

Post 2015 South Asia Development Agenda



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Foreword

The South Asia sub-region includes the countries of 'Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka'. Climate change is no longer an issue for the distant future. It is already taking place, and the South Asian countries, particularly the poorest people, are most at risk. The impacts of higher temperatures, more variable precipitation, more extreme weather events, and sea level rise are felt in South Asia and will continue to intensify.

These changes are already having major impacts on the economic performance of South Asian countries and on the lives and livelihoods of millions of poor people.

The Rio+20 conference on sustainable development, which took place in Rio de Janeiro, Brazil in June 2012 was the biggest UN conference ever been and a major step forward in achieving a sustainable future. At the Summit the Heads of State and Government with the full participation of civil society, renewed commitment to sustainable development ensuring the promotion of an economically, socially and environmentally sustainable future for our planet present and future generations.

This '**Post 2015 South Asia Development Agenda**' report is intended to provide the key challenges and the critical analysis on means of implementation of the Rio+20 outcome and the policy/programme responses in South Asia in addressing environmental priorities identified in the Rio outcome document 'The future we want' as well as their linkages to poverty reduction and development. In addition, this report is expected to raise awareness of the key challenges related to implementing the Rio +20 environment and climate change related outcomes.

This report was prepared using analytical desk research and PSIR (Pressure State Impact Response) framework analytical framework and is structured into three parts. The first part gives an overview of the State of Environment of South Asia; Second part gives an assessment of South Asia level of policy responses to the Rio +20 environment issue and the third part gives an assessment of critical gaps and opportunities in supporting Rio +20 environment priorities focused on short term action and longer term action post-2015. Regional consultation workshops were organized with the member countries of South Asia **to review the draft Post 2015 South Asia Development Agenda on post Rio +20 and to provide comments and inputs. Organizations such as SAARC, UNEP & UNDP etc were also invited.**

I am confident that this report reflects the key challenges and the critical analysis on means of the Rio+20 outcomes in South Asia and **SACEP would take this initiative forward in collaboration with our partners.**



Mr. S.M.D.P.A Jayatilake
Director General, SACEP

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Mr. S.M.D.P.A Jayatilake
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Executive Summary

The South Asian Sub-region 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 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. Therefore, due emphasis must be placed on increasing responsibilities of all stakeholders and collaborative efforts towards ensuring a healthy environment for the future.

Out of the eight billion people inhabiting Planet Earth, more than one billion people are still facing extreme poverty and income inequality. At the same time, unsustainable consumption and production patterns have resulted in tremendous escalation in terms of economic and social costs and may even jeopardize the life on our planet. Achieving sustainable development will require global actions to pave the path for further economic and social progress, requiring growth and employment, as well as strengthening environmental protection. Sustainable development will need to be inclusive and the strategies to attain this must be ambitious, action-oriented, collaborative, and also adaptable at different levels of development.

Major events like United Nations Millennium Declaration and the World Summit on Sustainable Development (WSSD) - Johannesburg 2002, in the recent past, have distinctly articulated the sustainable development challenges and priorities for the global community over the next decade. Poverty eradication has been clearly identified as the foremost global challenge and an indispensable prerequisite for sustainable development, particularly for the South Asia region and the developing countries. Rio+20 is United Nations Conference on Sustainable Development for 'future we want' where world leaders, scientists, corporate, private groups and other stakeholders from across the globe came together to shape up sustainable development in context of the three dimensions social, economic and environmental focusing on the emergent need of eradication of poverty, advancement in social equity and ensure environmental protection.

The South Asian Sub-region holds a population of around 1.5 billion, which is increasing at the annual rate of 1.8 percent, despite covering only 4.8 percent of the world's total land mass. As the population is increasing exponentially, the demand for goods and services also increases, leading to unsustainable consumption of natural resources and resource inefficiency. Rapid population growth aggravates poverty in developing countries by producing a high ratio of dependent children for each working adult. Hence poverty continues to be a major problem in South Asia countries. Natural resources are under extreme pressure due to increasing human population and urbanization. The negative effects of urbanization and industrialization can be listed as degrading ambient air quality, poor solid waste disposal and unsustainable consumption pattern & resource inefficiency. Air quality of South Asian countries is affected by the release of pollutants like particulate matter and gaseous emissions like sulphur oxides (SO), nitrogen oxides (NO). This pollution is evident in the form of degrading ambient air quality of major cities; the per capita emission of CO₂ in 2010 was 1.4 metric ton. Solid waste generation and disposal has also emerged as a major environmental issue, with 39.8% of population having access to improved sanitation facilities. Due to lack of proper solid waste disposal and lack of improved sanitation technology, urban areas are facing one of the most serious environmental problems - surface and ground water contamination. The water availability and water quality is also affected by rapid urbanization, population growth and industrialization.

One of the key drivers of the region - Climate change is already taking place, and the South Asian countries, particularly the poorest people, are most at risk. The impacts of higher temperatures, more variable precipitation, more extreme weather events, and sea level rise are felt in South Asia and will continue to intensify. Due to sea level rise, low-lying coastal cities will be at the forefront of receiving most of the impact, being most vulnerable to the risks of sea level rise and storms. The emission of greenhouse gases have also increased at an alarming rate, further adding to the threat of climate change. According to Fifth Assessment Report of the IPCC (Intergovernmental Panel on Climate Change); extreme climate events will have an increasing impact on human health, security, livelihoods, and poverty, with the type and magnitude of impact varying across South Asia. Another negative impact of climate change is loss of Bio-diversity, which will have an impact on ecosystem services, which will further affect the benefits received by the people directly as well as indirectly. 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. The region is most exposed to natural disaster like GLOFs, flooding, cyclones. Twenty major glacial lakes in Nepal have been found to be potentially dangerous with respect to GLOFs. These challenges are already having a major impact upon the economic performance of South Asian countries and on the lives and livelihoods of millions of poor people.

These alarming trends call for an urgent response for mainstreaming environment into developmental plans and processes. The global community has been grappling for a long time to understand the crux and gravity of these challenges in order to remove these roadblocks in the path of sustainable development. It is therefore, poverty eradication and environmental sustainability have been very clearly identified as the major challenges in the path of achieving sustainable development in the South Asian Sub-region.

Post 2015 Sustainable Development Agenda (SADA) identifies the common and trans-boundary priorities of South Asian countries to achieve Sustainable Development. The document serves as a long term policy planning tool and identifies 3 key priorities, mainly: eliminating poverty and creating human security, securing economic base and strengthening institutional system. Post 2015 South Asia Development Agenda set priorities for cooperation of the South Asia states with innovative approach. The document was prepared in a participatory process in consultation with the concerned line Ministries of member countries, intergovernmental organizations, international organizations, expert institutions and civil society organizations.

This document is expected to provide the strategic direction for the pursuit of sustainable development in the South Asian Sub-region. 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 South Asian Sub-region. It is expected that the document will be used by policy makers in the South Asian Sub-region countries as well as the officers and decision makers in the regional and international organizations active in the development process of the South Asian Sub-region.

The Post 2015 South Asia Development Agenda has been structured into four sections:

Section 1: This section provides a brief history and perspective of sustainable development at global and regional level. It also reviews the sustainable development challenges that have been articulated more recently in global deliberations. There was a strong sense that Agenda 21 evolved out of the United Nations Conference on Environment and Development (UNCED) at Rio in 1992 had not been pursued vigorously enough. Hence there was a reaffirmation of commitment to the Rio principles and the Millennium Declaration. The WSSD agreed on a Plan of Implementation to further build upon the achievements since UNCED and commitments in the Millennium Development Goals. The Rio+20 - United Nations Conference on Sustainable Development which took place in Rio de Janeiro, Brazil, in June 2012 – is

considered to be an historic opportunity to define pathways to a safer, more equitable, cleaner, greener and more prosperous world for all.

Section 2: 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. Identifies major environmental issues, drivers and also analyses the gaps in existing policy addressing these issues.

Section 3: This section focuses on the identification of priorities areas for South Asia and framing of Sustainable Development Agenda for the region. The development agenda pivots around four key priority areas: Eliminating Poverty and Creating Human Security; Conserving Natural Resources; Securing the Economic Base and Strengthening the Institutional System. These key priority areas rest upon the four pillars of sustainable development (economic, social, environment and governance).

Eliminating poverty involves a complex model of creating human security and managing population growth and its impact at the same time. Each of these actions is based on the tripod of accessibility, affordability and availability. Direct and indirect measures include creating mass awareness, empowering women with education skills and investing in developing an infrastructure for health, education etc.

Degradation of natural resources requires urgent action in terms of arresting industrial pollution, promoting sustainable human settlements and conserving bio-diversity.

Secure financial and economic base: A number of measures could be taken to secure the economic base and financial situation of the region, like promoting technological cooperation, building a sub-regional trading block and promoting sustainable development, with minimal external assistance.

There is a need to Strengthen the Institutional Systems to cater to the emerging priorities of the sub-region. Evolving mechanisms to formulate policies and implement them at all levels of the system (local, national, regional and global) is vital for the countries to achieve the goal of sustainable development. Building local capacities, improving national governance, enhancing South Asian cooperation and responsible global systems are some of the important measures that could be taken to strengthen the governance mechanism at local, national and regional levels. The regional cooperation will be extremely useful in mutually supporting and reinforcing the national and local initiatives.

Section 4: This section describes how Green economy in the context of sustainable development and poverty eradication can be one of the vital tools available for achieving sustainable development and could also provide appropriate policy options. Green Economy contribute to eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the Earth's ecosystems. It emphasizes the need for the four pillars of sustainable development to be strengthened, fully integrated and properly balanced, giving particular attention to social equity and good governance. Following measures should be taken to achieve the green economy in the South Asia region: Political Commitment; Reformed Policies, Legislation and Schemes; Private Sector Investment and Involvement; Stakeholder Partnerships and Community Participation; Incorporating Sustainability in Education, Vocational and Capacity Building Programmes; Investing in Research and Development; Investing in Knowledge Management; Technology Transfer and Financial Arrangements; Environmental Governance; Investing in Infrastructure; Need for Innovation and Promoting Regional Cooperation in Sharing of Best Practices, Resources and Strengthened Implementation Systems.



Sustainable Development Challenges

1

South Asia is home to one of the oldest civilizations of the world. The sub-region comprises eight main countries, namely - Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. South Asia habitats a total population of around 1.5 billion, burgeoning at the annual rate of 1.8%, inspite of covering only 4.8 per cent of the world's total land area. This region's topography encompasses a broad spectrum of amazing range of mountains, plateaus, dry regions, intervening structural basins and beaches. The majestic landscape of south Asia varies from Planet Earth's highest point, Mount Everest to the world's lowest, the sea beaches. The entire coastline runs for about 11,696 km, right from Pakistan to Bangladesh, with wetlands occupying an area of 1,34,161 sq km. The region is uniquely characterized by a tropical monsoon climate.

The South Asian region remains one of the fastest growing sub-regions in the world, despite its slow progress during the year 2012. Although the sub-region continues to push the world's economic center of gravity to the east, with India on track to become the world's second largest economy by 2050, South Asia has yet to cross many a hurdles to attain the lofty goal of sustainable development. These obstacles or challenges include large concentrations of poverty and hunger, rising inequality, poor levels of human development, wide infrastructure gaps, lack of a diversified base for high value-added products and exports, widespread food and energy insecurity and high risk of disasters¹. The global community has been grappling for a long time to understand the crux and gravity of these challenges in order to remove these road-blocks in the path of sustainable development.

1.1 Global Perspective

The history of sustainable development dates back to 1972, when the term was coined for the first time during the

Stockholm Conference. In 1972, United Nations Conference on the Human Environment held at Stockholm brought the industrialized and developing nations together to delineate the 'rights' of the human family to a healthy and productive environment. A series of such meetings followed, e.g. on the rights of people to adequate food, access to sound housing, safe water and to appropriate means of family planning. The recognition to revitalize mankind's connection with nature to live in peace and harmony, led to the creation of global institutions within the UN system.

A Programme of Action for Sustainable Development comprises the **Rio Declaration** on Environment and Development, which recognizes each nation's right to pursue social and economic progress and assigns States the responsibility of adopting a model of sustainable development, along with the Statement of Forest Principles. A number of agreements were also reached on the Convention on Biological Diversity and the Framework Convention on Climate Change. UNCED, for the first time, mobilized the major groups and legitimized their participation in the sustainable development process. It was also the very first time when the lifestyle of the current civilization was addressed in Principle 8 of the Rio Declaration. The urgency of a definite change in the consumption and production patterns was deeply expressly and broadly acknowledged by State leaders.

Agenda 21 further reaffirmed that “sustainable development was delimited by the integration of the economic, social and environmental pillars”. The spirit of the conference was captured by the expression "Harmony with Nature", brought to the fore with the very first principle of the Rio Declaration: "Human beings are at the center of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature".

1 UN-ESCAP, Regional Cooperation for Inclusive and Sustainable Development-South and South West Asia Development Report 2012-13

Malmö Declaration: During 17-19 October, 2011, the World Maritime University and the International Maritime Organization hosted the International Conference on Piracy at Sea (ICOPAS 2011) at Malmö, Sweden. The Conference goal was to enhance the exposure of the increased global threat of maritime piracy and discuss possible solutions in mitigating and eradicating this threat. In particular, the Conference highlighted the significant impact of piracy on humanity and focused on “Save Our Seafarers” through humanitarian support initiatives. Upon attaining the consensus of the Conference attendees, the Malmö Declaration was adopted.

The global commitment to sustainable development in the face of rapid globalization was reaffirmed at the outset of this decade with two major events: United Nations Millennium Declaration; and, 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 different generations and communities².

United Nations Millennium Declaration

Millennium Development Goals (MDGs) are an outcome of the global community's commitment to address the serious 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 urgent action to be taken at various levels of inter and intra country Programme development, as well as the corporate policies, procedures and culture in order to influence institutions, policies, day-to-day practices and expenditures.

**The Millennium Development Goals
Eight Goals for 2015**

	Eradicating extreme Hunger & Poverty		Improve Maternal Health
Achieve Universal Primary Education		Combat HIV/AIDS, Malaria & Other Diseases	
	Promote Gender Equality & Empower Women	Ensure Environmental Sustainability	
Reduce Child Mortality		Develop a Global Partnership for Development	

² Malmö Declaration- <http://www.unep.org/malmo/>

The achievement of mainstreaming MDGs into policy planning is contingent upon bringing together capacity building and long-term commitment while remaining people-centric at the same time; and, this 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 upon the process.

In the year 2010-11, UNDP came up with a regional South Asia MDG report, which gives an analysis of the progress of the south Asian countries, for each indicator each country of the region falls in one of four categories.

