the regional health network, a common position on research, support and development of medicines can well be evolved to reduce the cost of health care to the poor. Regional strategies for prevention and treatment of HIV/AIDS, Dengue, Malaria and other major epidemics that take place on a catastrophic scale, can be designed. The drafting of a common policy on life-saving drugs and vaccines will enhance the bargaining power of the SAARC members vis-à-vis multinational pharmaceutical companies. A trans-boundary system for technology cooperation and production, storage and distribution of drugs at affordable prices in a sustained manner can also be instituted.

South Asia has a long tradition of Ayurveda, Unani and other indigenous systems for health care, cutting across country boundaries. An integrated system of holistic health involving trans-traditional co-operation will do justice to South Asia's rich heritage. The South Asian Health Alliance can consolidate and synergize the numerous initiatives of governments, private sector and civil society in the region to facilitate and promote alternative medicines.

SAARC Initiatives

Deliberations of the 13th SAARC Summit on health care collaborations in the sub-region

During the 13th SAARC Summit held in Islamabad in 2005, the heads of state or governments recognized the need to collaborate on the preparedness to address health emergencies, including prevention and control of pandemics like avian influenza, as these pose a major global threat with impact on health, trade and tourism involving human mobility. These experts emphasized on the need to develop a regional strategy for such emergencies as soon as possible; and identify and strengthen collaboration within and beyond the region and establish links with other regional organizations. They called for an early establishment of a SAARC Health Surveillance Centre and a Rapid Deployment Health Response System, to deal with emerging and re-emerging diseases. In addition, they welcomed the preparation of a strategy for collective SAARC response to prevent the spread of HIV/AIDS. They noted that regional response in this regard should be further enhanced to eliminate this dreadful disease from South Asia. In this regard, they emphasized the importance of early implementation of the Regional Strategy of HIV/AIDS. At the same time, they underscored the need for increasing cooperation to develop regional strategies for the prevention and treatment of Dengue, Malaria and other infectious or communicable diseases constituting major public health concerns. They also agreed to launch a regional initiative with regard to basic healthcare services and sanitation in the rural areas and encouraged exchange of experience and best practices within the region. They called for expediting elaboration of a SAARC Plan of Action for cooperation in medical expertise and pharmaceuticals, as well as traditional medicine, and availing affordable pharmaceuticals produced in the region, harmonization of standards and certification procedures and production of affordable medicines. There was also an agreement on promoting traditional medicine and protecting the intellectual property rights as a matter of regional priority.

D) Promoting Intra-regional Trade

A closer look at the macroeconomic indicators of the SAARC region suggests that there is a huge potential for economic cooperation in the region. The Group of Eminent Persons (GEP) of SAARC has proposed a roadmap for economic integration through the formation of South Asia Free Trade Area (SAFTA), a South Asian Customs Union (SACU) by 2015 and South Asian Economic Union (SAEU) by 2020. South Asian countries have also initiated cooperation within the framework of SAARC in the areas of poverty alleviation and people-to-people contact programs, expansion in the scope of investment and technology cooperation, besides bilateral initiatives such as Indo-Nepal FTA, Indo-Sri Lanka FTA, and some sub-regional initiatives such as Bangladesh Bhutan-India-Nepal Growth Quadrangle (BBIN). Although many of these initiatives are already being pursued, a lot more needs to be done, some of which have been enumerated in the following paragraphs.

Increasing Intra-regional Trade through SAFTA

It is envisaged that opening up of trade presents a large potential, both in terms of trade diversion from traditional sources towards the SAARC countries and trade expansion. By expanding intra-regional trade, South Asia will gain in terms of cost efficiency, higher unit value realization in international markets and strengthening its bargaining power in regional forums like WTO. Studies conducted in the framework of gravity model have estimated that complete elimination of tariffs under SAFTA may increase the intra-regional trade by 1.6 times. It is also important to highlight that such advantages of scale would largely accrue to the smaller member countries of SAARC, due to the possible expansion in their scale of operation by getting access to larger markets of larger member countries. An example is the India-Sri Lanka FTA that has noticeably benefited Sri Lanka. This success has prompted Sri Lanka to seek to expand the scope of the India-Sri Lanka FTA to cover investments and services in a comprehensive economic partnership agreement.

- SAFTA has been put into operation since 2006. It calls for reduction in import duties to 20 per cent by 2008 and between 0 and 5 per cent by 2013, but allows the less developed economies to reduce the rate of duties up to 5 per cent by the year 2016. The SAFTA will be implemented through five primary instruments: Trade Liberalization Programme; Rules of Origin; Institutional Arrangements; Consultations and Dispute Settlements; and Safeguard Measures. Apart from these steps, any other measures agreed upon by the Member countries may also be included. Besides implementing rigorously the measures proposed in the SAFTA, some other actions are also required to be taken at the sub-regional level. These include strengthening of the Asian Clearing Union (ACU) to reduce the cost of exchanging currencies for intra-regional trade and to improve the transparency in price setting necessary for the promotion of intra-regional trade and investment flows (RIS 2004a), which would help the:
- Simplification of procedures and standardization of customs documents and declarations through implementation of the ratified Agreement on Mutual Administrative Assistance in Customs Matters (SATS 2005)
- Finalization of Regional Action Plan on Standards, Quality Control and Measurement for resolving issues related to individual national standards and developing regional standards (SAARC 2004)
- Common Transport Policy' in South Asia for optimum utilisation of existing utilities as well as expansion of new facilities in the region (RIS 2004b)

Marketing Collaborations for Export Promotion outside SAFTA

A number of traditional commodities exported are exported in bulk as a lack of marketing efficiencies and other constraints prevent value-added realization. Even in this bulk market, many countries of the region frequently under price products in the foreign markets in order to compete with the others. Jute, rice, tea, coffee as well as textiles and apparels are examples of intense competition. In the process, they lose in terms of normal unit value realization and, consequently, in foreign exchange.

To reverse this trend and benefit the South Asian players, there is very good scope for marketing collaborations and joint export promotions. Some of the ways in which this can happen are:

Tie-ups in Tea: India and Sri Lanka, which account for almost a third of the world's tea production, can jointly undertake value addition by blending their tea, designing their packaging in line with demand patterns overseas and marketing it through common distribution channels. Presently, South Asian tea is exported in bulk and blending and value addition is done elsewhere.

Mutual Cooperation in Textiles and Clothing: In the post Multi Fibre Agreement (MFA) scenario, global trade in textiles is expected to rise to US$650 billion by 2010 and US $850 billion by 2015. Trade in value added fabrics and apparels will experience an even greater growth. India and Pakistan, who are strong in primary textiles can join hands with Bangladesh and Sri Lanka in apparels and become major exporters to Europe and the Americas. Specialization can be developed based on factor endowments and comparative advantages. Some of measures that can be taken are:

- India and Pakistan can transact in different counts of cotton
- Textile machinery and accessories imported by South Asian countries can be sourced from India at much cheaper rates
- A South Asia textile and clothing group can be established to maximize the benefits of mutual co-operation
- Common distribution and marketing chains can be set up abroad
- Creating and projecting a South Asia brand will reflect the regional specialities

Other commodities such as coffee, jute, cardamom and basmati rice, which are currently exported in bulk and are subject to low unit value realization, could be marketed through regional joint ventures who could undertake packaging and marketing,

Promoting Intra-regional Investments

Capital integration at the South Asian level can help to the countries in strengthening their economic base. In a regional grouping like SAARC, strengthening of trade investment linkages is a pre-requisite for achieving economic success because of the fact that trade deficits between bigger and smaller countries need to be compensated by capital account surpluses wherein outward FDI from bigger to smaller countries takes place. This kind of linkage helps improving export supply capabilities of the smaller countries. It has been empirically demonstrated that the transfer of resources and technology through South-South joint ventures is more appropriate and cost effective for the receiving country than similar transfers from trans-national companies based in the industrialized countries.

Hindrances to Intra-SAARC capital include:

- Varying economic policies adopted by different countries to protect their domestic industries
- Presence of many barriers including tariff and non-tariff barriers, such as different standardization and certification processes, different custom rules and regulations, tax laws and regulations, exchange rates, interest rates, duty structure as well as macroeconomic policies formulated in different states.
- Poor physical infrastructure and non-physical infrastructure facilities including regulatory, fiscal, and legal systems that raise direct cost and by corruption; bureaucratic delays; property disputes also create a sense of uncertainty.
- Absence of effective banking networks in the countries, including no co-operation between the central banks of the countries
- Lack of sufficient cross-border facilities like transportation and communication
- Political factors and acute mistrust among the nations:

To address these concerns towards increasing the cross-border capital flows within the South Asian region, the following initiatives should be taken up urgently:

- Finalization and ratification of the Regional Agreement on Promotion and Protection of Investment within the SAARC region to create conditions favourable for promoting and protecting investments in the member states by investors from other member states
- Implementation of the Customs Action Plan to harmonize customs rules and regulations; to simplify documentation and procedural requirements; to upgrade infrastructure facilities; and to provide training facilities
- Setting up of centres (on the lines of Asia Africa Investment and Technology Promotion Centre) to promote business linkages in the form of investment, trade and technology transfer within the countries of the region
- Co-operation among Chambers of Commerce and Industry of member countries through SAARC Chambers of Commerce and Industry to promote investments and joint ventures
- Creation of regional public goods, including transport infrastructure such as road and rail links, bridges, creation of warehouses facilities, energy plants, etc.

E) Growth of Indigenous Institutions

South Asia Technology Bank

In recent times, technology has become a critical asset for competitiveness and long-term economic and social growth. This has driven South Asian countries to seek technology capabilities from advanced countries with the objective of improving the lot of their people. However, these technologies are too sophisticated and capital intensive, which is not suitable for the labour-surplus, capital scarce economies that are still constrained by the small size of their markets. Moreover, the technology offered is expensive and there are restrictions on adaptation, research, use of personnel and trademarks and terms of transfer.

As opposed to this situation several cutting edge technologies have been developed within the region. South Asian countries have gained sufficient expertise in areas relating to chemicals and pharmaceuticals; heavy and light engineering equipment; defence equipment and electronics; and nuclear, space and information technologies. There exists a huge scope for technology co-operation between countries due to similarity in socio-economic conditions and the advantages of labour-intensive production.

Banking Technologies

To enhance access to technologies developed within the region, many experts have suggested the formation of a South Asian Technology Bank and a wide range of activities have been initiated by many UN agencies to facilitate technology transfer, cooperation and capacity building in the developing world. The Asia Pacific Centre for Technology Transfer (APCTT) has been operating in the region and the proposed South Asian Technology Bank can forge partnerships with these entities and the private sector. It would facilitate horizontal and vertical technology transfers, technology capacity building, promotion and management of innovation, as well as regional/sub-regional networking and technology trade community building. It would focus on enhancing the competitiveness of Small and Medium Enterprises (SMEs) by facilitating adoption of good practices related to acquisition/adoption of Environmentally Sound Technologies (ESTs). It would have a database that includes various industrial and technological survey reports, technological profiles and sector status reports, which could be updated and shared to further development.

South Asian Development Bank

In various parts of the world, sub-regional development banks such as West African Development Bank and the Caribbean Development Bank have been formed. These institutions have proved to be fairly effective in sub-regional financial issues and forwarding the agenda of economic integration. Based on this experience, there may be a potential for a South Asian Development Bank with the mandate to accelerate sustainable socio-economic development in South Asia. It will play the following roles:

- Funding the physical, social and economic infrastructure
- Building institutional, financial, technical

and knowledge capacity for development

- Supporting more effective interventions and regional integration by maximizing the impact of all players in multi-lateral ventures

To set up the proposed institution, technical and management support can be sought from the World Bank and the Asian Development Bank (ADB), with equity from the member countries and other multilateral, bilateral and private institutions.

South Asian Reserve Fund

Another major function of the sub-regional bank can be setting up and managing a South Asian Reserve Fund. Experts have proposed that South Asian countries can create a pool of foreign exchange reserves of perhaps 10 per cent of their current reserves in an institution, which can be called the South Asian Reserve Fund (SARF). These reserves can be used for loans or purchase of bonds issued by South Asian governments or corporations as appropriate. As the SAR gets accepted, the SARF can earn profits, which will be distributed among members as grants for development purposes.

While aiming to foster, facilitate and catalyse a globally competitive industrial sector, the economies of the South Asian sub-region are in a precarious position, as there is a need to balance industrial activities and environmental sustainability.

The economies of the South Asian region should aspire to achieve intra-and inter-generational equity, and aim to bring down the impacts of business activity to a level which does not exceed the carrying capacity of the natural environment. To protect, conserve and to improve the environment, and to ensure efficient use of available resources to increase economic growth rates, it is necessary to:

- Strengthen Corporate Social Responsibility (CSR) amongst business houses
- Bring about a change in the current production and consumption patterns
- Address the special needs and issues of MSME (micro-small and medium scale enterprises) sector
- Strengthen the regulatory mechanisms for trans-boundary pollution
- Uphold regional and multilateral environmental agreements

The countries have demonstrated quite effective mechanisms to prevent industrial pollution by promoting a mix of instruments—voluntary compliance, market based mechanisms of taxes and incentives; expanding command and control regime and cleaner production measures.

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SECTION – IV

Institutional Mechanisms and Implementation Framework

This section reiterates the need for strengthened institutional systems to cater to the emerging priorities and implementation of the MDGs and World Summit on Sustainable Development (WSSD) plan. The section emphasis the general understanding that 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 level and scale. It calls for effective national governance, responsible global systems, cooperation at the sub-regional and global scale apart from having technology transfer and resource mobilization arrangements in place along with adequate financial systems and efficient monitoring and evaluation systems. The section also provides action points for cooperation along with the proposed implementing institutions.

Ensuring sustainable development and growth of the South Asian sub-region is beyond the scope of individual countries. This is especially true in vulnerable countries that face multiple stresses such as: poverty and unequal access to resources; weak institutions; and food and water insecurity, in spite of rapid advances in technology and economic resources. These are matters of urgency that require sustained and concerted efforts from every country in the sub-region. Therefore, due emphasis must be placed on increasing responsibilities of all stakeholders and collaborative efforts towards ensuring a healthy environment for the future.

Recent assessments emphasize the need to strengthen institutional systems while emphasising the significance of systems to address the priorities of eliminating poverty and creating human security; managing population growth and its impacts; conserving the natural resource endowments; and securing the economic base. Successful efforts to bring about sustainable development will necessarily require countries of the sub-region to establish mechanisms for formulating policy and implementing it at the all levels – local, national, regional and 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 actions, establish responsibilities, set up mechanisms for monitoring progress towards agreed goals and create mechanisms for accountability.

A) Strengthening Institutional Systems

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.