- ✓ *Early achiever* Has already met the target Green
- ✓ *On track* Expected to hit the target by 2015 Yellow
- ✓ *Off track Slow* Expected to hit the target, but after 2015 Orange
- ✓ *Off track Regressing* Slipping backwards, or stagnating Red

Since then, countries in the region have taken several initiatives to achieve the targets of MDGs.

Table 1: Paths to 2015 MDG Priorities in Asia & the Pacific

Goals	1		2		3			4		5		6			7						
Indicators	\$1.25 per day Poverty	Underweight Children	Primary Enrolment	Reaching Last Grade	Primary Completion	Gender Primary	Gender Secondary	Gender Tertiary	Under 5 Mortality	Infant Mortality	Skilled Birth attendance	Antenatal care (>_ visit)	HIV Prevalence	TB Incidents	TB Prevalence	Forest Cover	Protected area	CO ₂ Emissions	ODP CFC Cons.	Safe Drinking Water	Basic Sanitation
Afghanistan																					
Bangladesh																					
Bhutan																					
India																					
Maldives																					
Nepal																					
Pakistan																					
Sri Lanka																					

Source: Asia-Pacific MDG Report 2010-11 www.undp.org

World Summit on Sustainable Development (WSSD)

The outcome of the World Summit on Sustainable

Development (WSSD) held at Johannesburg during 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 the United Nations Conference on Environment and Development (UNCED). This reinforced the commitments in the MDGs and aims at the following:

1. Reinforcing the MDGs, including:
 - Poverty eradication as the highest priority
 - Changing unsustainable patterns of consumption and production
 - Protecting and managing the natural resource base of economic and social development
 - 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)**, emerging from the WSSD, emphasized the need for the development, enhancement and implementation of agreed regional or Sub-regional Sustainable Development Strategies (SSDS) and action plans reflecting national and regional priorities. It was agreed that such strategies should integrate the three pillars of sustainable development viz. economic, social and environmental dimensions. JPOI called upon the countries to take immediate steps to make progress in the formulation and elaboration of national Sustainable Development strategies (NSDS), and commence their implementation by 2005. It also encouraged sub-regional, regional and international organizations to assist in the preparation of SSDS.

It is a recurring, collaborative and adaptive process of planning, participation and actions in which the accent is on managing progress towards sustainable development goals. JPOI identified the lack of coordinated and holistic institutional mechanisms as a major hurdle in terms of attaining sustainable development. It has 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 a SSDS that builds upon individual NSDSs has been recommended.

Rio+20 “The Future We Want”

Rio+20 the short name for the United Nations Conference on Sustainable Development took place at Rio de Janeiro, Brazil, in June 2012. This historic event was a great opportunity to define pathways to a safer, more equitable, cleaner, greener and more prosperous world for all.

Rio+20 was the UN Conference on Sustainable Development for the 'Future We Want', where of world leaders, scientists, corporate, private groups and other stakeholders came together to shape up sustainable development in context of the three dimensions - social, economic and environmental - focusing on the emergent need for eradication of poverty, advancement in social equity and ensuring environmental protection. Various vital issues came to the fore during the conference like climate change, its adverse effects, especially in marginalized and vulnerable regions, impacting the poor populace of developing and least developed countries. This pivotal event has provided the golden opportunity to align Sustainable Development Goals with the framework of Millennium Development Goals (MDGs) for a global reach and monitoring the implementation of Rio+20 outcomes.

Rio+ 20 Outcome Document is a guide to all the nations, with the view to renew the commitments and ensure full participation of the civil society, having met 20 years after the 1992 Earth Summit at Rio de Janeiro. Here, Heads of state and high level representatives of various governments met and discussed various thematic areas and cross-sectoral issues and draw a pragmatic road map or an appropriate agenda to achieve the ultimate goal of sustainable development, ensuring equitable economic, social and environmental development for the present and future generation.

Among the various thematic areas, highest priority was accorded to **Poverty Eradication** within the UN agenda and a matter of urgency. Acknowledgement of human rights and all humanitarian aspects; the right to freedom and equality and access to all resources were recognized as a means to social protection systems essential to eradicate poverty and achieve sustainable development. Emphasis was on accelerating the momentum to achieve the Millennium Development Goals (MDGs), aligned with the Sustainable Development Goals (SDGs), while protecting the health of the environment globally.

The concept of **Green Economy** is not entirely a new concept. It was first mooted by the London Environmental Economics Centre (LEEC) in a publication in 1989 authored by David Pearce, Anil Markandya and Ed Bardier. It is considered to be as a tool or vehicle that facilitates the transition to sustainable development.

The United Nations Environment Programme (UNEP) defines the Green Economy as “one that results in improved human well-being and social equity, while significantly reducing environmental risk and ecological scarcities” (2010).

“The Green Economy is one in which the vital linkages among the economy, society and environment are taken into account and in which the transformation of production process, consumption patterns, while contributing to a reduced waste. Pollution and the efficient use of resources, materials and energy will revitalize and diversify economies, create decent employment opportunities, promote sustainable trade, reduce poverty, and improve equity and income distribution.”³

The following were the issues identified in the **Rio+20 The Future We Want Document**:

1. **Food Security and Nutrition:** Access to safe and sufficient nutritious food and providing the rural

communities easy access to credit, financial services, markets, land tenure, health care and social services

2. **Sustainable Agriculture:** Considering the recent advancement of climate change and rapid degradation of natural resources, vulnerability of agriculture and livelihoods depending on it has increased, which simultaneously threatens food security; hence, there is a dire need to address these issues with immediate effect to increase adaptation and resilience of the agricultural community and build environmentally sound strategies to mutually benefit all, including the communities, agriculture, climate and environment
3. **Climate Change:** It is considered as the greatest threat, having an adverse effect on efforts for sustainable development in poor, developing countries which are most vulnerable to climate change extremes like floods and droughts, disturbing the dynamics of fragile ecosystems like mountains. Controlling GHG emissions should be a top priority to save global population from global warming
4. **Biodiversity:** preservation of biodiversity; conservation of forests; chemical and waste management; and, checking desertification, land degradation and droughts
5. **Energy:** Energy plays a critical role in sustainable development; access to modern energy contributes to poverty eradication, saves life and improves health and, hence, is essential to social inclusion
6. **Transport:** Environmentally sound, safe and affordable transportation is vital as a means to improve social equity, notably public mass transportation systems and acknowledge that developing countries need assistance
7. **Green Cities:** Well planned and integrated cities can be economically, socially and environmentally sustainable. Hence, the commitment to create sustainable cities for all, particularly the vulnerable;

3 Green Economy in Action: Articles & Excerpts that illustrate Green Economy and Sustainable Development Efforts – August 2012, UNDP

promotion and protection of safe and green urban spaces; water and sanitation; air quality; decent jobs; improved urban planning and slum up-gradation. This also includes creating sustainable jobs and providing employment to the local population, especially in developing countries.

8. **Health and population:** Good health is considered as a pre-condition for, an outcome of, and an indicator of all the three dimensions of sustainable development. Acknowledgment of non-communicable diseases as a major threat and providing affordable access to prevention, treatment, healthcare and support; and, strengthening health systems through financing, capacity building and improved distribution and access to medicines and health infrastructure.
9. **Employment:** Providing productive employment and decent work for all as well as recognizing the importance of job creation. Workers should have access to education, skills and healthcare including occupational health and safety.

Outcome Document includes renewal of the political commitment towards human environment, Agenda 21 Programme implementation, Programme of action for sustainable development for small islands, developing nations, least developed nations, implementation of commitments under UNFCCC, convention on biodiversity, and UN convention to combat desertification, especially for drought-prone countries.

Rio+20 meet also monitored setbacks, areas of insufficient progress related to sustainable development, and the severe financial, economic, food and energy crisis which the world is facing currently. It also reviewed advancing integration, implementation, and progress till date, along with identification and addressing of new challenges and assessment of institutional framework.

It was pointed out that all **stakeholders** from each level and major groups need to be identified from the public as well

as the private sector and should be involved in the entire process, right from decision making to policy making and implementation. Special emphasis has to be given to the leadership role that women play; corporate and other companies; scientific and technological **communities** to provide the research and development tools and techniques that are economic and environmentally sound; participation of youth, NGOs and small farmer communities at the grassroots level; global partnerships, institutions in terms of mobilizing resources pertaining to the UN's Sustainable Development mandate.

Institutional Framework for Sustainable Development is an effective, specific, strong and transparent development tool that avoids duplicity and overlaps in the function to implement, review, monitor and report in terms of sustainable development. It was decided to launch a universal, inter-governmental, process in UNGA to define the form of a high level forum to strengthen international environmental governance to provide guidance and recommendation for sustainable development.

The process of **Sustainable Development Goals** was formulated when it was acknowledged that SDGs should be action-oriented, concise, and easy to communicate limited global development goals applicable to all countries, while taking into account different national realities and include development targets and indicators. It should involve all governments and stakeholders and have a transparent inter-governmental process open to all stakeholders. The process should also encompass communication, knowledge exchange, technology transfer, capacity building of all the stakeholders, and policies that are consistent with international laws benefiting all levels and groups for equitable sustainable development.

1.2 Regional Concerns

The South Asia Sub-region (SAS) comprising eight countries - Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka is one of the economically 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, but seems threateningly endangered as of now. It is, therefore, essential to focus on diverse response options and instruments for possible solutions.

South Asia State of Environment Reports

South Asia State-of- Environment Reports reveals sub-regional issues related to sustainable development of the region's environment and also SD priorities. SAEO 2013, published by UNEP, highlights the major pressures, impacts, and the current state of the environment, factors that have been a big hindrance in achieving sustainable development at the regional scale and also recommendations that can be fed directly into development plans of the South Asian countries. The key environmental concerns emerging out of the South Asia State of Environment Reports are:

1. **Ensuring livelihood security:** This includes food, water, energy, 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 urbanization:** Tackling migration, employment opportunities, urban poverty, waste management, 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.
6. *Adaptation to Climate Change*

South Asian Strategy Paper for World Summit on Sustainable Development

World Summit on Sustainable Development 2002 was published by United Nations and the document is heavily based upon the learning's and conclusions reached in similar documents prepared for the region including the State of the Environment in Asia and the Pacific 2000,

Bhutan Gross National Happiness (GNH)

Thirty years ago, the Fourth King of Bhutan famously proclaimed that "Gross National Happiness is more important than Gross National Product," thereby setting Bhutan on a holistic development path.

Following this historic declaration, Bhutan developed the concept of **Gross National Happiness (GNH)** as a screening tool to evaluate all new policies.

The concept implies that sustainable development should take a holistic approach towards notions of progress and give equal importance to the non-economic aspects of well being. The concept of GNH has often been explained by its four pillars: good governance, sustainable socio-economic development, cultural preservation, and environmental conservation. Lately, the four pillars have been further classified into nine domains in order to create widespread understanding of GNH and to reflect the holistic range of GNH values.

Unlike the other development models, GNH is a more comprehensive/holistic approach to development by having incorporated the innovative dimensions like Psychological well-being, Community Vitality, Time Use and Cultural Diversity & Resilience, otherwise undermined in the other policy making frameworks. So, this makes GNH a more realistic measure of progress that ensures a consistent alignment between what an individual aspires from development and what the Government does in the name of development.

Source: <http://www.gnhc.gov.bt/>
<http://www.grossnationalhappiness.com/articles/>

prepared by the Economic and Social Commission for Asia and the Pacific (ESCAP) and the Asian Development Bank (ADB), Global Environment Outlook (GEO) by United Nations Environment Programme (UNEP) and Asian Environment Outlook by ADB. Sustainable development priorities for South Asia, according to Agenda 21, recall amalgamating social, economic and environmental factors at policy, planning and management levels. Agenda 21 states that countries should prepare National Sustainable Development Strategies (NSDSs) and formulate National Councils for Sustainable Development (NCSDs), 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 paper discussed the potential framework, examined the setbacks that led to unsatisfying results in terms of meeting the sustainable development goals and identification of institutional framework to track and monitor the Sustainable Development Goals (across the three pillars - social, economic and environment).

The experience of NSDS and NCSDs across the world highlighted the lack of integration of the three pillars. For example, GDPs may have increased but the social dimension lacks progress and inequalities still remain and environmental degradation persists. Among the current issues that need to be prioritized for South Asia are:

1. Policy changes in coherence with the three pillars of SD, dynamics of social, economic and environmental in coherence with each other.
2. Balancing the economic growth with environmental protection, which is very critical for the poor, ensuring them food, water and livelihood security.
3. Meeting MDGs is a major contributor for SD since governance failure and poverty traps are the major barriers meeting MDGs and to attain them

appropriate governance, effective policy making and implementation, capacity building of the stakeholders and participation is required at all levels.

4. Mainstreaming SD in Institutional framework to collate, assess, prioritize, support the government, increase participation, monitor, and track and review the progress of the SD activities and Programmes in the country.
5. Involving local and regional governance along with stakeholder-participation so that private and independent sectors are also involved in the development of strategies and plans, and contribute to the implementation, independent monitoring and evaluation systems that can recommend continuous improvement in strategies and plans.
6. Integrate concepts of SDGs to local services at national, regional and sub-regional levels; maintain regional and sub-regional cooperation, especially in vulnerable South Asia countries that face multiple stressors.
7. Strategy formulation and capacity development at regional and sub-regional level for green economy; inter-cooperation for developing integrated mechanisms to integrate trans-boundary environmental, social, and trade issues; looking beyond political conflicts; and, establishing decentralized frameworks to integrate development planning at all levels.
8. It was pointed out in the paper that a strategy for SD is not a new planning mechanism; rather, it is a mechanism for convergence and coherence between different planning frameworks and policies. Here, the potential role of a 'Watch' organization was accentuated to track the progress of South Asia nations towards sustainability e.g. India Sustainability Watch (ISW).
9. There is need to reinforce their utility, including the introduction of inter-generational and integrated

planning at the national and regional levels, ensuring adequate horizontal as well as vertical assimilation across government ministries /departments, and most importantly, making the “watch” institutions responsible for formal tracking of all initiatives taken to achieve SDGs.

Sub-regional Sustainable Development Strategy for South Asia (SSDS-SA)

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

Sub-regional Sustainable Development Strategy for South Asia (SSDS-SA) 2009 was published by UNEP Regional Resource Center for Asia and the Pacific (RRC.AP) and the document was expected to provide a strategic direction for the pursuit of sustainable development in the South Asian Sub-region (SAS). It identifies common and trans-boundary goals to achieve sustainable development in south Asian countries -India, Afghanistan, Bangladesh, Bhutan, Nepal, Maldives, Pakistan and Sri Lanka. SSDS 2009 ensures to treat the SAS beyond individual countries as these are highly vulnerable to multiple stressors such as poverty, unequal access to resources, weak institutions, food and water security, in spite of rapid advances in technology and economic resources.