It is strongly advocated that the several regional initiatives are made more effective by involving 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 polices like SAPTA and SAFTA can currently be supported by SAARC, along with the launch of 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).

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 (CANSA) 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 marginalized in South Asia. The South Asian Watch on Trade, Economic and Environment (SAWTEE) is a partnership for capacity building to address liberalization and globalization. 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 organizations. They bring in rich and diverse expertise and experience, and also propagate the regional initiatives at nominal costs.

Strengthening global cooperation

Bringing about fundamental changes will need a 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:

- To eradicate global poverty.
- To conserve the environmental resource base.
- To ensure that the benefits of globalization 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 a global governance code of ethics on corruption and agree to eliminate corruption at all levels of public life.

B) Enhancing Regional Cooperation

Asia is assuming importance in terms of its centrality to global geopolitics and geo-economics. Though characterized by tensions and conflicts, the continent is also an area of potential economic growth. South Asia is populated with vast numbers of 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.

The key areas of regional cooperation would include: joint action on poverty eradication and human security; sub regional trade and economic policies; sub regional sharing and management of natural resources; and strengthening implementation systems

Local governance 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 suburban locations; jobs with meaning and dignity that generate incomes; and jobs that place the least pressure on the environment. These jobs help produce goods and services that cater to the basic needs of the local people and simultaneously increase their purchasing power to acquire these goods and services.

The creation of sustainable livelihoods requires fundamental changes in the choice of technology, financing systems and functioning of the marketplace. It also needs strengthening of the institutions of ***local governance***, which must create a sense of ownership by local people over the resources on which they depend, and therefore decisions regarding these resources, while also guiding their future generations 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 mobilization*** is the most effective instrument for creating both the supply of sustainable livelihoods and the demand for them. This is where the traditionally marginalized 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 mobilization options and are becoming increasingly familiar with the kinds of intervention needed.

Successful social mobilization must be based on active participation by all the stakeholders; and 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-governance, establishing clearly defined entry points and effective support systems.

Promoting Sustainable Production and Consumption Patterns

Virtually every country today wishes to "become competitive in the global economy" by using the easiest accessible technological strategies and production systems; most of which 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 (pricing, advertising, credit), the policy framework (perverse incentives), cultural expectations, technological innovation, infrastructure and land use, as well as individuals purchasing decisions. This, in turn, entails tackling the institutionalized 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 industrialized 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*".

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

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 complementing, supporting and reinforcing 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 towards the global agenda of sustainable growth.

Technology transfer

As called for by the Programme for the Further Implementation of Agenda 21, efforts are needed to accelerate the creation of an enabling environment, on the part of both developed and developing countries. This environment could include supportive economic and fiscal measures, as well as a practical system of environmental regulations and compliance mechanisms, to help stimulate private sector investment in developing countries. Transfer of publicly funded environmentally sound technologies, including biotechnology, should be supported and promoted. Barriers and restrictions should be limited, allowing easier access to these technologies. The private sector may be encouraged to invest in technologies targeted for local initiatives by maximizing the use of locally available resources, and other resources through South-South cooperation. These investments could eventually lead to more business opportunities for cleaner technology markets. The development of renewable and cleaner resources and technologies will improve the efficiency of production and consumption, in turn improving environmental sustainability.

Integration of major groups into planning and decision making

Effective policymaking would also necessitate the inclusion of a broader range of participants from major groups which possess valuable institutional knowledge and expertise to work in tandem with Governments. To increase ownership and accountability in the implementation of policies, participatory approaches from major groups for engagement in the policy dialogue could continue. The role of public-private partnerships is also increasingly recognized as an effective mechanism for promoting sustainable development and bringing efficiency and new technologies to environmental management.

Table 24 : Role and Responsibilities of agencies towards achieving MDGs and SDGs

S. No.	MDGs	SDGs	Action Points	Implementing agency/Institutions
1	**Eradicate extreme poverty and hunger**	• Eradication of Hunger Poverty • Halve proportion of people in Poverty by 2010 • Ensure adequate nutrition and dietary improvement for the poor • Ensure a robust pro-poor growth process	• Early warning of food insecurity • Food during emergencies • Regional co operative • Agricultural R & D • Disseminating environmental friendly agricultural practices • Openning of labour markets/ Youth policy / youth development fund / employment guarantee scheme / training and skill development programme	• SAARC Three-Tier Mechanism on Poverty Eradication • SAARC Development Fund • Integrated Programme of Action • SAARC Agricultural Information Centre • Food and Agriculture Organization of the United Nation
2	**Achieve universal primary education**	• Access to primary/communal school for all children, boys and girls • Completion of primary education cycle • Universal functional literacy • Quality education at primary, secondary and vocational levels	• raising the quality of education through the exchange of information among the universities in the region • improve access to quality education	• SAARC Forum of Vice Chancellors of Open Universities • South Asian University in India • Skill Development Institutes • SAARC Human Resource Development Centre

S. No.	MDGs	SDGs	Action Points	Implementing agency/Institutions
3	**Promote gender equality and empower women**	• Reduce social and institutional vulnerabilities of the poor, women, and children • Ensure access to affordable justice • Ensure effective participation of poor and of women in anti-poverty policies and programmes.	• reduction of the proportion of early marriage among girls • the postponement of the age of first pregnancy • reduction of malnutrition and mortality rates • encourage women entrepreneurs in the region. • Ending gender biases by removing all sorts of economic, political and social disparities • Ensuring inclusion of women in decision making processes at all levels • Bringing gender equality and equity as priority agenda of political parties • Participation in consultative policymaking processes • Making women-friendly legislation and enforcement of labor laws • Creation of income generation opportunities for women • Incentives/scholarships for families to address dropouts • Ensuring security for girls at all levels	• SAARC Social Charter • SAARC conventions related to Trafficking in Women and Children and Promotion of Child Welfare • United Nations Development Fund for Women • Asian Centre for Human Rights – • The United Nations Children's Fund • SAARC Plan of Acton on the Girl-Child • South Asian Association for Regional Co-operation in Law • SAARC Autonomous Advocacy Group of Prominent Women Personalities
4	**Reduce child mortality**	• Child health	• Implementing The SAARC Convention on Regional Arrangements for the Promotion of Child Welfare in South Asia	
5	**Improve maternal health**	• Maternal health	• Target regional interventions to reduce malnutrition and child and maternal mortality;	• Kathmandu Resolution on Women and Family Health

S. No.	MDGs	SDGs	Action Points	Implementing agency/Institutions
			• Legal protection against gender discriminatio; • Inclusion of socially vulnerable groups in the development process through affirmative actions; • Strengthening sub-regional cooperation for free-flow of life-saving drugs and medicines, • Focusing intervention, where it is most needed like rural areas and urban poverty pockets • Creating awareness about Reproductive Rights • Inclusion of basic maternal health and gender equity content • Regular research and data on maternal health indicators and progress • Making donors realize the severity of the maternal health problems in South Asia	
6	**Combat HIV/AIDS, malaria and other major diseases**	• Affordable health-care • Improved hygiene and Public health	• Interconnected network of public domain referral centres • Establishing knowledge networks across the subregion-Urban management • SAARC Health Surveillance Centre and a Rapid Deployment Health Response System • Transtraditional co-operation in holistic health • Implement aggressive campaign to change behaviour,	• Collective SAARC response to prevent HIV /AIDS • SAARC Health Surveillance Centre • the SAARC Convention on Narcotic Drugs and Psychotropic Substances • SAARC Drug Offences Monitoring Desk • SAARC Tuberculosis Centre • World Health Organization

S. No.	MDGs	SDGs	Action Points	Implementing agency/Institutions
			• promote the use ICTs to enhance access to knowledge • integrate life skill education in formal and informal education programmes (with special focus on youth and women) • mainstream HIV/TB/malaria prevention into media and entertainment programmes. • exchange best practices among countries in the region as well as across regions	
7	**Ensure environmental sustainability**	• Acceptable level of forest cover • Water Security • Acceptable level of water and soil quality • Acceptable level of air quality • Conservation of bio-diversity • Wetland conservation • Ban on dumping of hazardous waste, including radio-active waste	• Shared database on transboundary river water quality. • Promote affordable, self-sustaining (cost-sharing) community based water conservation and management system, and sanitation, waste water and solid waste management, drawing lessons from the successes in the region. • Tenurial rights of the slum population ought to be ensured for enabling their access to regular utilities • Sharing regional environmental information • South Asian Disaster Preparedness and Management System • South Asian project "Integrated flood risk management"	• South Asia Cooperative Environment Programme • United Nations Environment Programme • Convention on International Trade in Endangered Species Secretariat • Traffic International • South Asia Cooperative Environment Programme – Transboundary Conservation Areas/ Peace parks • Landscape network • International Union for Conservation of Nature • International Centre for Integrated Mountain Development

S. No.	MDGs	SDGs	Action Points	Implementing agency/Institutions
			• South Asian Regional cooperation should be promoted for integrated river basin management (IRBM) • a regional approach could be developed for transboundary movement of these wastes • Eco-tourism in mountain zone • Transboundary research and monitoring of biodiversity • Transboundary Anti Anti-Trafficking Initiatives	• South Asia Seas Programme • South Asia Biodiversity Clearing House Mechanism • Global Invasive Species, Program, • SAARC Coastal Centre • Regional Environment Office, Kathmandu • SAARC Plan of Action on Environment • SAARC Forestry Centre • SAARC M0eteorological Research Centre • SAARC Coastal Zone Management Centre. • Comprehensive Framework on Early Warning and Disaster Management • SAARC Energy Centre • South Asia Forum for Infrastructure Regulation • South Asia Regional Initiative for Energy • Asian Energy Network • International Water Bank Institute • International Network for Participatory Irrigation Management • Centre for Drainage and Irrigation – Nampur • The Indus Water Treaty • Global Water Partnership (South Asian Chapter) • SAARC centre for oil spills

S. No.	MDGs	SDGs	Action Points	Implementing agency/Institutions
				• National Institute of Oceanography (Indian) • International Centre for Integrated Mountain development (Landslides, etc.) • South Asian Network for Development and Environmental Economics • The Access Initiative • Male Declaration • Basel Convention on International Waste • Landscape network
8	**Develop global partnership on development**		• Transboundary cultural and spiritual tourism • Strengthen Transboundary infrastructure facilities	• South Asia Subregional Economic Cooperation • SAARC Regional Multimodal Transport Study • SAARC Terrorist Offences Monitoring Desk and the SAARC Drug Offences Monitoring Desk. • SAARC Cultural centre • SAARC Information Centre • South Asia Subregional Economic Cooperation • SAARC Preferential Trading Arrangement • United Nations Educational, Scientific and Cultural Organisation • South Asian Network for Development and Environmental Economics • Centre on Integrated Rural Development for Asia and the Pacific

Source: SSDS Consultation workshop, August, 2006, Nepal

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

Civil society, including community based organizations and non-governmental agencies have growing rapidly, in terms of their influence on people's lives. Effective institutions in this sector need to be encouraged and nurtured, particularly because they are usually better capable of delivering social mobilization services, and usually at a fraction of the cost. They have high levels of motivation and the willingness to work within severely constrained circumstances, and are also effective innovators, whose solutions can be adopted on larger scales.

The private sector

The corporate sector has also begun to realize the opportunities offered by the rural market in South Asia and can be a major potential partner in providing sustainable development services to the poor. 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 increase their business opportunities. In this context the efforts like the Global Reporting Initiative (GRI), a worldwide, multi-stakeholder network aims to design and build acceptance of a common framework for reporting on the triple bottom line of sustainability - the economic, the environmental, and the social since its inception in 1997, and the Global Compact, a voluntary international corporate citizenship network initiated to support the participation of both the private sector and other social actors to advance responsible corporate citizenship and universal social and environmental principles to meet the challenges of globalization, launched by the United Nations, in 2000, 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; and
- ***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 charged with implementing policies, programs and practices that protect human rights, communities and the environment based on principles of justice and sustainability. However, while corporate sector participation in the development process needs to be encouraged, governments and regulatory systems must ensure that profit motives do not transform cultural values and traditional conservation practices as these have played a vital role in conserving biodiversity, over years.

Setting Standards

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 to:

- 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.

C) Resource mobilization arrangements

Sustainable development in South Asia has essentially to be fuelled by public and private investments from within countries. Micro-credit programmes have demonstrated the power and potential of internal resource generation, through innovative mechanisms as demonstrated by its success in Bangladesh, its rapid growth in India and to a lesser extent in other countries. It is only this potential of internal resource generation – even from the poor – that can leverage external finances effectively.

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

Many studies in the region have *indicated that the* private sector financial flow to developing countries has increased. However, most of this flow is to India and very marginal amounts reach other countries. The proposed regional enabling institutions such as 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.

ODA needs to be used as the last resort to fuel the sustainable development process in the region. While over years, development aid has been useful, it has also created a dependence on donors as has been seen in the 1980s, when Bangladesh's economy became largely dependent on external aid. However, with the current trends indicating a decline in development assistance, the chances for future increases could be remote. The available amounts of development assistance have to be judiciously utilized to support and test innovative approaches and act as a catalyst for private investment.

Financing schemes to upgrade infrastructures and systems

As noted above, one of the main constraints associated with building sustainable development capacities in least developed countries, landlocked developing countries and small island developing States is the lack of access to financing. To alleviate this situation, as well as to attract more favourable official development assistance, these groups of countries need innovative financial packages from multilateral and bilateral financing institutions. Technology-intensive small and medium-sized enterprises could receive low-interest loans to finance their projects and enterprises and widely deploy alternative technologies. Such widespread application and acceptance of technologies could further induce sustainable infrastructural development, as well as systems to reduce environmental pressure.

All countries have a role to play in emission reductions. They are encouraged to use all possible measures especially flexible mechanisms of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

D) Monitoring and Evaluation Systems

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. Recognizing 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.

The three sets of proposed activities for regional cooperation – poverty eradication; sharing and management of natural resources; and trade and economic activities – aimed at sustainable development are complex and diverse. SAARC should set up independent mechanisms for supportive supervision and monitoring of all three sets of activities. Expertise can be drawn, from time to time as required, from among government, the private sector, civil society, individuals and institutions.

For ensuring transparency and accountability in operations, 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 MDGs, the WSSD Framework for Implementation and the various Multilateral Environment Agreements. This will facilitate national, regional and global reporting. However, it would be essential to work on modifying these indicators to better reflect the values and cultures of the region.