The Document presents a planning tool and lays emphasis

on increasing the collective responsibility of all the stakeholders and collaborative effort to secure the three main goals: eliminating poverty and creating human security; conserving natural resources; and, securing the economic.

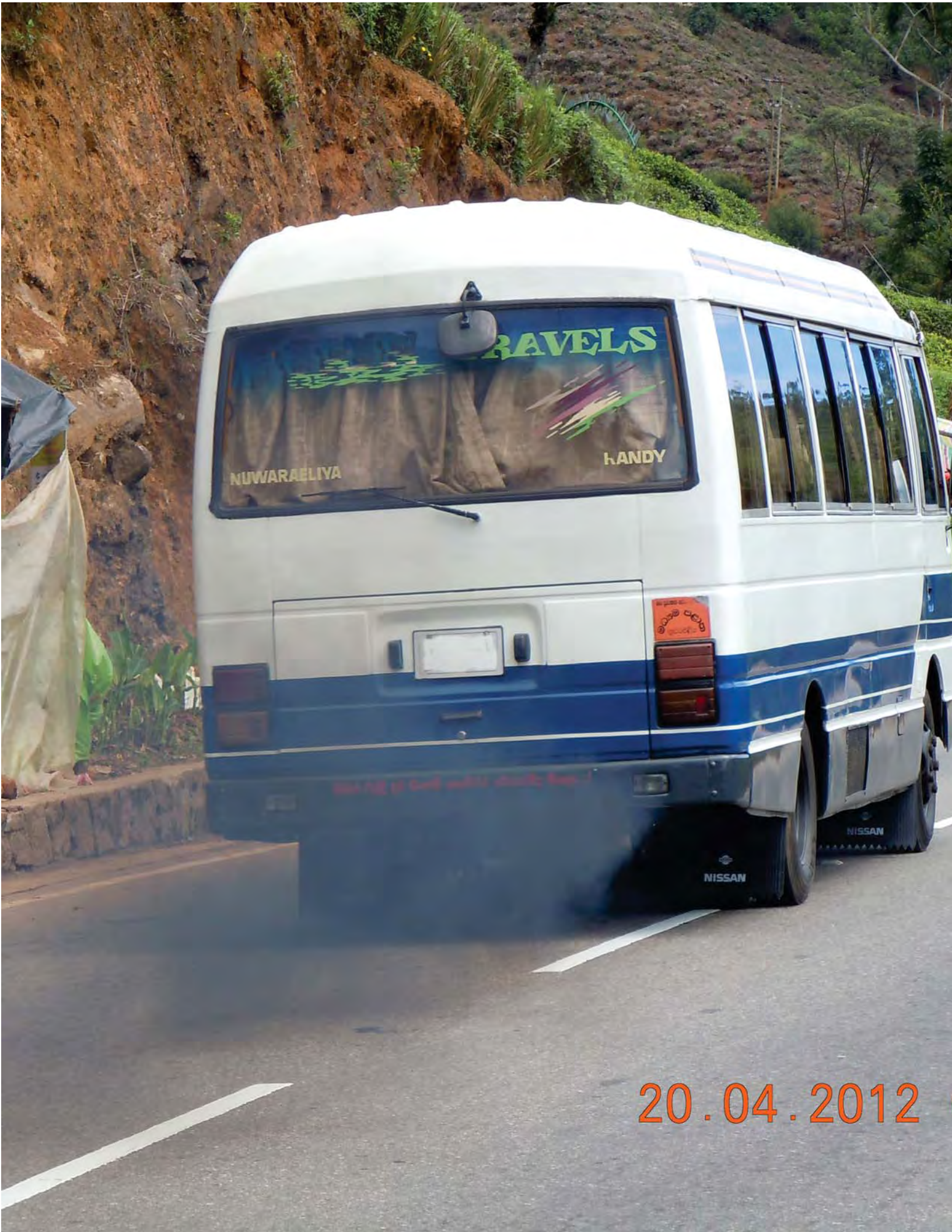
Major challenges faced by South Asia are eliminating poverty and creating human security; conserving natural resources endowments and securing the economic base. The Document recalls that poverty remains the major hindrance in achieving MDGs and sustainable development at the sub-regional level and that owing to this South Asia is the poorest performing region globally. In fact, nearly 40 percent of the world's poorest population lives in South Asia. Another major challenge is filling the inequality gap and creating sustainable productive employment for 514 M people added from 2003 to 2015.

SSD-SA 2009 highlights the importance of ensuring food and nutritional security, and indirect factors impacting it like the climate change, which is a grave threat to food security as it hampers the primary production unit i.e. agriculture, well as access to water and sanitation.

Regional Implementation Mechanism

ESCAP together with 30 UN agencies is taking a leading role in mapping Rio+20 and post-2015 development efforts across Asia and the Pacific. They have refocused all of the Thematic Working Groups to align with the Rio+20 agenda, and one Thematic Working Group will be taking the lead in advocating for sustainable development in the region.

The aim is to also produce a comprehensive State of Sustainable Development Report for Asia and the Pacific, including an Inclusive Sustainable Development Index for the region. Later after finalizing the regional reports, reports will be collected from other UN regions and will be combined as one global report on sustainable development from the regional perspective, led by the Regional Commissions.



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2.1 Introduction

In recent decades, the world's human population has increased at an alarming rate. This increase of population has been accompanied by an exponential growth in economic activities; exploitation, depletion and mismanagement of natural resources; and, increase in transportation, industry and tourism. These trends have created a severe pressure on the environment, especially on food, water and energy and, in some cases, have already breached ecological limits. The South Asia region is facing significant environmental changes such as loss of biodiversity, deforestation, soil erosion, pollution, climate change, shortage of food, lack of access to safe drinking water. All major environment indicators depict a negative trend. These alarming trends call for an urgent response through prioritizing the environment into developmental plans and processes, termed as **Environmental Mainstreaming**.

Environmental Mainstreaming is defined as integrating poverty-environment linkages into national development planning processes and their products, such as Poverty Reduction Strategy Papers (PRSPs), Millennium Development Goals (MDGs), and growth strategies. It involves establishing the links between poverty and environment including climate change and identifying the policies and programmes to bring about better pro-poor environmental management. It is targeted at influencing national plans, budget processes, sector strategies and local level implementation reflecting the need to integrate the valuable contribution of environmental management to improved livelihoods, increased economic security and income opportunities for the poor.

Poverty-environment linkages are dynamic and context specific, reflecting geographic location, scale and the economic, social and cultural characteristics of individuals, households and social groups. In particular, sex and age of

the head of the household (male or female, adult or young person) are the key factors influencing poverty-environment linkages. These vital linkages can be positive or negative, creating either favorable or deteriorating ambience for environmental preservation and poverty reduction. While trade-offs may be necessary, Environmental Mainstreaming aims at achieving the best balance between environmental preservation and poverty reduction for the benefit of the poor and long-term **Environmental Sustainability**.

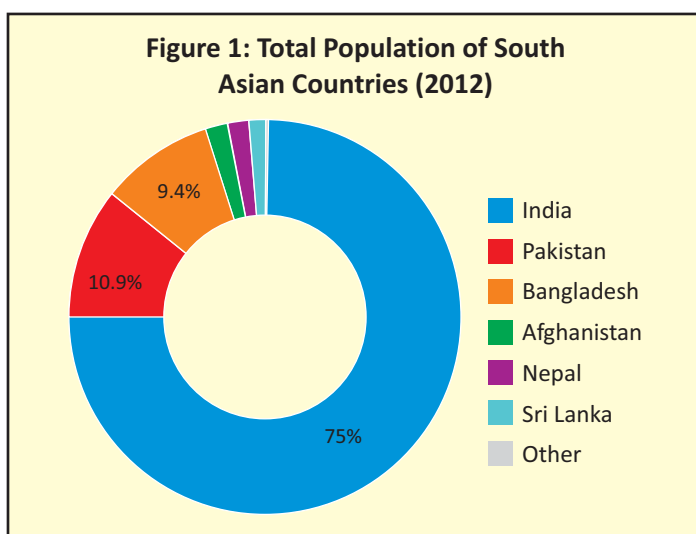
2.2 South Asia Key Priorities for Action

Understanding drivers is the key to address impacts and mitigate environmental change. Drivers influence key sectors like energy, industries, land use change, forestry and waste sectors. Population growth and economic development are the key drivers of change in the South Asian region. They are degrading the environment through uncontrolled urbanization and industrialization, expansion and intensification of agriculture and destruction of natural habitats. Poverty eradication is the primary and biggest stumbling block in the path of achieving the goals of Sustainable Development. However, eliminating poverty involves a whole complex paradigm of creating human security in terms of ensuring food, income, water, and livelihood and also managing population growth and its impact. Poverty-environment linkages can be conceptualized in many ways, notably in terms of their relationship to livelihoods, resilience to environmental risks, health and economic development.

Though South Asia occupies only 4.8% of the world's land mass, it is home to about 20% of the world's population. This figure is expected to rise to about 25 per cent by 2025. India is the most populated country in the region, followed by Pakistan. Countries like Bhutan and Maldives are comparatively less populated than the other nations in the region. The population of Bhutan was 741,822 as compared to 1236.6 million of India in 2012. The population of

Maldives was 338,442 in 2012⁴. According to the medium variant, the world population is projected to reach 10.1 billion persons by 2100. By 2021, population of India is projected to surpass even that of China. By 2100, Bangladesh will be in the list of 20 most populous countries (UNDESA 2011). Human population is growing beyond the carrying capacity of Planet Earth, negatively impacting the environment.

Poverty in Asia is a massive problem since more than two thirds of the world's poor people live in Asia, with nearly half of them hailing from South Asia. Poverty is basically a rural problem in Asia: In the major South Asian countries, 80 to 90 per cent of poor people reside in rural areas. Most of Southern Asia has been left behind in the overall economic upturn in Asia. In the past three decades, the economies of Southern Asia's countries have grown merely by 4 to 6 per cent and the gross national income by only 1.4 per cent. Although the poverty has declined by one-third, the incidence of poverty in terms of the percentage of the population living below the government poverty line is higher in Southern Asia than in any other region of the world except sub-Saharan Africa.



Source: World Bank (2012): World Development Indicators <http://data.worldbank.org/region/SAS>

4 World Bank - <http://data.worldbank.org/region/SAS>

Population increase and demographic upheavals are directly related to key issues in the region like land degradation, resource depletion, food security, and air quality degradation. Hence, natural resources are under extreme pressure due to the burgeoning human population and urbanization. Population growth, along with higher consumption lifestyles, is putting an immense pressure on the water resources of the region. Global water withdrawals have increased in the recent times in response to the demands of the ever-growing world population. Reduced access to water will have cascading effects including reduced food production, loss of livelihood security and large-scale migration within and across borders. The quantity of the available water has also reduced due to water and fertilizer intensive agriculture, over-exploitation of groundwater for drinking, industrial and agricultural purposes and large scale contamination of water resources by industrial and domestic effluents.

2.2.1 Urbanization

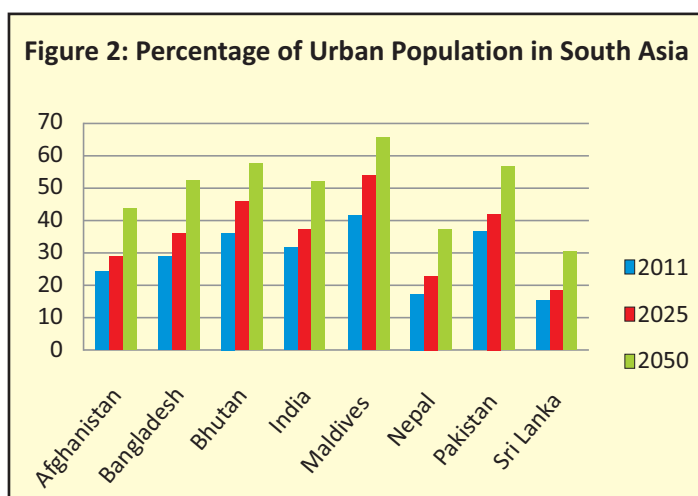
According to the United Nations Department of Economics & Social Affairs, Population Division, the urban population of South-Asia during 2011 was 32.6%. It has been estimated that by the middle of the twenty-first century, at least 50 percent South Asians will be residing in urban areas, which means that the urban population of this region will be over 1.2 billion (UN Department of Economics & Social Affairs, Population Division, 2011). This will be larger than the urban population of numerous countries in the world. Urbanization is not limited simply to large cities only. It is also taking place in small and medium cities. The extent of urbanization is not uniform in the countries of South Asia.

Apart from the population growth, another factor contributing to urbanization in the region is the rural to urban migration. In the next two decades, net rural to urban migration is expected to contribute to about 25-40 percent urban growth in this region, except in Bangladesh and Nepal (Basnyat Khilendra; *Urbanization problems in South Asia*). Some cities such as Bangalore, Delhi, Dhaka, Lahore

and Karachi may receive more migrants in comparison to other cities.

Air Pollution: Urbanization and industrialization in the countries is affecting the air quality by through the release of pollutants like particulate matter and gaseous emissions like sulphur oxides (SO_x), nitrogen oxides (NO_x). This pollution is evident in the form of degrading ambient air quality of various cities like Karachi and Delhi. The emission of greenhouse gases have also increased at an alarming rate, further adding to the threat of climate change.

Atmospheric brown clouds are caused by emissions associated with the combustion of fossil fuels and biomass. Such sources of air pollution have increased in the past several decades because of rapid economic development. Increasing amount of soot, sulphates and other aerosol components in **Atmospheric Brown Clouds (ABCs)** are causing major threats to the water and food security of Asia and have resulted in surface dimming, atmospheric solar heating and soot deposition in the Hindu Kush-Himalayan-Tibetan (HKHT) glaciers and snow packs. ABC-induced dimming is considered as the major causal factor for the rainfall decrease in India. In order to overcome the issues of air pollution a collective decision was taken in Male, Maldives. The Male Declaration was adopted in a meeting of seventh Governing Council of SACEP. The members of Male Declaration are Bangladesh, Bhutan, India, Maldives,



Source: UNDESA 2011

5 http://www.sacep.org/html/senric_main_recent.htm

Iran, Nepal, Pakistan, Sri Lanka and implementing agencies and sponsors are SACEP and UNEP. The “Malé Declaration⁵” on control and prevention of trans-boundary air pollution and its likely trans-boundary effects for South Asia is a good example of tackling trans-boundary air pollution through regional cooperation. The Draft Declaration was discussed and adopted by Ministers of the Environment of South Asian countries in April 1998. The Male’ Declaration’s objective is to aid the process of providing a clean environment through clean air. The Declaration calls for regional cooperation to address the increasing threat of trans-boundary air pollution and its possible impacts. During Phase I, a network was established, baseline studies were completed and action plans drawn up. Consequently, a capacity building programme was initiated in Phase II which included strengthening the monitoring network and training. National and regional level stakeholder’s consultations were also held during this phase. Phase III implementation continued the capacity building for monitoring, initiated during Phase II. In addition, capacity building for impact assessment and prevention of air pollution was also initiated. The regional network development was strengthened in a number of ways. Phase IV continues to assist the member countries to enhance their regional co-operation, monitoring, impact assessment; strengthen the initiatives started in the first three phases and to initiate new ones.