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

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SECTION — V

CASE STUDIES : A Selection of Good Practices from South Asia

Natural Resource Management and Conservation

Reducing emissions in India

Small scale industries were found to contribute 44 percent of the overall particulate emissions in a central area of Kolkata, India. The emissions largely came from the use of energy inefficient coal fired units for manufacturing processes such as small boilers, ceramic kilns and coast iron foundries. The West Bengal Pollution Control Board (WBPCB) adopted a stricter particulate emission standard and intensified enforcement efforts by targeting units located in the area. Most of the units using small coal fired boilers were required to change to an oil fired boiler (typically using a light oil) to meet the new standard. To facilitate compliance, a fund was created at the WBPCB, with the support of the India-Canada Environment Facility, to assist small scale industries in financing the costs required for compliance with the new standard.

Since a natural gas network is not available in Kolkata, the most viable option was to replace coal boilers with more energy efficient and cleaner oil fired boilers. The fund provided a grant of 50 per cent of capital cost which was paid after conversion was implemented. The WBPCB also involved industrial associations that helped to reach out to the units and provide technical advice. A recent assessment of pollutant emission reduction, after the adoption of new standards and establishment of the fund, showed a reduction of about 98 per cent of the total particulate matter from units who had completed the conversion.

The WBPCB program has many elements of good practice such as using scientific information to set a regulatory priority; create a targeted regulatory programme, complemented by outreach, technical and financial assistance; and building partnership with regulated industry.

Source: SAARC 2003

Urban waste management in Bangladesh

Dhaka, with a population of 6 million within its metropolitan boundary of 344 km^2, generates around 3 000 metric tons of municipal solid waste per day. Only 42 per cent is collected; and the rest lies on road-sides, in open drains and low-lying areas. Waste Concern, a local NGO, has developed an innovative solution to this massive problem, based on decentralized composting integrated with primary collection of solid waste.

The innovation drew on two critical research conclusions: firstly, that like other mega-cities, more than 50 per cent of waste generated is disposed of in environmentally unsound and unfriendly ways; and secondly, that a large informal sector industry exists in Dhaka which recovers and recycles solid waste. Much of this recycling activity focuses on: inorganic waste that is reusable; and recyclable materials, which can be resold. However, organic waste is not recycled.

The project has demonstrated that organic waste can be converted into a valuable resource such as compost, through a number of small-scale decentralized private micro-enterprises (composting plants) using appropriate technology and involving the private sector, as a link between the suppliers of raw waste and end-users of compost. Since the completion of the pilot phase, Dhaka City Corporation has undertaken to replicate the model in four of its wards. Further replication, in other urban centres of the country is expected.

Source: SAARC 2003

Restoring traditional water harvesting practices in India

Rajasthan is one of the most arid states in India, with regular recurrence of droughts. Traditional water harvesting structures that were used to store and conserve water faced a gradual decay as increasing population pressure, deforestation, large-scale migration and a dependent mentality took hold. Large parts of the state were listed as a dark zone as ground water table was extremely low.

Tarun Bharat Sangh (TBS) was established in Alwar district in March 1975 with a mission to harvest and conserve water through revival of traditional water harvesting structures called *johads*, and construction of new structures. TBS mobilized people by undertaking awareness campaigns and participating in local governance meetings. The organization extended its activities to a holistic treatment of the catchments area of its water structures by taking up afforestation work. Tying *sacred thread* on trees was one of the symbols used by TBS to encourage people to plant and protect trees. Projects were financed by peoples' contribution, assistance received from philanthropists and other organizations, including the Council for Advancement of Peoples Action and Rural Technology (CAPART). Over the years, TBS has built more than 4 500 water harvesting structures, based on indigenous technology and with locally available material, which are maintained by the community, themselves.

The carrying capacity of land for fuel, fodder and food grains has increased considerably and agricultural land under cultivation, in villages falling in the watershed, has increased from around 20 per cent in 1985 to nearly 100 per cent at present. Diversification of livelihood opportunities, especially into the dairy industry is clearly visible in the area. Five rivers of the area – Arvari, Ruparel, Sarsa, Bhagani and Jahajwali – that had dried up earlier have a perennial flow.

However, the availability of water in rivers and ponds has its own drawbacks. Villagers around the river-bed began growing water-intensive crops like paddy and sugarcane. Farmers installed diesel pumps to irrigate crops over long periods of time, creating water scarcity and conflict among the village community.

To resolve this issue and ensure that every villager received a fair share of water, a village parliament was formed in the catchments of these rivers. The members of this parliament were drawn from all the villages in the watershed area of the river. They decide the rules regarding the use of river water and the villagers, themselves, strictly enforce these.

Though TBS and its movement for water harvesting and conservation have received accolades within the country and overseas, there have been disputes between state agencies, specially the Irrigation Department, and the villagers. The Irrigation Department claimed total authority over water. Questions of legality and safety of the TBS constructed structures were raised and attempts were made, by government agencies, to demolish some of these in accordance with agreements signed before independence, between princely states. However, these conflicts were resolved through the mediation of civil society organizations and environmental activists.

The President of India, Shri K.R. Narayanan, in the year 2000, visited Hamirpura village in Alwar and felicitated the villagers for their work on rain water harvesting, rural engineering and

revival of the river Arvari. Shri Rajendra Singh, Director, TBS whom the villagers fondly call the 'Johadwala Baba' or 'the bearded man of the check dams' was awarded the Ramon Magsaysay Award for community service in year 2001.

Source: SAARC 2003

Social Welfare Disaster Management and Social Protection

Social protection in conflict – food security

In Sri Lanka, more than twenty years of conflict in the north and east has adversely affected food security in these areas. There have been large losses in terms of lives, homes and lands; destruction of infrastructure facilities; and all these, have adversely affected livelihood opportunities of the people.

Moreover, there has been a substantial decline in agricultural production, mainly due to degradation of irrigation facilities, high risks associated with agriculture due to the war and severe drought in the area, breakdown of public and private sector support services and displacement of large number of farmers (about 800,000 people have been internally displaced due to the civil war with the share of the displaced being significantly high in certain districts – Mannar, 95 per cent; Baticaloa, 75 per cent; Vavuniya, 84 per cent; and Trincomalee, 70 per cent).

In addition, restrictions on transportation of basic construction items; essential food items and the LTTE taxation system are some other conflict-related factors that constrained food security in the war zone.

The government, in collaboration with NGOs and international organizations, has undertaken number of interventions to reduce food security-related problems in the conflict area. These interventions are of two types: provision of relief food assistance, particularly for the internally displaced people (IDP) and, development-oriented policies that aim to improve livelihood opportunities and attain long-term, sustainable food security in the region.

The government provides food relief (dry rations) to all displaced families, with a monthly income of less than LKR 1 500; and currently there are over 700 000 recipients in the scheme (about 175 000 are in refugee camps known as “welfare centers” and 530 000 live outside the camps).

The Integrated Food Security Programme (IFSP), Trincomalee, is another important programme that supports people – who are at risk of food insecurity and affected by the conflict – to diversify and increase their food and income sources; and to improve their nutrition and health care. It focuses on 'development' rather than 'relief and concentrates its activities in three broad areas: poverty projects for individual families (goat and poultry rearing, tank fishing); community infrastructure development (drainage, wells, tanks, roads); and special health and nutrition interventions (support for health centers, mid-day meals for children). With the existing political and economic constraints in the war affected area, fulfilling sufficient food and nutritional requirements of all the people in the region consistently (as implied by the definition of 'food security') is far from practical. However, the government has continued to make optimal efforts in ensuring food security.

Source: SAARC 2003

Expanding the Reach of Basic Education in Maldives

Rapid progress has been recorded by the Maldives in the provision of universal education and the stage has been reached where even the smallest and most remote island has been provided with a school. School enrolment rates for girls and boys and are equal.

The commitment to basic education finds expression in a very high adult literacy rate, averaging 98 per cent of the adult population. However, about 10 per cent of the atoll population is found on islands with schools that are without drinking water and toilet facilities. Some of the key challenges to improvement in education quality are the high number of untrained teachers; shift systems in schools due to lack of adequate classroom space; and lack of basic infrastructure facilities such as libraries, science laboratories and equipment.

In 2000, the “22-Schools Project” was launched, aimed at addressing these issues through the provision of basic resources and training inputs, to the least served island schools, with a special focus on continuing education and skills development. The project's mandate includes: improving the quality and level of girls' education, by focusing on completion of their basic education cycle; access to secondary or alternative forms of education; and creating awareness to eliminating gender gaps. Project activities include: professional development of teachers, with a focus on multi-grade teaching and gender issues; training of head teachers in resource and facility management; curriculum management, student services and facility management; school health services including adolescent girls' reproductive health; provision of strategic resources for curriculum implementation; and, exchange of teachers between under-privileged schools and schools in Male'.

Source: SAARC 2003

Self-help Groups and Poverty Alleviation in India

Subsequent to the ISACPA report of 1992, the South Asia Poverty Alleviation Programme (SAPAP) – a UNDP supported initiative – was launched in all SAARC countries to build institutional capacity for poverty reduction through social mobilization; and then replicate the experience on a larger scale. In India, SAPAP was taken up in three backward districts of Andhra Pradesh – Mahbubnagar, Ananthpur and Kurnool, with strong support and backing from the Government of Andhra Pradesh. The programme was focused on three objectives: social mobilization; training and skill development; and capital formation.

The poor in the selected villages were organized at three levels: homogenous Self-Help Groups (SHGs) of the poor at hamlet and sub-hamlet levels; SHGs in villages, organized under Village Level Organizations (VOs). Women were the main participants in the programme as nearly 90 per cent of SHG members are women.

The areas for training and skill development component, conducted for SHGs, included: income generating activities; fostering skills for conducting meetings, elections and rotation of group leaders; and bearing responsibility for various activities of SHGs.

The SAPAP strategy for capital formation was to encourage small savings and internal lending among the SHG members. Funds were also made available to SHGs through linkages with government programmes and micro-finance institutions. Institutional linkages were forged with NGOs working in the project districts and

18 partner VOs, associated with the SAPAP programme, were entrusted with the task of social mobilization and capacity building through a network of 22 community coordinators and 121 community volunteers. Each community worker was assigned between five and six habitations.

Women SHG's have emerged as a platform for addressing social evils that prevail in society. Child marriage, violence against women, child labour, poor condition of widows, liquor consumption and the practice of *Jogini* (where a woman is married to the God), have been dealt with by the SHGs.

In one of the villages in Kurnool district, SHGs comprising of single women, demonstrated their effectiveness in achieving objectives; and this resulted in single women, in other villages, forming SHGs, as well. These SHGs were federated into a group called *Jeevan Rekha* ('Life Line') which is open to: widows and destitute women; and deserted, divorced and never-married adult women. Many SHGs have initiated legal action for atrocities against women. They have won Panchayat elections and become village heads and ward members. A women's bank was also formed by a SHG in Kurnool district.

However, evaluation reports indicate that access to micro-credit became the foremost objective, relegating the basic aim of creating a strong social capital base to the background. It was established that SAPAP did not translate into a comprehensive planning instrument for village development plan.

The model of social mobilization demonstrated by this SAPAP has been adopted by the World Bank in its Andhra Pradesh District Poverty Initiatives Project that is being implemented in six districts of Andhra Pradesh including Mahbubnagar and Ananthpur. Community investment funds and educational support to girl child labourers are important components of the programme. The social mobilization strategy for upliftment of the poor, initially adopted under the Development of Women and Children in Rural Areas (DWACRA) project of Government of India, is the central core of the Swaranjayanti Gram Swarozgar Yojana (SGSY), a holistic programme for self-employment in rural areas, as well as micro-credit programmes of the National Bank for Agriculture and Rural Development (NABARD), Rashtriya Mahila Kosh (RMK), Small Industries Development Bank (SIDBI) and other micro-finance institutions.

Source: SAARC 2003

Health-care Services for the Poor

Health-care reaches out to the poor in Pakistan

The privately established *Edhi* Foundation has created the largest fleet of ambulances in Pakistan with an unparalleled record of quick response for victims of road and other accidents. Its nation-wide network equipped with the latest communication system covers even the remotest areas of the country. A fleet of over four hundred ambulances, field mobile units and rescue units, which comprise this network, are maintained in a state of readiness to meet any emergency in the shortest possible time anywhere, in Pakistan. Air Ambulance Service helicopters and fixed wing aircraft-based emergency service supplement this endeavour by providing services such as evacuation, transportation of doctors to remote locations, inter-hospital transfers and search and rescue of stranded persons. *Edhi* Foundation, the largest and most organized social welfare system in Pakistan, demonstrates what ordinary people can achieve through sincerity of purpose, dedication and perseverance.

Source: SAARC 2003

Community Development

Community Driven Development Approach in Sri Lanka

The Community Development and Livelihood Development Project, 'Gamidiriya', was initiated in 2004, with assistance from the World Bank. It was based on an innovative strategy for alleviating rural poverty, using the Community Driven Development (CDD) approach. The objectives of this project are to empower the village communities by:

- Transferring decision-making power and control over resources to them;
- Building their ability to engage in participatory appraisal, priority setting, planning, management of implementation, monitoring and evaluation of their programme;
- Enabling them to negotiate access to resources and services from the various service providers in a transparent, accountable and cost-effective manner;
- Building accountable and demand-responsive local governments; and
- Linking village communities with the organized private sector and local level development partners.

The project was preceded by a pilot in 2000 to test an institutional model developed in three villages. It demonstrated that communities could articulate their needs and priorities; and take responsibility for implementing and monitoring their village development. The second stage of the pilot involved the federation of village organizations and the building of partnerships with the private sector. The project villages adopted an ethical framework of 10 golden rules as non-negotiable principles ensuring participation, inclusion, transparency, accountability, unit, trust, and community contribution. The model developed was further pilot-tested in 24 villages in twelve Divisional Secretariat Divisions.

The first phase of Gamidiriya is to be implemented in 2005, in 143 villages in six districts. More than half of the decision-making persons on the board of directors, social audit committees, financial committees, procurement committee and village savings and investment committee are women. Twenty-one village companies have accessed funds amounting to LKR 28.8 million, for implementing their village development plans, through direct funding during the past four months. The communities take their own resource management decisions.

More than 650 small groups have saved over LKR 1 million, forming their own savings and investment organizations, in the process, to invest within the village economy. More than 3 000 families are engaged in planning livelihood developments to access livelihood development funds. Training and capacity building have been undertaken through three capacity building agencies and ten villages support organizations, who continue to work in the field.

Source: SAARC 2005

Financial Services for the Poor

Micro-credit in Bangladesh

Today, Grameen Bank is renowned in the development sector, globally, as the pioneer of micro-credit, which originated from the concept that the poor are credit worthy. After about 25 years of successful operations, the bank initiated a major re-engineering effort on April 14, 2000, to refine its services to its customer base. By August, 2002, it successfully managed a transition to a new system, Grameen Generalized System or Grameen II, which became operational in 41 000 villages in Bangladesh.