Sanitation and Solid Waste Management

Solid waste generation and disposal has emerged as a major environmental problem, particularly in the urban areas in recent times. In this region, sewerage system (covering both conveyance and treatment) exists only in a few cities. Disaggregated and community-based systems in the slum improvement schemes in India and Pakistan have been promising but have yet to be scaled up. Solid waste disposal has emerged as a major environmental problem, particularly in the urban areas in recent times. Rapid urbanization, growing affluence, changing consumption patterns, low level of awareness and poor civic sense are the key factors causing increased waste generation. Less

than half of the urban population in India has access to adequate toilet facilities; and, sewage treatment is virtually non-existent, creating one of India's most serious environmental problems - surface and ground water contamination. The situation is virtually the same in Bangladesh, Nepal and Sri Lanka. This problem is more pronounced amongst the slum dwellers. To counter the problem of urban waste, the Dhaka Declaration was held in

2004, which states that the 'SAARC countries agree to encourage NGOs and private companies to establish community based segregation at source, separate collection and resource recovery from wastes with particular focus on composting'⁶. The table given below gives a quick summary of the policies/plans/acts taken up by South Asian countries:

Sustainable Urbanization

Table2: Legislations and Policies Governing 3Rs in South Asian Countries	
Country	Laws, Policies & Acts
Afghanistan	No separate law for Municipal Solid Waste
Bangladesh	Draft National Solid Waste Management Handling Rules (under approval) National 3R Strategy for Waste Management
Bhutan	Environmental Codes of Practice for Solid Waste Management
India	National Environmental Policy
Maldives	No separate law for MSW & Weak legislation
Nepal	Local Self Governance Act, 1999 No national quality standard for
Pakistan	MSW - NEP-National Environmental Policy, 2005
Sri Lanka	NSSWM -National Strategy for Solid Waste Management

Over the last two decades, demographic and economic changes have propelled cities and urban centers to become the principal habitat of humankind. The cities of the world's emerging economies are increasingly becoming drivers of global prosperity while the planet's resources are fast depleting. It is, therefore, more critical than ever that Member States and United Nations agencies commit themselves to realize the goal of sustainable urbanization as a key lever for development.

There is an urgent need to find ways of achieving economic

and socially equitable growth without any further cost to the environment. Part of the solution lies in how cities are planned, governed, and provide services to their citizens. When poorly managed, urbanization can be detrimental to sustainable development. However, with appropriate vision and commitment, sustainable urbanization is one of the solutions to our ever growing global population. By prioritizing sustainable urbanization within a broader development framework, many critical development

6 <http://www.saarc-sec.org/SAARC-Summit/7/>

challenges can be addressed in tandem such as energy, water consumption and production, biodiversity, disaster preparedness and climate change adaptation. It is vitally important that this emerging opportunity be recognized and endorsed.

2.2.2 Economic Growth

Economic growth of a country is closely associated with industrialization and technological innovations. Industrial development has always been considered as a means to improve the standard of life via generation of wealth. In the South Asian region, India is in the forefront of the industrialization process. It is one of the leading manufacturers of goods⁷. Even though South Asia has been the fastest growing region in the past 20 years, poverty is still a widespread problem and has direct and indirect negative effects on environment. Its direct and indirect effects includes: destroying immediate environment for survival; cutting down the forests for fuel; encroaching marginal lands which in turn changes in the migration patterns; overgrazing grasslands by livestock etc.

Consumption Pattern and Resource Efficiency: Industrial production has a major impact on the environmental quality. Consumption and production of goods and services are vital components of economic development. This 'development' is directly proportional to the supply of natural resources. It leads to disruption of the environment, deteriorating the environmental quality. To maintain this supply, the most accessible resources are used first. Non-renewable resources like minerals and fossil fuels are being exploited in a devastating manner. It drives changes in the land-use cover and also generates waste. The ESCAP-ADB-UNEP joint publication, Green Growth, Resources and Resilience (ESCAP, ADB and UNEP, 2012) points out that while there is need to continue to elevate the standard of living, this must be achieved based on resource efficient, rather than resource-intensive growth strategies. In a

7 International Yearbook of Industrial Statistics 2012

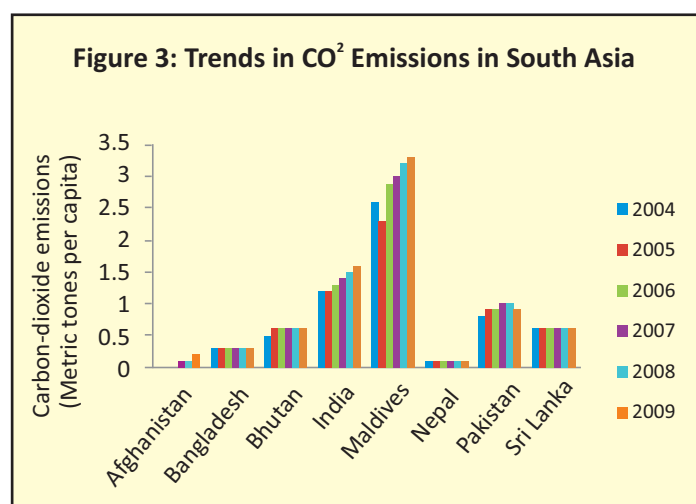
8 CASE is a project of the government with the support of World Bank

context of high and volatile resource prices and increasingly evident resource constraints, a resource-intensive growth pattern translates to an economy with higher exposure to risk, especially for the most vulnerable in society. Resource efficiency is increasingly an economic risk management strategy on both economic and social fronts.

Air Pollution & Air Quality: With the upward economic growth, the standard of living has improved in a number of countries. According to Global Environmental Outlook 5 (GEO), the number of vehicles in the world is growing at a much faster pace than the number of people. Air pollution in the form of emissions of pollutants, like oxides of sulphur and nitrogen, carbon dioxide, is also a by-product of economic development. Deterioration of air quality can be majorly observed in the cities like Karachi, Dhaka and many others. According to Clean Air and Sustainable Environment (CASE)⁸, degrading air quality in Dhaka can be attributed to the brick industries located on the outer parts of the city.

Other signs of stress on resources include water pollution of major rivers because of dumping of industrial effluents, shrinking of the forest cover, extinction of flora and fauna and many others.

2.2.3 Climate Change



Source: data.worldbank.org

As pointed out in the Fourth Assessment Report of the IPCC (Intergovernmental Panel on Climate Change) in 2007, South Asia is likely to be one of the regions that will be a major casualty of all the negative impacts of climate change. The major causes of climate change include an increase in the concentration of greenhouse gases (GHGs like carbon dioxide, methane, nitrous oxide, fluorinated gases) and land use changes for urban and human settlements. Climate change will have wide-ranging impact on environment as well as on socio-economic and related sectors, including water resources, agriculture and water security, human health, terrestrial ecosystems, biodiversity and coastal zones. Its effects include changes in rainfall patterns leading to severe water shortages and/or flooding; melting of glaciers causing flooding and soil erosion; and rising temperatures affecting food security and increasing the rates of extinction for many habitats and species. Increasing sea level means a greater risk of storm surge, inundation and wave damage to the coastline.

Impacts of Increasing Temperature

Temperature rise will negatively impact rice and wheat yields in the tropical parts of South Asia, where these crops are already being grown close to their temperature tolerance threshold (*Kelkar and Bhadwal 2007*)ⁱ. Drylands and mountain regions are likely to be more vulnerable than othersⁱⁱ and ecosystem degradation is largest in these regionsⁱⁱⁱ. Climate change is likely to cause additional inequities, as its impact is unevenly distributed over space and time and disproportionately affects the poor.

Impacts of Precipitation Variability on Water Resources

Water resources are inextricably linked with climate; hence, the prospect of global climate change has serious implications on water resources and regional development^{iv}. Tendencies of increase in intense rainfall with the potential for heavy rainfall events, spread over a span of few days, are likely to impact water recharge rates and soil moisture conditions. A warmer climate, with its increased climate variability, will increase the risk of both floods and droughts. Many people in South Asia are dependent on glacial melt water during the dry summer season. Accelerated glacial melt questions the very perennial nature of many of the Himalayan flowing rivers^v. In semi-arid areas, climate change may extend the dry season of no or very low flows, which particularly renders water users unable to rely on reservoirs or deep groundwater wells^{vi}. Many of these areas will suffer a decrease in water resources due to climate change.

Impacts of Sea Level Rise

Low-lying coastal cities will be at the forefront of receiving most of the impact, being most vulnerable to the risks of sea level rise and storms. These cities include Karachi, Mumbai, Dhaka, and Maldives all of which have witnessed a tremendous amount of environmental stress recently.

Higher seawater levels would also increase the risk of flooding due to rainstorms by reducing the coastal drainage. A rise in the sea level would raise the water table, further reducing the drainage in coastal areas. All these effects would have devastating socio-economic implications, particularly on the infrastructure in low lying deltaic areas.

Impacts on Bio-diversity

Table 3: Threats to ecosystems in South Asia

Ecosystems	Threats	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka
Coastal (mangroves, mudflats, estuaries)	Inundation, salination, storm, species loss								
Coral reefs	Bleaching, acidification, loss of ecological and protective services, reduction in species diversity								
Inland wetlands	Desiccation, drainage and diversion degradation and service loss								
Forests	Loss of forest cover and species, altered composition and structure, enhanced evapotranspiration								
Mountain (subtemperate, temperate)	Altitudinal shift in vegetation disrupting species types								
Mountain (subalpine, alpine)	Loss of vegetation cover								
Glaciers	Loss of coverage								
Desert	Expansion								
Rangeland & Grasslands	Regime shift, degradation due to overgrazing and increased incidence of fire								
Freshwater (rivers, lakes)	Desiccation, increased salinity at coast, degradation due to increased demand								
Species diversity (floral & faunal)	Loss of diversity and habitat, changes in species composition and food web								
Key:		Locations particularly vulnerable to impacts of climate change.							

Source: World Bank South Asia Region Report, 2009

South Asia's geographical expanse and topography include several diverse ecosystems that harbor 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. Loss of biodiversity will impact the ecosystem services, which will affect the benefits people receive directly as well as indirectly. These include: Provisioning services (food, clean water, timber, fibre); Genetic resources regulating services (the regulation of climate, floods, disease, water quality, and pollination); Cultural services (recreational, aesthetic, and spiritual benefits) and Supporting services (soil formation, and nutrient cycling).

Impact on Crop, Pasture and Forest Productivity

Agriculture is the mainstay of several economies in South Asia. It is also the largest source of employment. In fact, this sector continues to be the single largest contributor to the GDP in the region. As three-fifths of the cropped area is rain fed, the economy of South Asia hinges critically on the annual success of the monsoons (*Kelkar and Bhadwal 2007*). In the event of a failure, the worst affected are the landless and the poor whose sole source of income is from agriculture and its allied activities. Climate change is likely to affect agriculture, increasing the risk of hunger and water resource scarcity with enhanced climate variability and more rapid melting of glaciers (*Cruz et al 2007*).

In 1998, the SAARC Food Security Board was established to advise governments on food situation and prospects in the sub-region including factors such as production, consumption, trade, prices, quality, and stocks of food grains

Grasslands in the dry lands of South Asia comprising fast-

growing, often short lived, species are sensitive to carbon dioxide and climate change, impacting the stability and resilience of plant communities. Experiments support the concept of rapid changes in the composition and diversity of various species under climate change. In dry regions, there is a risk that severe vegetation degeneration may lead to positive feedbacks between soil degradation and reduced vegetation and rainfall, with a corresponding loss of pastoral areas and farmlands (*Zheng et al. 2002*).

The natural grassland coverage and the grass yield in Asia are projected to decline with a rise in temperature and higher evaporation. In fact, the thermal stress reduces productivity, conception rates and is potentially life-threatening to livestock.

Although climate change will impact the availability of **Forest Resources**, the anthropogenic impact, particularly land-use change and deforestation in tropical zones, is likely to be extremely important.

Growing global importance of climate change and related threats has forced countries all over the world to introduce and implement climate change adaptation policies and programmes at the regional, national, and local levels.

In the South Asian region, consensus for a joint approach to combat climate change in South Asia can be seen within the framework of SAARC. Similarly, at the national level, countries have developed their own National Adaptation Programmes for Action (NAPA) in an attempt to move towards a climate change resilient future. The table below provides a summary of national climate change policies. In their strategy, Bhutan, Sri Lanka, and Nepal are focusing efforts towards building capacities of communities in order to adapt to the threats posed by climate change.

Natural Disaster

Table 4: Summary of National Climate Change Plans in the South Asian Region

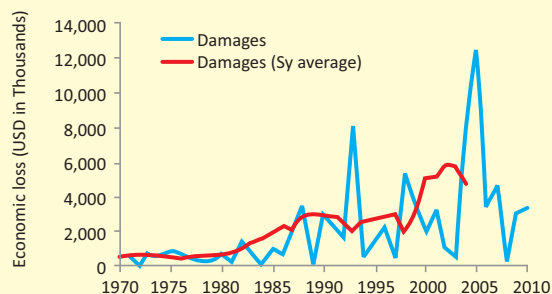
Country	Title	Issuing Authority	Year
Afghanistan	National Adaptation Programme of Action for Climate Change	National Environmental Protection Agency	NA
Bangladesh	Bangladesh Climate Change Strategy and Action Plan (BCCSAP)	Ministry of Environment and Forests	2009
Bhutan	National Adaptation Programme of Action	National Environment Commission	2012
India	National Action Plan on Climate Change	Prime Minister's Council on Climate Change	2008
Maldives	National Adaptation Programme of Action	Ministry of Environment, Energy and Water	2007
Nepal	National Adaptation Programme of Action to Climate Change	Ministry of Science and Technology	2002
Pakistan	National Climate Change Policy	Ministry of Climate Change	Launched on 2013
Sri Lanka	National Climate Change Adaptation Strategy	Ministry of Environment and Renewable Energy	2010

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. Despite increasing disaster risk in South Asian region (SAR), awareness and understanding of this risk among individuals and governments remains low. Enhancing resilience to hazards in SAR is critical given the continued, steady path of economic development. One of the manifestations of the impact of climate change has emerged in the form of GLOF hazard glacial Lake Outburst floods. A new hazard has been added to the lexicon of

natural hazards and the frequency of this hazard has shown an increasing trend over the past decades, especially in the Himalayan region. In Nepal and Bhutan, melting glaciers are filling glacial lakes beyond their capacities, contributing to 'GLOFs' or Glacial Lake Outburst Floods (*UNEP 2007*). Of the 2,323 glacial lakes in Nepal, 20 have been found to be potentially dangerous with respect to GLOFs. The most significant such event occurred in 1985, when a glacial lake outburst flood caused a 1015 m high surge of water and debris to flood down the Bhote Koshi and Dudh Koshi rivers for 90 km, destroying the Namche Small Hydro Project.

The number of seismic events has remained relatively

Figure 4: Trends in Economic Losses Associated with Natural Disasters in South Asia (1971- 2010)



Source: Emergency Events Database (EM-DAT: The OFDA/CRED International Database) ([Http://www.em-dat.net](http://www.em-dat.net))

steady over the past 40 years, but flood and storm events have become increasingly common despite relatively consistent rainfall patterns. The growth in the number of hydro-meteorological events is driven by the region's limited capacity to manage high rainfall and storm events and an increased concentration of assets in high-risk areas. When combined, this results in a greater number of disasters and higher economic losses. South Asia is the most exposed region in the world to flooding and highly exposed to cyclones.

Figure 4 shows the increase in losses over time, with dramatic spikes representing the losses caused by medium and large-scale single events. Not only have direct losses (resulting from the physical destruction of assets) increased, indirect losses due to natural disasters have also multiplied. Indirect losses include the broader consequences of disasters, including the interruption of business operations, a decrease in private and public revenues, widespread unemployment, and market destabilization⁹.

2.3 Initiatives to Promote Cooperation on Environment at Regional Level¹⁰

The inter-governmental organizations are notable in the context of regional cooperation on environmental issues in South Asia. These are (i) the South Asian Association for Regional Cooperation (SAARC) (ii) the South Asia Cooperative Environment Programme (SACEP).

SAARC

Envisaged as “a political organization” and established in 1985, SAARC has during the past two and a half decades paid increasing attention to environmental concerns and challenges. Since 1987, references to environmental issues have figured in the speeches made and declarations issued by SAARC Summits. Since the late 1980s, Ministers of Environment have held over a dozen meetings, including a meeting in 1997 which adopted the first SAARC Environment Action Plan, the meeting in 2005 in the wake of the Asian Tsunami which led to the consideration of a regional disaster cooperation framework, and the meeting in 2008 at which a Declaration and an Action Plan on Climate Change were adopted ahead of the 2009 climate change meeting in Copenhagen.

The 16th SAARC Summit hosted by Bhutan in April 2010 had, as its main theme, the topic of Climate Change and issued a statement on climate change. The broad-based SAARC Convention on Environment was signed at the Summit and has since been ratified by most member-states. An expert-level Technical Committee on Environment was set up in 1992 and an inter-governmental Expert Group on climate change was set up at the 16th Summit in Thimphu.

In pursuance of the 1997 and 2008 plans of action, a number of SAARC centers have been established, including the SAARC Forestry Centre in Thimpu, the SAARC Disaster

9 Disaster Risk Management in South Asia A Regional Overview, December 2012

10 Environmental Challenges in South Asia, Shafqat Kakakhel NUS & ISAS

Management Centre in New Delhi, the SAARC Meteorological Research Centre in Dhaka, and the SAARC Coastal Management Centre in Maldives.

The Dhaka Climate Change Action Plan had identified seven thematic areas for consultation and cooperation. These include mitigation; adaptation; technology transfer; finance and investment; education- and awareness-enhancement, management of climate change impacts and risks; and capacity building for intergovernmental negotiations.

SACEP

The South Asia Cooperative Environment Programme (SACEP) was established in 1982 by the government of South Asia. Its secretariat is located in Colombo (Sri Lanka) which, in addition to implementing the SACEP Work Plan, also administers the South Asia Regional Seas Programme and several other regional programmes. SACEP's objectives include promotion of mutually beneficial cooperation in priority areas of environment, promotion of exchange of knowledge and expertise, and formulation, financing and implementation of environmental projects. SACEP seeks to work in areas where regional cooperation and collective action can add value to member countries and produce better outcomes for the region. SACEP is also an appropriate forum for action on trans-boundary environmental issues. These are issues where the geographical scope or impacts extend beyond national boundaries. One such area of engagement is control and prevention of air pollution and its likely trans-boundary effects. SACEP has implemented a number of projects and programmes in the areas of environment education, environment legislation, biodiversity, air pollution, and the protection and management of the coastal environment. SACEP is also secretariat for the South Asian Seas Programme. The 9th Governing Council has approved a new work programme of SACEP which include the following broad areas: Waste Management, Adaptation to Climate Change and Data Management.

SACEP has initiated the following programmes in South Asia:

International Partnership for Expanding Waste Management Services of Local Authorities

International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) was launched during the CSD-19 Intersessional Conference on Building Partnerships for Moving Towards Zero Waste in New York in May 2011 to address the needs of Local Authorities (LA) in expanding waste management services with a goal to help LA's move towards a Zero Waste scenario on a global level. IPLA was initiated by United Nations Centre for Regional Development (UNCRD) and SACEP is the sub-regional secretariat for South Asia

It would focus on LAs/ public waste utilities, emphasizing linkages between waste and resource and build capacities of LAs to facilitate implementation of waste management projects and expansion of related services.

SAWEN –South Asia Wildlife Enforcement Network

The SAWEN Secretariat was formally established on 20 April 2011 in Kathmandu, Nepal, and housed under the Department of National Parks and Wildlife Conservation (DNPWC), Ministry of Forests and Soil Conservation, Government of Nepal. Mission of SAWEN is to strengthen, promote and co-ordinate regional co-operation for curbing illegal wildlife trade that threatens the wild flora and fauna of South Asia.

South Asia Regional Seas Programme

The South Asia Regional Seas Programme was established, with support from UNEP, in 1982. This initiative focuses on integrated coastal zone management, oil-spill contingency planning, human resource development, and pollution of marine resources caused by land-based activities. A South Asia Regional Seas Action Plan was finalized and adopted in 1995 which will, hopefully, lead to the negotiation of a Regional Seas Convention modeled on the Conventions adopted in other regions. The Action Plan contains

proposals on crucial issues such as integrated zone management, development and implementation of national and regional oil-spill contingency plans, and coral reef protection and management.

South Asia Coral Reef Task Force (SACRTF)

The establishment of the South Asia Coral Reef Task Force (SACRTF) to facilitate the implementation of regional and international initiatives in the management of coral reefs and associated ecosystems, and to promote collaborative action, and trans-boundary responses to shared environmental challenges, was endorsed by the country governments of the 5 maritime nations of South Asia

(Bangladesh, India, Maldives, Pakistan and Sri Lanka), at the SACEP Governing Council Meeting in Nepal, in January 2007.

Regional Cooperation for Disaster Management¹¹

In South Asia, SAARC countries established the SAARC Comprehensive Framework on Disaster Management. The signing of the SAARC Agreement on Rapid Response to natural Disasters during the 17th SAARC Summit in Maldives, in November 2011, which also forms the part of Addu Declaration, is an important milestone in pursuing regional cooperation for disaster preparedness.

Table 5: Landscape of Regional Cooperation on Disaster Management in South Asia

South Asia (SAARC)	<ul style="list-style-type: none"> • SAARC Comprehensive Male Declaration of environment Ministers in June 2005 to formulate a • Comprehensive Framework on early Warning, Disaster Management and Disaster Prevention. • Framework on Disaster Management 2006. • Setting up SAARC Disaster Management Centre New Delhi 2007.
Bay of Bengal Initiative for Multi Sectoral Technical and Economic Cooperation (BIMSTEC)	<ul style="list-style-type: none"> • The environment and Disaster Management Cooperation framework under the Bay of Bengal initiative for Multi Sectoral Technical and economic Cooperation (BIMSTEC). • The national Centre for Medium Range Weather Forecasting (NCMRWF), Department of Science and Technology of India— nodal research Centre for disaster early warning.
Regional Integrated Multi-hazard Early Warning System	Regional integrated Multi-hazard early Warning System set up using United nations ESCAP Trust Fund that provides early warning products/services for tsunami, cyclone, floods, drought (including monsoon outlook) and storm surges covering South Asia— with a secretariat in Maldives.

¹¹ Regional Cooperation for Inclusive and Sustainable Development, South and South-West Asia Development Report 2012–13, UNESCAP

Notes:

- i Caulker U, Bhadwal S (2007) South Asian regional study on climate change impacts and adaptation: implications for human development. Human Development Report Office, Occasional Paper. United Nations Development Programme
- ii Gitay H, Brown S, Easterling W, Jallow B (2001) Ecosystems and their goods and services. Climate Change, 2001, Impacts, Adaptation, and Vulnerability. In: McCarthy JJ, Canziani OF, Leary NA, Dokken DJ, White KS (eds) Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, pp 237-342
- iii Hassan R, Scholes R, Ash N (eds) (2005) Ecosystems and human well being: volume 1: current state and trends. Island Press, Washington, DC, p 917
- iv Rebsame WE, Strzepek KM, Wescoat LJ Jr, Perritt R, Graile GL, Jacobs J, Leichenko R, Magadza C, Phien H, Urbiztondo BJ, Restrepo P, Rose WR, Saleh M, Ti LH, Tucci C, Yates D (1995) Complex river basins. In: Strzepek KM, Smith JB (eds) As climate changes, international impacts and implications. Cambridge University Press, Cambridge
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- vi Giertz S, Diekkruger B, Jaeger A, Schopp M (2006) An interdisciplinary scenario analysis to assess the water availability and water consumption in the Upper Oum catchment in Benin. *Adv Geosci* 9:111
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- viii Zheng YQ, Yu G, Qian YF, Miao M, Zeng X, Liu H (2002) Simulations of regional climatic effects of vegetation change in China. *Q J Roy Meteor Soc* 128:2089-2114, Part B
- ix Lu XR, Lu XY (2003) Climate tendency analysis of warming and drying in grassland of Northeast Qingzang Plateau of China. *Grassland of China* 24:813
- x Easterling DR, Meehl GA, Parmesan C, Changnon SA, Karl TR, Mearns LO (2000) Climate extremes: observations, modeling, and impacts. *Science* 289:2068-2074
- xi Zhao Y, Wang C, Wang S, Tibig L (2005) Impacts of present and future climate variability on agri culture and forestry in the humid and sub-humid tropics. *Climatic Change*



Sustainable Developmental Agenda for the South Asia Region

3

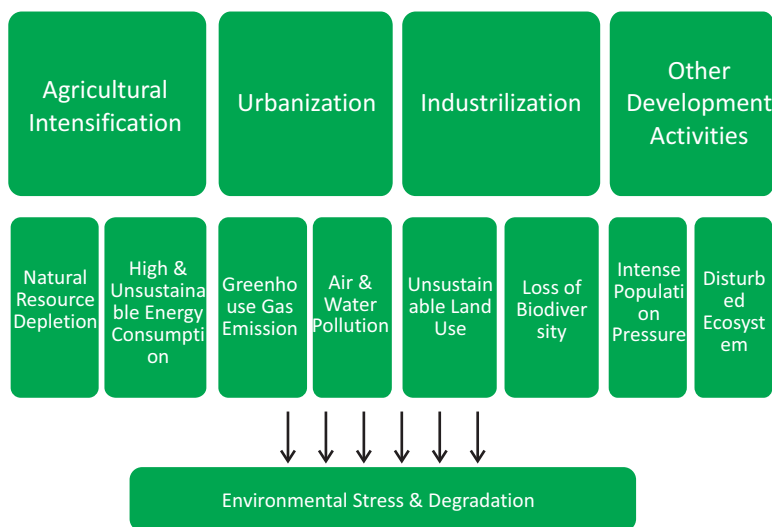
According to the World Bank figures, percentage of people living below the poverty line (i.e. less than \$1.25 a day) fell from 61% to 36% between 1981 and 2008. Yet, the South Asia region is home to close to 571 million people that survive on less than \$1.25 a day. They make up more than 44% of the developing world's poor.

The challenges and priorities of sustainable development clearly extend beyond national boundaries. South Asia needs to focus on enhancing regional cooperation in specific areas of high potential, supported by strengthened implementation systems. From the previous section following were identified as key priorities to South Asia: Urbanization, Economic Growth & Climate Change and the developmental agenda is framed based on these priorities. They are degrading the environment through uncontrolled urbanization and industrialization, expansion and intensification of agriculture and destruction of natural habitats. Poverty eradication is the primary and biggest stumbling block in the path of achieving the goals of Sustainable Development. Poverty-environment linkages can be conceptualized in many ways, notably in terms

of their relationship to livelihoods, resilience to environmental risks, health and economic development.

Eliminating poverty continues to be the top priority for this region. In addition to eradicating poverty, environment is another high priority for South Asia. Globally, multilaterals, inter-governmental organization and policy makers are increasingly arguing for norms, regulations, and policies that are focused towards environment conservation. There is enough evidence to prove that any growing economic activity (production and consumption) requires larger inputs of energy and materials and generates larger quantities of waste by-products. The growth-environment nexus can be delicate and the exclusive pursuit for economic growth can entail substantial and often irreversible damage to the physical environment and threaten the very sustainability of development (Ahmed and Doeleman 1995; Pearce 1993; Alauddin and Tisdell 1998). The figure below depicts the conceptual framework highlighting the environmental consequences of human activities in South Asia.

Figure 5: Environmental Consequences of Human Activities in south Asia



Source: Alauddin, 2002

As such, reducing loss of biodiversity, improving management of forests and water basins are also high priorities for this region. In such a scenario, it becomes imperative that the region adopts a sustainable model of development, wherein there is little or no compromise in terms of the growth agenda, social equity and the environmental base.