The new system eliminates most of the familiar features of the former Grameen Classic System which categorizes its products into: general and seasonal loans; group funds; and loans with ceilings and fixed weekly installments. It also reduced the minimum period of a loan from one year.

The new system is built around one prime product called the Basic Loan. In addition, there are two other parallel products, the Housing Loan and the Higher Education Loan. To deal with a situation where the borrower faces difficulties in repayment, the Basic Loan comes with an exit option in the form of a Rescheduled Basic Loan (a flexible loan) which reduces the amount of the installment and increases the repayment period. Once the borrower overcomes his/her difficulties s/he can negotiate a return to the Basic Loan. Under the new system, the borrower remains a valued client all through the process of moving in and out of the flexible loan. By providing such an exit route, Grameen II has reduced defaulting rates. Instead group solidarity is used for forward-looking joint actions for building things for the future rather than for the unpleasant task of putting unfriendly pressure on a friend.

Since its inception, Grameen bank has disbursed US$3.7 billion, out of which US$3.4 billion has been repaid. Its current annual disbursement is US $ 263 million. Ninety per cent of this is financed from its own funds and savings of depositors, 82 per cent of whom are its own borrowers.

Prof. Muhammad Yunus and Grameen Bank were awarded the Nobel Peace Prize for 2006.

Source: SAARC 2003

Micro-credit for self-employment in Pakistan

In Pakistan, it is estimated that of 6.5 million poor people who need microfinance services, only about 5% are being served by microfinance institutions. To expand microfinance services to the poor, the Khushhali Bank (KB) was established in August 2000 by 14 private and 2 state-owned commercial banks as a flagship microfinance bank, as part of the government's poverty reduction strategy; and Micro-finance Sector Development Programme (MSDP), developed with the assistance of Asian Development Bank. The banks mandate was to retail micro-finance services and act as a catalyst in stabilizing the country's newly formed micro-finance sector. MSDP provides an integrated package of policy reforms, means for institutional development and outreach expansion, to facilitate growth of micro-finance sector.

Despite the short period of functioning, the Khushhali Bank has performed well by these criteria. It has quickly grown to become, by far, the largest provider of micro-finance in Pakistan. By the end of 2005, KB had 63 branches and employed 1,576 people. KB reported that in 2003, it provided loans to 100 000 households. It aimed to reach 700 000 households by 2007. The bank's line of products includes short-tenure microloans, up to US$500 for working capital and asset purchase, as well as training and consulting. It does not offer deposit services. Its lending is based on the Grameen model, i.e., loans to community groups without collateral. To ensure that the loan reaches the target segment (e.g., the poor), KB has limited the loan size to about US$150, an equivalent of 36 per cent of the per capita GDP, an amount in which wealthy people would not have interest. Khushhali Bank also uses another method of targeting: ranking poor prospective borrowers by tracking the economic status of their beneficiaries.

The emergence of Khushhali Bank heralds a new era in Pakistan's banking history. Pakistan's microfinance sector is now gaining recognition and momentum as a viable business proposition for the private sector.

Source: ADB 2008

Economic Empowerment of Women

A Micro-Insurance programme for Women in India

Self-Employed Women's Association (SEWA) was registered as a Trade Union in 1972 in Ahmedabad, India. It was a movement to organize urban self-employed women to strengthen negotiations in increasing incomes and employment opportunities, and better access to social security. SEWA was the culmination of the realization that provision of timely, credit to poor women, particularly poor self-employed women, who worked as hawkers, vendors, home-based workers and other service providers, was a major constraint and formal banking channels were unable to respond to their requirements. SEWA has made insurance available to poor women workers in several Indian states to ensure health security and uninterrupted productive work for poor women and to protect them from being pushed further into poverty.

The SEWA Micro-insurance Programme was first started in Ahmadabad city, in the state of Gujarat, in 1992, and was gradually expanded to rural areas of the state. SEWA now has sister associations in seven other states in India. As part of its programme plan, SEWA's first strategy is to organize poor self-employed women, who are its main target group. Once the union or collective is in place, the other programmes to promote full employment and self-reliance are initiated.

The most direct achievement of the SEWA Programme has been the total amount received by members as reimbursement, since the inception of the programme. Over the last 14 years, SEWA Insurance has paid out about Indian INR 85,795,244 (approximately US$ 20, 00,000) in claims to 48 524 members.

SEWA is active in seven states of India, and in 14 districts in the state of Gujarat. SEWA's vision is that all poor women workers in the informal economy should have full employment and be self-reliant. Full employment entails not just paid work but also risk protection against sickness, asset loss and death. SEWA Insurance is thus a critical component of full employment for poor women and their families.

The programme has succeeded in building the understanding and acceptance of insurance as a risk protection tool among poor women. It has also created a cadre of grassroots workers who sell and service insurance. As a result of SEWA's success in insurance, there is

increased recognition of the insurability for the poor among policy makers.

The steadily increasing membership of SEWA Insurance testifies to its usefulness to its members. One of the main reasons for the programme's success has been the fact that it is housed within the SEWA Union. Several features of the product, servicing and scheme management have contributed to its success. The product has also been continuously revised in response to the changing needs of its members. This responsiveness to members' needs has increased its value to members. Moreover, as SEWA members are involved in all stages of the scheme's administration, it has made the service responsive to members' needs and has resulted in the transparency of the programme, as the rationale for all decisions are known to all stakeholders.

Source: SEWA 2007

Technology Applications for Sectoral Development

Transforming agriculture through the internet in India

The International Business Division of ITC Limited initiated a business model to function as an alternative supply chain to overcome the inherent disadvantages that the corporate sector faces, in the agriculture business in India. Fragmented and small farmers; infrastructure bottlenecks; quality of produce; and the presence of a large number of intermediaries, characterize the sector.

The model called e-*Choupal*, tried to overcome some of these limitations, by leveraging information technology so that farmers could access current data on products and services that they need to: enhance farm productivity; increase revenues by better realization in the market place; and reduce transaction costs in input purchases and produce marketing. It also enables farmers to access current, local and global information on weather, scientific farming practices, as well as, market prices for inputs and produce, without leaving their village, through a web-portal. The Choupal provides information to the farmers in a local language they understand.

Prior to establishing e-Choupals, the company completed extensive back-end work such as surveys of villages; mobilization of people; and identification of local leaders and training of the Sanchalaks, for using the infrastructure to make the system operational.

An e-choupal consists of an internet kiosk in the house of a lead farmer who is known as the *Choupal Sanchalak, or the operator*. ITC has also taken care to integrate local middlemen into its network, to leverage their knowledge about farmers and the market structure, by involving them in the operations as Choupal Samnyojaks or coordinators. Both functionaries, the *Sanchalak* and *Samnyojak* are required to take an oath in public for maintenance of transparency in the functioning of the Choupal.

Estimates made by the ITC indicate that transactions made in the Choupal create a win-win situation for the farmers as well as the company. A farmer, by selling his produce through the Choupal, saves money on packaging, transportation, loading, unloading, wastage and other charges that he would have to incur if he took his produce to the market, himself. ITC saves money by getting direct access to the farmers and eliminating middlemen, in addition to ensuring quality of the produce. A 10 per cent commission, on the sales executed through Choupal is charged, of which half is passed on to the Choupal Sanchalak for meeting operational costs of running the kiosk. Many other companies have also joined hands with ITC to use e-Choupals as a delivery mechanism for fast moving consumption goods and other products needed by farmers.