The current financial crisis has brought with it a number of challenges for global economies. The interdependence and interconnectedness of global and regional economies have increased the vulnerability and exposure to the negative effects of the recent crisis. The South Asian region is no different as its huge population makes it a lucrative market for all kinds of products. Secondly, the countries of this region, with the exception of Maldives and Sri Lanka, are all major debtor countries, which are unable to break free from the 'low-level equilibrium trap' - created by low rates of capital formation - that compounds the need to secure resources from other sources, to build up a capital base. Despite efforts to improve regional cooperation, South Asia is still less integrated economically than most other regions of the world, such as Southeast and East Asia, Europe, and

the America. Securing the economic base of this region is a high priority item on the sustainable development agenda.

The *2001 World Development Report: Attacking Poverty* highlights the importance of good governance and effective public sector institutions for poverty reduction. South Asian countries have had democratic governments installed but the state of governance has become a matter of concern. According to the Human Development Commission (HDC) Report, South Asia is one of the most poorly governed regions of the world, with the exclusion of a mute majority, unstable political regimes and poor economic management. The system of governance has become unresponsive and irrelevant to the needs and concerns of the people. South Asia as a whole should take up these challenges in the region and strive *towards strengthening* institutional capacity at the local, national, and regional levels.

The figure below describes four priority areas and a number of sub-priority areas for the region. The sub priorities are identified in a way that supports the main.

Figure 6: Sustainable Development Agenda for South Asia

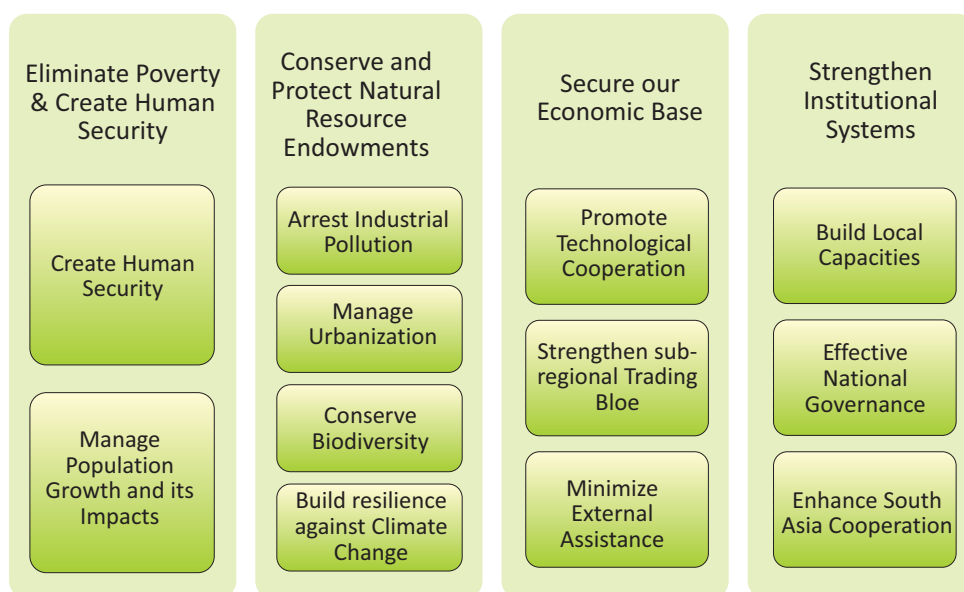
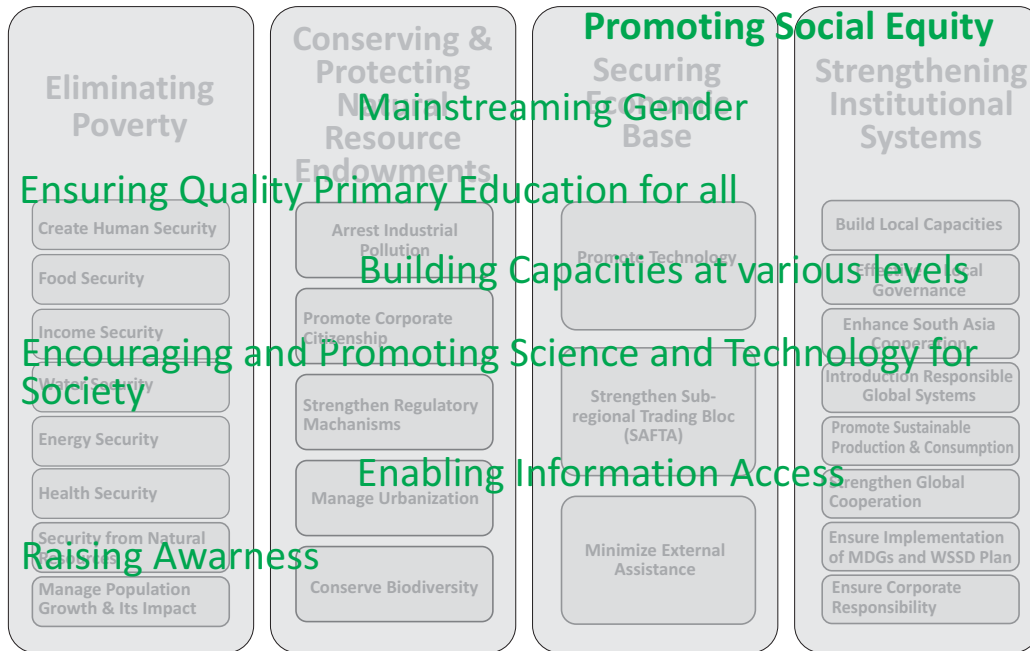


Figure 7: Cross-cutting Priorities



These four priority areas rest on the four pillars of sustainable development – economic, social, environmental, and governance. The figures above highlight priorities and sub-priorities for this region along with “cross-cutting measures and priorities” that need to be addressed.

3.1. Eliminating Poverty and Creating Human Security

As agreed by member States in *The Future We Want, 2012*, poverty eradication continues to remain the greatest global challenge facing the world today and an indispensable requirement for sustainable development. As highlighted above, despite the significant achievements in poverty reduction made by the South Asian countries, the region continues to remain home to 44 percent of the developing world's poor populace. That said, this region has the potential to change global poverty provided it moves in the direction of inclusive and sustainable growth. Eliminating poverty involves a complex paradigm of creating human

security and managing population growth and its impacts. In this section, we will highlight certain priority areas for the region along with measures that countries need to take to ensure South Asia moves in the direction of poverty alleviation and eventually its eradication.

3.1.1. Creating Human Security

Experiences at different levels in the sub-region aimed at poverty eradication indicate that food and income securities are the two major priorities along with water, energy and health securities that need to be addressed. Simultaneously, local communities need to be protected from devastation caused by regular natural disasters. . In the last 40 years, an estimated 825,000 people in the region lost their lives in natural calamities. In the past decade alone, nearly 700 million people, or half the region's population, was affected by one or more disasters (*World Bank, 2012*).

Some of the specific actions that are vital for creating human security in the sub-region are outlined below. The

measures for each of these are based on the three pillars of *accessibility, affordability, and availability*. In order to ensure any kind of security within the region, steps need to be taken by institutions, government bodies, and the civil society to ensure their accessibility, affordability, and availability.

➤ **Ensuring food security**

Measures might include:

- Increasing the availability by improving agricultural productivity
- Improving the access by strengthening public distribution systems
- Enhancing affordability through appropriate pricing instruments
- Nutrition and not just 'food'
- Strengthening of agricultural research system for developing new crop varieties and agricultural technologies in response to changing weather patterns
- Increasing agricultural productivity and increasing incomes of both farmers and agricultural workers

➤ **Promoting Income Security**

Measures might include:

- Facilitating access to decent jobs by reducing the drudgery and improving the working conditions
- Encouraging and strengthening micro, small and medium scale industries
- Developing financial instruments in the form of micro-credit that cater to the poorer sections of the society
- Ensure equal wages for men and women

➤ **Providing Water Security**

Measures might include:

- Strengthening of Integrated Water Resources Management (IWRM)
- Improving access to quality water for all by

regulating consumption, managing ground water augmentation, and adopting waste water recycling

- Introducing “pay-per-use” regulations that ensure water affordability for drinking, domestic use, livestock, irrigation, industrial use, and recreational purposes
- Enhancing the water availability by creating innovative financing and partnerships for effective extraction, treatment, storage and equitable distribution of water

➤ **Enhancing Energy Security**

Measures might include:

- Improving the access to reliable, economically viable, and environmentally sound energy services for all
- Enhancing rural electrification, decentralized energy systems, and use of renewable energy sources through national initiatives and regional cooperation
- Regulate pricing to encourage renewable decentralized systems in the region
- Adopt clean energy / energy-efficient technologies that are climate friendly and commercially viable
- Promote research on energy efficiency and the diversification of the energy mix

➤ **Providing Health Security**

Measures might include:

- Investing in primary health care infrastructure and systems that are linked to referral systems in towns and cities.
- Ensuring universal access to primary healthcare, through affordable and innovative insurance and other financing mechanisms
- Promoting private investments to increase access to healthcare and decrease the pressure on public healthcare systems.

➤ **Providing Security from Natural Disasters**

Measures might include:

- Ensuring access to timely information through decentralized knowledge centres, ICT-based solutions, mobile-telephony, etc.
- Strengthening disaster-preparedness through national and regional risk assessment, mapping, monitoring and vigilance systems
- Ensuring timely relief, recovery and rehabilitation of victims affected by natural disasters through effective policies and procedures, including regional cooperation.
- Ensuring safety from natural disasters through risk abatement and mitigation strategies (like Coastline Protection)

➤ **Provide Quality Education**

Measures might include:

- Promote participation in lifelong learning/ education to make the young population ready for the increasingly competitive and complex job market and take advantage of relevant available opportunities as their age increases
- Mainstream Technical and Vocational Education and Training (TVET) and skills education in post primary curriculum
- Ensure equal participation of men and women in education, politics, economic activities, and civic roles

3.1.2. Manage Population Growth and its Impacts

Research indicates that most of the global population will grow in the less developed region in the coming decades and the South Asian populace will have to face many burdens and difficulties in the spheres of, development and environment. This region is home to 20 percent of the world population which will keep burgeoning in the coming

decade. By 2050, Asia is projected to add another billion people to its already huge population of 4.3 billion, which is not a result of high birth rates but of the large number of people in the childbearing ages. (Drysdale, 2013)¹².

Arresting population growth is a priority for the survival of most countries in the sub-region. With the global population projected to increase to nearly nine billion by 2050, from the current population of six billion, the potential for causing irreparable environmental harm is obvious. South Asia, with the highest density of global population, is unable to support its unskilled people in agrarian activities. In addition, rural to urban migration has led to almost half of every city and town turning into slums and shanties (UNEP, 2004).

Globally, one out of two jobs - in agriculture, forestry and fisheries - depends directly on the sustainability of ecosystems. While in places like Maldives and Sri Lanka, population growth has been addressed, countries like India and Bangladesh continue to experience population explosion. Direct and indirect measures need to be taken to address population control in the region. Some of them may include:

- Investing in developing infrastructure for health, education, drinking water, sanitation, transport, energy, and other public systems
- Empowering women with education and skills
- Creating large-scale mass awareness and strengthening family planning systems

3.2. Conserving Natural Resources

Almost half the land area in South Asia has become degraded in one form or another and even the water resource base is seriously threatened due to overexploitation and pollution. South Asian cities like Mumbai and Dhaka are having the dubious distinction of being among the most polluted cities in the world. With the

12 <http://www.eastasiaforum.org/2013/03/18/asias-demographic-transition-over-the-next-30-years/>

biodiversity under severe threat, the resource base in the sub-region is largely degraded due to its low-lying geography, utter poverty and high population density. Approximately one billion people are expected to face increased risks from reduced water supplies, decreased agricultural productivity and enhanced risks of floods, droughts and cholera. As such, the three areas that require immediate and sustained attention are:

- Arresting Industrial Pollution;
- Promoting Sustainable Human Settlements; and
- Conserving Biodiversity

3.2.1. Arresting Industrial Pollution¹³

Environmental considerations have often been compromised while accelerating on the road to economic development and poverty alleviation. Its implications are now quite visible in South Asia. The corrective action is possible by taking the following measures:

- Promoting the “polluter-pays” concept that addresses the current stress caused by industrialization upon air, water, and land
- Facilitating technology, information, know-how and regulation for enabling industries to clean up (with special emphasis on small and medium size industries)
- Promote cost effective and technically and environmentally sound management of chemicals and wastes throughout their life-cycle and enhance capacity in this regard
- Strengthen integrated waste management systems as well as improve wastewater collection and treatment systems
- Promotion of new and innovative public-private partnerships among industry, governments, academia and other non-

governmental stakeholders aiming to enhance capacity and technology for environmentally sound chemicals and waste management, including for waste prevention

- Create public awareness about the health and environmental problems associated with the chemicals and wastes

In addition, there are three more measures that countries in this region can take to address the issue of industrial pollution. They are as follows:

Promoting Corporate Citizenship

Large industries in the region, both indigenous and trans-national corporations, are increasingly being forced (by discerning local and global consumer and shareholder pressure) into adopting cleaner industrial production technologies and practices. Those who are better aware recognize that without corporate environmental and social responsibility, their survival and long term sustainability is at stake. In the recent past, there has been a sudden surge in the cleaner production processes, technologies, and self-regulatory mechanisms like the ISO 50001 series. Besides regulations, these initiatives need to be promoted at the national and regional levels as well so that these operations are both competitive and sustainable. Green awards and certifications, environmental auditing, triple-bottom line reporting, EIA process, etc can also be incorporated to promote sustainable production practices in this sector.

Small and Medium Enterprises (SMEs) in the South Asia account for almost two-third of the industrial production and employment in the region (OECD, 2000). They find it difficult to comply even with the minimum requirements of the regulatory agencies since their products and services cater to markets that are very price sensitive. A majority of these units belong to the 'unorganized sector' and are generally isolated. Hence, they are a nightmare for

13 Industrial Pollution is pollution linked directly to industry. Given the region is looking at growing at not less than 6-7 percent p.a. and industrialization is on the rise, it is important to treat this type of pollution differently. Hence this is not clubbed into “pollution” and discussed under managing urbanization.

regulatory agencies. As a consequence, they are often highly resource-intensive and inefficient with a high level of pollution load per unit of production. It is imperative for the region to support the SMEs with more efficient technologies, financial incentives, and capacity building for their up-gradation. Experience has also shown that collective systems for waste treatment are more cost effective but not necessarily easy to implement.

Ensuring Corporate Responsibility

It is increasingly becoming clearer that companies that integrate social and environmental concerns into their business operations can improve relations with governments, address stakeholder concerns, identify strategic advantages and improve their management systems. In this context, the efforts like the Global Reporting Initiative (GRI) (www.globalreporting.org) and the Global Compact(www.unglobalcompact.org) initiated by the United Nations Secretary General need to be encouraged. Attempts are being made to evolve more comprehensive reporting and monitoring mechanisms with the participation of a broader set of stakeholders. Besides regulation, three critical aspects needed to promote corporate responsibility at the global level include:

- Voluntary commitments, in order to encourage companies to go beyond the 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 challenged to implement policies, programmes and practices that protect human rights, communities and the environment based on principles of justice and sustainability.