The first e-Choupal was launched in June 2000 in the state of Madhya Pradesh for soybeans. It is presently functioning in over 4 500 villages through 770 kiosks in Madhya Pradesh, Karnataka, Andhra Pradesh and Uttar Pradesh. The Choupals in different states deal in different produce. Aqua-Choupals in Andhra Pradesh cover fisheries, plantersnet.com in Karnataka is for trade in coffee and in Uttar Pradesh wheat transactions take place in the e-Choupals, set up for the purpose. While setting up e-Choupals which cater to specific crops, individual crop characteristics are taken into account while designing the system configuration.

The e-Choupal concept can be further strengthened and made more useful to the farming community if it is also networked with extension workers, of both private and public undertakings for educating farmers about new crop varieties and agricultural cropping practices. Though the e-Choupal provides a range of information, its limitation is that it provides facilities for only a single crop. Farmers have to depend on other channels of marketing for other crops and this may affect development of the strong bond between the e-Choupal and the farmers. Infrastructural constraints of road connectivity, electricity, timely provision of repairs and maintenance facilities could also be a major constraint in the rapid expansion of this concept. However, with improvements in availability of power, road connectivity and other infrastructure, E-Choupals could become a crucial centre in rural areas for marketing of information, knowledge, inputs and produce.

Source: ITC Limited 2007

Rural Energy and Infrastructure

Rural Energy for Development in Nepal

Nepal has more than 600 rivers and rivulets and is the second richest country in the world in water resources, after Brazil. It has the potential to generate 83 000 megawatts of hydro-electricity but currently generates only 319. Electricity consumption in Nepal is one of the lowest in the world, roughly equivalent to one 60 watt bulb burning for one hour per person per day. Only 15 per cent of the country's population has access to electricity.

The Rural Energy for Development Programme (REDP) was been initiated to provide multi-level support to mitigate the situation. It includes policy formulation at the central level; capacity-building for district elected bodies to manage rural energy systems, as an integral component of local development; and social mobilization at the community level to plan, implement, operate and maintain integrated energy systems such as micro-hydro plants.

REDP was implemented to enhance rural livelihoods and preserve the environment by supporting micro-hydro plants as an entry point for development of rural energy systems. The combination, of micro-hydro power development with effective utilization of water resources greatly benefits irrigation, water supply, sanitation, agriculture, natural resources (bio-mass coverage) and cottage industries.

Initiated as a pilot programme, with the financial

and technical assistance of the United Nations Development Programme (UNDP), in five districts on 16 August 1996, REDP was expanded to 10 districts in 1998 and to 15 districts in 2000. The main objective was to enhance the rural livelihoods through the promotion of rural energy technologies; primarily the community managed micro hydro system as the entry point for the holistic development and poverty reduction. Based on its impressive achievements and impacts, when REDP was extended as the Second Phase, the World Bank has joined as a partner organization to provide the financial assistance for expanding REDP activities to an additional 10 districts making a total of 25 districts in 2003.

REDP has entered into the Phase Three from 1 September 2007 after the successful completion of its Second Phase. In this third phase, among others, the REDP is supporting the Government of Nepal (GoN) to implement the Rural Energy Policy 2006 in all 75 districts. The Alternative Energy Promotion Center (AEPC) of Ministry of Environment, Science and Technology (MoEST) is the government executing agency.

Source: REDP 2008

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SECTION – VI

ANNEXURES

Annexures - I - List of Acronyms

ACU	Asian Clearing Union
ADB	Asian Development Bank
AIDS	Acquired Immunodeficiency Syndrome
APCTT	Asia Pacific Centre for Technology Transfer
AQM	Air Quality Monitoring
AWP	Area Water Partnership
BARC	Bhabha Atomic Research Centre
BCRC	Basel Convention Regional Centre
CANSA	Climate Action Network South Asia
CIRDAP	Centre for Integrated Rural Development for Asia and the Pacific
CITES	Convention on International Trade in Endangered Species
CSR	Corporate Social Responsibility
CWP	Country Water Partnership
DA	Development Alternatives
DOTS	Directly Observed Treatment Short Courses
EANET	East-Asia Network on Acid Deposition
EMS	Environmental Management System
ESM	Environmentally Sound Management
ESTs	Environmentally Sound Technologies
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FTA	Free Trade Agreements
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GIR	Gross Intake Rate
GISP	Global Invasive Species Programme
GNP	Gross National Product
GPI	Gender Parity Index
GRI	Global Reporting Initiative
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HPC	High Power Committee
ICDS	Integrated Child Development Scheme
ICDS	Integrated Child Development Services Program
ICIMOD	International Centre for Integrated Mountain Development
IMPACTS	Integrated Monitoring Program on Acidification of Chinese Terrestrial Systems
INDOEX	Indian Ocean Experiment
INPIM	International Network for Participatory Irrigation Management
INRM	Integrated Natural Resources Management Committee
IPA	Integrated Programme of Action
IPR	Intellectual Property Rights
ISACPA	Independent South Asian Commission on Poverty Alleviation
IUCN	International Union for Conservation of Nature
IWRM	Integrated water resources management
MDGs	Millennium Development Goals
MEA	Multi-lateral Environmental Agreements
MFA	Multi Fibre Agreement
MFN	Most Favoured Nation
MMR	Maternal Mortality Ratio
MSME	Micro Small and Medium Scale Enterprises)
MTNs	Multilateral Trade Negotiations
NAFTA	North American Free Trade Association
NAPAs	National Adaptation Programmes of Action
NIDM	National Institute of Disaster Management
ODA	Official Development Assistance
ORS	Oral Rehydration Salts
PIC	Prior Informed Consent
PTR	Pupil Teacher Ratio
RPTC	Regional Power Trading Corporation
SA	South Asia
SAAPE	South Asia Alliance for Poverty Eradication
SAARC	South Asian Association for Regional Cooperation
SACEP	South Asia Co-operative Environment Programme
SAEU	South Asian Economic Union
SAFIR	South Asia Forum for Infrastructure Regulation
SAFTA	South Asia Free Trade Agreement
SAGQ	South Asia Growth Quadrangle
SAHF	South Asian Health Foundation
SAICM	Strategic Approach to International Chemicals Management
SANDEE	South Asian Network for Development and Environmental Economics
SAPTA	SAARC Preferential Trading Arrangement
SARF	South Asian Reserve Fund

SARIE	South Asia Regional Initiative for Energy
SASEC	South Asia Sub-regional Economic Cooperation
SATWQM	South Asia Trans-boundary Water Quality Monitoring
SAWTEE	South Asian Watch on Trade, Economic and Environment
SBC	Secretariat of the Basel Convention
SDF	SAARC Development Fund
SDGs	SAARC Development Goals
SFP	Sub-regional Focal Point
SHARE- Asia	Stations at High Altitude for Research on the Environment in Asia
SME	Small and Medium Enterprises
TAI	The Access Initiative
TCARD	Technical Committee on Agriculture and Rural Development
TCDC	Technical Cooperation among Developing Countries
TNC	The Nature Conservancy
TRIM	Trade related Investment Measures
TRIP	Trade Related Aspects of Intellectual Property Rights
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNDAFs	United Nations Development Assistance Frameworks
UNEP	United Nations Environment Programme
UNEP. RRCAP	UNEP Regional Resource Centre for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

Annexure - II - List of Tables

Annexure - III - List of Figures

Annexure - IV

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