Strengthening Regulatory Mechanisms

Most countries in South Asia have recognized the efficacy of the complementary approach of providing incentives along with regulations, rather than just depending on the 'license and inspector raj.' Most countries have already formulated various policies and standards at the national level which are being fine-tuned for local application. The major problem has been in terms of implementation due to lack of trained personnel, inappropriate infrastructure and local political interference. Regional cooperation will prove substantially beneficial in sharing experiences to enhance the capacity of regulatory agencies.

3.2.2. Managing Urbanization

South Asia is home to over 4000 cities and towns. About 80 of these house populations of more than 500,000 and have some form of Urban Development Authority or City Improvement Trust and one or more municipal bodies to plan and manage their development process. However, the vast majorities do not have the support mechanisms to systematically plan and facilitate this process. They only have some kind of agency for routine municipal administration. Generally, they lack the requisite technical, planning and management skills and are financially weak too.

As a consequence, these small and medium towns are growing at a rapid pace and turning out to be a potential environment and development nightmare. The current fire-fighting focus is still on the large cities where the unplanned urbanization process has already taken its toll. The likelihood of major environmental and social disasters exploding in several places across the sub-region is imminent over the next decade if immediate attention is not focused on these small and medium towns. Regional cooperation can support local and national initiatives to plan, design, innovate and demonstrate strategies and solutions in municipal towns with a population of 100,000 to 500,000 people. The approach can bring together the concerned stakeholders on a participatory and consultative

planning and management platform. The requisite technical and management expertise may be initially drawn from external sources. Ultimately, local capacity building will be carried out to continue with the process. A number of socio-technological management options will also be demonstrated for issues like solid waste management, transportation systems, and water and energy management. Viable and sustainable financial management systems will also be designed with the participation of reputed financial institutions sustainable transportation can be promoted by encouraging clean fuels and multi-modal transport system

- Promote an integrated approach to planning and building sustainable cities and urban settlements ensuring balance development for cities with rural regions
- Ensure affordable and sustainable transport and energy
- Consider disaster risk reduction, resilience and climate risks in urban planning;
- Partnership arrangements and other implementation tools to advance the coordinated implementation of the Habitat Agenda with the active involvement of all relevant United Nations entities and with the overall aim of achieving sustainable urban development
- Create the supportive institutional, regulatory and policy environment for investment by the private sector into housing, and related infrastructure, with a particular focus on the provision of low-cost housing

3.2.3. Build Resilience against Climate Change and Disaster Risk

Climate change is likely to have significant impact on the region. There are scientific evidences of climate change globally manifested through rise in temperature levels, increase in the incidence of extreme climatic events in the

form of recurring droughts and floods, melting glaciers, sea-level rise, etc. According to the Intergovernmental Panel on Climate Change (IPCC), other uncertain outcomes of an increase in global temperatures in the future include increased risk of drought and enhanced intensity of storms, including tropical cyclones with higher wind speeds, wetter Asian monsoon, and, possibly, more intense mid-latitude storms.

A number of measures could be taken in this direction, including:

- Raising awareness amongst various stakeholders on impacts of climate change
- Mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) plans into the development planning and budgeting process
- Conducting vulnerability assessments and inform communities
- Introducing technologies that help mitigate climate change
- Accelerating implementation of the Hyogo Framework for Action (HFA), at all levels, and build resilience to disasters with renewed sense of urgency
- Committing adequate, timely and predictable resources to Disaster Risk Reduction (DRR), including for the international community, to help with technical assistance and technology transfer;
- Ensuring early warning systems (EWS) and disaster risk assessments are a key part of disaster resilience efforts at all levels; and
- Ensuring investments and development plans integrate a comprehensive approach to reduce risk and enable smooth transitions between relief, recovery and development, including linking with climate change adaptation (CCA) and promoting gender based approaches.

- Promote regional and global cooperation for disaster forecasting and reduction and managing post disaster situation

3.2.4. Conserving Biodiversity

South Asia shelters approximately 15 percent of the known global flora and fauna. Unfortunately, the rich natural endowments are constantly under threat including the precious gene pool. More recently, traditional knowledge and ownership rights of indigenous communities are also being threatened by global trade and patenting agreements. This is despite the ecological debt built up by industrialized economies over the years by systematically exploiting the natural endowments in developing regions. The loss of sub-regional biodiversity has a negative impact upon the people of South Asia and also the global community. Some of the key priorities for action by the sub-region are outlined below:

- Introduction of Eco-System based natural resource management.
- Continuing to assess, map and document the biodiversity wealth of the sub-region
- Reviving the traditional knowledge, especially among local communities, indigenous people and women
- Minimizing the losses from soil erosion, landslides and desertification by checking land degradation

3.3. Securing the Economic Base

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

3.3.1. 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 onto the Third World (*Pandey, 2004*). Countries in the sub-region need to focus seriously on developing and sharing indigenous technology. Developing regions and sub-regions need to clearly demonstrate the potential and strength of South-South technology cooperation. Some of measures that could be taken include:

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

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

3.3.2. Building a Sub-regional Trading Bloc

With acute poverty at one end, South Asia is also rated as the second fastest growing economic zone in the world (over five percent per annum), next only to the East Asian tigers. Unfortunately, countries in the sub-region have not fully recognized and taken advantage of this latent potential. With a consumer base of over 425 million people in the middle class bracket (larger than any other economic bloc of the world), South Asia has the potential to contribute significantly to the evolving global economy. Hence, considerable rationalization is required within the sub-region to tap this potential. The countries in the sub-region need a much more liberalized trading regime among

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

3.3.3. Development with Minimal External Assistance

In all international deliberations, developing countries are seen to be negotiating for more development assistance, besides technology. It is clear that overseas development assistance has been decreasing over the years and the likelihood of its substantial increment seems pretty remote. In fact, many developing countries have been gradually dragged into the debt trap. Countries in South Asia should strive towards attaining the goal of sustainable development with minimal overseas (fiscal) assistance. The economies in the sub-region could be bootstrapped with appropriate cooperation in the spheres of trade and technology. The sub-region also needs to seriously consider taking up the following measures:

- Promote technology transfer within the region
- Leverage corporate social responsibility towards development in the form of partnerships
- Consider setting up a South Asian Development Bank
- Leverage remittances for development by introducing Remittance Tax

3.4. Strengthening Institutional Systems

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

- Local
- National
- Regional
- Global

At each level, it is now necessary to build the capacity for understanding the basis of action for sustainable development; formulate policies and programmes to encourage such action; establish responsibilities; set up mechanisms for monitoring progress towards agreed goals; and, create mechanisms for accountability.

3.4.1. Building Local Capacities

Local governance institutions could be strengthened by designing them in such a manner that they create a sense of ownership among the local people over the resources on which they depend, and the decision-making systems that guide their lives; address the minds of the children on values of giving, caring and sharing. Some of the measures that could be taken up by local governance institutions are:

- Building capacities at the local level to facilitate informed planning and decision making
- Creating a sense of ownership amongst local people over resources on which they depend

3.4.2. Improved National Governance

The primary responsibility of national governments in the sustainable development process is to empower and facilitate the functioning of local governance institutions.

They need to ensure that governments at all levels are democratic, participative, transparent and accountable. Civil society, including community based organizations and non-governmental agencies, are now growing rapidly in terms of their influence on people's lives. Such institutions need to be encouraged and nurtured, based on their track record since they are usually better capable of delivering social mobilization services at a fraction of the cost. Due to their high level of motivation and willingness to work within severely constrained circumstances, they are also effective innovators from whom many new solutions can be adopted on a larger scale. The corporate sector is also beginning to realize the opportunities offered by the rural market in South Asian countries and can be a major potential partner in introducing sustainable development services to the poor. While corporate sector participation in the development process needs to be encouraged, governments and regulatory systems must monitor that profit motives do not deteriorate cultural values and traditional conservation practices. Traditional knowledge and traditional lifestyle have played a vital role in conserving biodiversity. South Asian governments should become role models in terms of setting an example of efficient operations for agencies in the other sectors to follow. Following are some of the measures we should take:

- Promote integrated and inter-generational planning for a long-term period (moving beyond Five Year Plans)
- Facilitate meaningful involvement in policy formulation and implementation by representatives of the private sector, local authorities, NGOs, trade unions and other major groups
- Incorporate sustainable development principles in the national constitution or legislation to accelerate the adoption of better development strategies
- Strengthening the accountability and transparency of institutions
- Decentralization of democratic governance to

local levels through devolution, appropriate administrative autonomy and assurance of a certain level of financial capability

3.4.3. Enhance South Asian Cooperation

The South Asian region is assuming importance in terms of its centrality to global geo-politics and geo-economics. Though characterized by tensions and conflicts, the continent is also an area of potential economic growth. South Asia is home to a phenomenal skilled manpower and also to some of the largest emerging global markets. Such a diverse resource base can be pooled together for broader regional cooperation, which in turn will bring about peace and security in the region. Key areas of regional cooperation include:

- Joint action on poverty Eradication and human security
- Sub-regional trade and economic policies
- Sub-regional sharing and management of natural resources
- Strengthening implementation systems, each of which is discussed in detail in the next section on the Framework for South Asian Action
- South Asian action on climate change adaptation

3.4.4. Responsible Global Systems

Concerted efforts are required by the global community to fulfill commitments made in the MDGs and at WSSD. This calls for Multi-stake holder collaborative programmes. 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.

Promote Sustainable Production and Consumption Patterns

Today, every country is keen to be competitive in the global economy. Unfortunately, these nations are trying to attain

this goal by emulating the same unsustainable technological strategies and production systems. This simply means that transforming production systems to meet the imperatives of sustainability is going to be an uphill task. Sustainable consumption is an even more ambitious objective that aims at transforming the ways in which goods and services are used and disposed off, in order to meet the needs of everybody and conserve the environment as well. While this region has inefficient and wasteful production systems, it poses the dire need for cleaner production and state of the art technology. South Asia has a rising middle class with unsustainable consumptive practices. Hence, it is high time that governments must take up the responsibility to guide the driving forces that influence consumption patterns in the society. This means addressing issues such as market pressures (e.g. pricing, advertising, and credit), the policy framework (e.g. perverse incentives), cultural expectations, technological innovations, infrastructure and land use as well as individual purchasing decisions. This, in turn, entails tackling the institutionalized inertia or status-quo 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 in order to communicate the advantages of more sustainable consumption. WSSD has once again invited the 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 for conserving the environment".

Making consumption sustainable is a long-term task, which will require structural changes in economies and lifestyles, tackling often entrenched expectations and vested interests. These issues cannot be addressed by policy alone,

but will require political vision and determination as well to opt for tough choices where these are necessary, supported by a mass movement for bringing about the change.

Some of the measures that we can take are:

- Guiding the driving forces towards sustainability that influence the consumption patterns in any society
- Transforming current systems (production patterns) to meet the imperatives of sustainability
- Transforming ways in which goods and services are used and disposed off (consumption styles)

Strengthening Global Cooperation

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

- To eradicate global poverty
- To conserve the environmental resource base
- To ensure that the benefits of globalization processes reach the poor and conserve the environment
- To ensure the poor countries easy access to 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 build financial and institutional capacity at local and community levels, particularly in poor countries
- To strengthen the capacity of developing countries to negotiate, access technology and ensure implementation of global conventions

- To develop global governance code of ethics on corruption and agree to eliminate corruption at all levels of public life

Ensuring Implementation of the MDGs and WSSD Plan

Both the Millennium Declaration and the WSSD Plan of Implementation have drawn out a clear agenda to address the issue of poverty eradication. Poverty eradication is dependent on three highlighted aspects and hence the case for poverty eradication and sustainable development becomes very strong, especially for this region. Recognizing that earlier commitments were not fulfilled due to weak institutional arrangements in terms of 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, a set of mechanisms for financing the initiatives have been outlined. 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 priorities of eliminating poverty and creating human security; conserving the natural resource endowments; and securing the economic base have to be essentially addressed at the local and national levels. Regional cooperation will be extremely useful in mutually supporting and reinforcing the national and local initiatives. Regional collaboration will also enable South Asia to negotiate with the international community from a position of strength and contribute meaningfully in determining the global agenda.



Framework for South Asian Action towards Transition to a Green Economy

4

The multiple global crises including climate change, biodiversity loss, water and energy crises, land degradation, frequency of natural disaster have put a major burden on most South Asian countries. Unlike many other regions, South Asia is currently undergoing rapid industrialization and urbanization, generating significant demand for raw materials and consequently exerting pressure on the local, regional and global environment. It is expected that the demand and pressures will increase markedly in the future. Rapid global changes such as climate change and consequent loss of biodiversity, rising sea levels, economic crises, and food shortages will further trigger the demand for resources. In this context, the emerging concept of green economy is particularly relevant for South Asian development because it offers insights and policy measures for sustainable transformation of the socio-economic system. The concept of green economy not only includes important aspects of economic efficiency and economic policy reforms (taxes, economic incentives, and investment in green technology), it also promotes a holistic view embracing social concerns of equity, inclusiveness and the compatibility of changes with social, cultural, and political views¹⁴. The concept puts due emphasis on the sustainability of economic growth with well-functioning markets and access to green products, alongside clearly defined rights of stakeholders for encouraging optimal use of natural resources. It also emphasises the need for the four pillars of sustainable development to be strengthened, fully integrated and properly balanced, giving particular attention to social equity and good governance. The pre-requisites to transition to a green economy in the South Asian region have been outlined below:

4.1. Political Commitment

Renewed political commitment is essential for the integration of all four pillars of sustainable development as well as for implementing the national action plans for sustainable development. It should primarily come from governments, but other stakeholders also need to be included in the decision-making process. All stakeholders need to be made accountable for fulfilling the commitments of a regional vision and take initiative in designing common minimum programmes and policies. Partnerships among all major groups and financial, technical and specialized institutions should be strengthened at national and international levels. It is high time that countries in South Asia appreciate their interdependencies for their own national interest and use the strengths of the collective in appropriate ways to drive their region towards sustainable development as well as position their sub-region on the global platform. This will require a close cooperation at the political level amongst SAARC countries.

Member countries need to continually reaffirm commitments made at previous regional summits and be accountable to each other to report on their commitments. Governments need to focus more on integrating various programmes and policies to render them more effective and reduce wastages that may be incurred as a result of looking at different sectors in isolation. Measures to keep political differences at bay would prove to be very useful in promoting regional cooperation.

14 Source: [www.teriin.org/index.php?option=com_publication &task=details&sid=1462](http://www.teriin.org/index.php?option=com_publication&task=details&sid=1462)

Maldives- UNESCO Reserve by 2017

The Government of Maldives has pledged that the entire country and its Exclusive Economic Zone (EEZ) will become a UNESCO Biosphere Reserve by 2017. This was in response to the Hyderabad Call for Biodiversity Champions in support of the Aichi Biodiversity Targets, made at the eleventh meeting of the CBD Conference of the Parties (COP 11) in Hyderabad, India, and builds on the announcement made at the Rio+20 Conference. The Maldives, which is endangered by climate change and global warming, has worked extensively for decades to raise awareness and protect its natural resources. This pledge from the Maldives is extraordinary in terms of its size and potential impact and will be an inspiration to other countries including Small Island Developing States and donor countries, to work harder towards the achievement of all the Aichi Biodiversity Targets.

Source: Adapted from a press release- United Nations Decade on Biodiversity by David Ainsworth and Johan Hedlund-Montreal-18, February 2013

4.2. Reformed Policies, Legislation and Schemes

The transition to a Green Economy requires reforms in policies, legislation, subsidy and incentive schemes, and a commitment from policy makers to mainstream green economy principles in national and regional development plans and agendas as well as acquire a new outlook in the governance of development processes. SAARC countries already have policy and legislative frameworks in place for sustainable development. However, the weakness lies in the implementation of these policies, monitoring and evaluation of the schemes, governance of development programmes and in the inter-ministerial coordination of sustainable development plans. It is important that policies

be integrated and strategies be made to combine sectoral efforts so that meeting the needs of one sector does not make it more difficult to meet the goals of the other sectors. It is thus important that senior representatives of sectors meet on an ongoing basis. For example, it will be useful for SAARC member states to discuss the benefits that can be accrued from integrating or having a combined focus on sectors such as natural gas and electricity or land and water management.

4.3. Private Sector Investment and Involvement

The transformation to a green economy will require changes in the business as usual approach. The advent of new legislations has seen an increase in foreign investment in the private sector of SAARC countries. It is now widely accepted that businesses must incorporate social and environmental concerns in their activities. Companies should not be limited merely by social responsibility, rather move into a space where their benefits can be derived by incorporating sustainability at the core of business activities. The move from the business as usual approach will require new legislations and regulatory mechanisms that effectively address issues of pollution and emissions, fertilizer and pesticide use, water contamination, and the use of environmental taxes and fines as crucial policy instruments that should be major or central components for promoting the green economy. In addition, to attract private sector participation, governments should address issues such as creating a conducive business environment, providing investment incentives, developing an adequate legislative framework and strengthening government capacity to negotiate. The awareness of the private sector towards the market potential of green sectors needs to be enhanced so that more resources are allocated to innovation and R&D for such technologies and systems.

Sri Lanka: Green Reporting System

This Reporting System was initiated by the Ministry of Environment in line with the requirement set out under the Mission 09 (Greening the Industries) of the National Action Plan of the Haritha (Green) Lanka Programme launched in 2009. Under this mission, strategies and actions have been developed for greening the industrial and service sectors and to minimize environmental degradation. The reporting system comprises 50 indicators which consist of 24 environment indicators, 20 social indicators and six economic indicators. The objective of the reporting system is to recognize and reward industrial units on their sustainability performance, which ultimately helps them to compete with the international and local markets. The reporting system targets the industry and service sectors in general; however, there are special provisions to stimulate small and medium-sized enterprises (SMEs) to participate in the process. Enterprises can associate themselves to the reporting system in different tiers according to their size and capability. Thus, a smaller company can choose tier one or two, allowing more time and training and less indicators until their first report and efforts are due. The Ministry of Environment offers training for those entities that are committed to the reporting system. The training programme provides the required knowledge for the entities to prepare reports and to identify performance indicators and parameters for the preparation of the reports. The reporting system is overseen by a Green Reporting Steering Committee comprising members from Government sector, Private Sector and Civil society Organizations.

Source: Extract from the Switch-Asia Network Facility website-
Green Reporting: Lessons from Sri Lanka

4.4. Stakeholder Partnerships and Community Participation

Fulfilling the dream of a green economy would need interaction and collaboration of various stakeholders including the government, researchers, private sector, multi-laterals, civil society organizations. The concept of green economy will only see the light of the day through their collective vision and effort. It is essential to bring about a convergence in public interest and private sector leadership in determining green economy initiatives. Policymakers have a large role to play in initiating partnerships and mobilizing financial, technical and other investments required to promote these initiatives. It is only through such partnerships that ambitious green economy projects can come to the fore. On the same note, encouraging community participation is also a vital element for the success of green initiatives. A case in point is Nepal's community forestry initiative where the handing over of responsibility for management and decision-making of local natural resources to local groups ensured their sustainable use. This proved to be far more effective than government control. Based on the success of community forestry, the government started various other initiatives such as participatory soil conservation and watershed management activities in a number of districts which have also proved to be very successful. Another case in point would be Bangladesh's unique community development Grameen Bank model. Grameen Bank, Bangladesh is an institution that pioneered the provision for microcredit facilities to the rural poor, aimed at generating income to help them meet their basic needs and become independent of the moneylenders. The success of the programme is based on community participation in the loan programme by forming groups and attending meetings. The collective responsibility of the group serves as collateral on the loan taken by individuals in the group. The coming together of individual members is also used for a number of other purposes including educating and awareness building, collective bargaining power, peer pressure etc. Since the Grameen Bank started in 1976, the peasants have attained

a new lease of life. Because of its significant performance, it has been copied in 52 countries of the world, including the United States, the United Kingdom, China, Australia, India, and other developed and developing countries.

4.5. Incorporating Sustainability in Educational, Vocational and Capacity Building Programmes

A transition to a green economy will create the demand for skilled and trained human resources. Filling this void would mean an increased need for capacity building and skill development programmes. A more pertinent concern in this regard is not isolated to issues pertaining to educational reforms, rather closing the gap between demand and supply i.e. workers' skills and the demands of the green industry.

Educational institutes must incorporate the element of sustainability and create leaders of tomorrow who have the vision of moving the current consumption-oriented corporate attitude towards sustainable development so that companies that employ them benefit from their knowledge. Environmental concerns should be well covered in educational courses at all levels as this will be the bedrock for securing future understanding about the role of environmental assets and the benefits they provide, and building commitment to their sustainable use. These concerns need to be integrated in primary and secondary school texts and teacher training programmes. Today's students are tomorrow's decision-makers and leaders and it is important to help influence their attitudes and behaviours towards environment. It is also important to address the capacity strengthening needs of all other stakeholders such as local governments, policy makers and industry. Training programmes that look at capacity building or retraining these stakeholders should look at incorporating an element of sustainability as a part of their training programmes. Policy makers should also look at finding a means of linking incentives and subsidies offered

to companies on the basis of their consumption patterns and the training of their workers.

4.6. Investing in Research & Development

A move to a green economy would require significant policy, human resource, financial, and technological investments to be made in research and development for solving problems related to land degradation, food security, deforestation, water scarcity, human settlements etc. This research is a crucial element in bringing about poverty alleviation, natural resource conservation and addressing the climate change issues at the national, regional and global levels. In the South Asian region, this can be facilitated by creating necessary linkages between research institutions and the private sector. The importance of regional cooperation can be further emphasized herein as research is costly and complex. Pooling of resources by South Asian countries can help in solving common problems related to climate change, resource depletion, degradation etc. Establishing a mechanism for IPR sharing will greatly benefit countries in the SAARC region as this will facilitate exchange of technologies, research notes and learning among them. Given its high capacity in the ICT sector, India can play a lead role in institutionalizing the process of information sharing. Regional R&D cooperation for a successful transition to a green economy can take the form of research networks, shared infrastructure, increased regional meetings seeking common solutions to common problems, creating inventories of what exists in order to avoid duplication, seeking funds in common, etc. An example of a research network would be the International Centre for Integrated Mountain Development (ICIMOD), a regional intergovernmental learning and knowledge sharing centre serving the eight regional member countries of the Hindu Kush Himalayas. There is immense potential in setting up a similar network between science and technology centres of SAARC countries to fulfil the objectives of a green economy. Policy makers have an essential role to play in creating an environment that facilitates these partnerships through a legislative

framework that takes care of the issues that may arise as in the process of building a common regional scientific standard.

4.7. Investing in Knowledge Management

Information sharing is the basis on which green economies of scale can be established. Knowledge portals and web-based database providing information on environmental issues including problems, available mitigation measures, policy and legislative reforms should be established as a collaborative effort by SAARC member states. The collection, documentation and sharing of data, governance and reform measures, best practices amongst all SAARC stakeholders can help in the effective refinement of practices existing in each of these states. There are multitudes of environmental concerns that have not gained sufficient recognition as yet like sustainable tourism, sustainable transportation, etc. Knowledge sharing is a means by which these issues can gain prominence and priority.

4.8. Technology Transfer and Financial Arrangements

There will be costs involved in making the transition to a low carbon, green economy in the pursuit of sustainable development. Some countries are better able to bear those costs than others, and are more resilient to changes. However, the most vulnerable countries, mainly LDCs, need to be supported and protected – particularly small and land-locked countries that must be provided access to appropriate financial and technical assistance. Developed countries must take steps for providing additional financial support, transferring technology, removing trade barriers

and opening their markets, and building capacity in the LDCs for realizing the global sustainable development goals. There are still priority areas that lack sufficient investment e.g. sustainable tourism, etc. Measures have to be put in place to ensure these areas get a fair share of the deal.

4.9. Investing in Infrastructure

There is a close and dynamic relationship between infrastructure and sustainable development, because inadequate infrastructure is one of the most serious constraints on development effort of any kind. The government should create an environment that is conducive to facilitating private sector investment and provide adequate incentives to that end. Policy makers should take into consideration infrastructure investment requirements and make adequate provisions for the same while drafting policies.

4.10. Need for Innovation

There is a need for innovative measures and a more punitive approach to the plaguing environmental concerns. The suggestions include changing taxation codes to reflect sustainability of businesses wherein less sustainable businesses pay more ('polluter pays' approach), and amending subsidy schemes to reflect environmental priorities e.g. shifting fertilizer subsidies to organic and/or urea-based fertilizers – which are less expensive and easier to use. Examples of possible areas of replication include charging yearly rates instead of one-off sums for pumping water for rice irrigation; making meters mandatory for factories sinking deep wells to draw out water, promotion of Environmental Impact Assessment, eco-labelling and appropriate certifying mechanisms for various sectors etc.

Gross National Happiness (GNH) in Business: A Pilot Project

Yangphel Adventure Travel and Hotel Zhiwa Ling, sister concern enterprises of Yangphel Company, have embarked on a 'GNH in Business' project, a pioneering initiative in the country's private sector to incorporate GNH values and ways of doing business in a systematic approach. The three-year project endeavours to develop a ground-breaking business paradigm which includes everything that a Corporate Social Responsibility programme would, as well as two additional elements. One element is to enhance the propensity and creativity of all individuals that are a part of a business to experience and share happiness in their work and dealings with colleagues, customers and other people who influence the business. The other is to enhance awareness and skills for positive actions that balance profit-making and human service. The GNH in Business project is work-in-progress, having completed only its first year. The preliminary model features the following four components:

- Greening the business: Examples include waste reduction and recycling, energy conservation, water conservation and management, carbon management for a carbon-neutral business, biodiversity conservation, establishing green purchasing and procurement policies, and use of greener and cleaner technologies.
- Driving community vitality: Examples include happiness surveys of communities that are affected by the business, community engagement projects (private-public partnerships), initiatives supporting vulnerable and disadvantaged communities, activities supporting local culture and traditional knowledge, and preferential employment of local people and procurement from local businesses.
- Evolving individuals: Examples include transformational programmes to reinforce a way of life of sufficiency, awareness, empowerment, and positive action, and learning programmes to develop skills to practice GNH and improve well-being.
- Doing business ethically and sufficiently: Examples include development of company vision, mission and core values, investing in GNH practices, integrity and transparency in communication with all business stakeholders including company staff and customers, using GNH decision-making tools in organizational and operational development, and development of GNH in Business leadership and advocacy.

The first year of the project, i.e. 2011, focused on GNH education and awareness-building within the company. Key activities have included training on GNH philosophy and conduct and on environmental awareness and monitoring to a total of 471 participants, GNH survey covering 110 strong staff, and implementation of environmental monitoring system for waste, water and energy consumption. While the results of the training and GNH survey are yet to be assessed, the implementation of the environmental monitoring system has resulted in modest but encouraging reductions in waste, water and energy consumption. These include 6.45 percent reduction in energy consumption, 15 percent reduction in waste produced, and 13 percent reduction in carbon footprint per guest-night at Hotel Zhiwa Ling, and 14 percent reduction in fuel consumption by Yangphel Adventure Travel. Ninety-eight percent of the waste produced at Hotel Zhiwa Ling is now recycled. The project aims to dedicate the second year on implementing initiatives leading to transformation for GNH-infused business environment and the third year on consolidating and monitoring initiatives that demonstrate lasting transformation for conduct of GNH in business.

Source: Adapted from GNH in Business Case Study Bhutan Report 2011 (draft) by Isabel Sebastian

4.11. Promoting Regional Cooperation towards sharing of Best Practices, Resources and Strengthened Implementation Systems

The transition to a green economy requires easy access to markets and resources among other things. This will not be possible without regional integration at the political, business, knowledge and technological level. South Asian countries have to sign treaties that improve allocation and distribution of resources in the region. The sharing of common borders and facing the same challenges pertaining to climate change is a good enough reason for these countries to share their best practices with respect to policies, schemes and programmes and to come together to think on the lines of green economy projects that build on energy inter-connections, renewable energy initiatives and research and innovation networks. Some successful interventions such as Nepal's environmental community-based conservation models and Bhutan's measures for promoting a green economy through interventions promoting Global National Happiness (GNH), eco-tourism, etc. can be replicated by partner nations. An even better way to facilitate this is to encourage member states to unite together to form common interest hubs consisting of academicians, subject matter experts, researchers, etc. to look into sector-wise environmental concerns. These hubs can go a long way in advising governments and providing integrated solutions to the most pertinent issues affecting the environment.

Mahatma Gandhi National Rural Employment Guarantee Act 2005

India's Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA) is a guaranteed wage employment programme that enhances the livelihood security of marginalized households in rural areas. Implemented by the Ministry of Rural Development, NREGA directly touches the lives of the poor, promotes

inclusive growth, and also contributes to the restoration and maintenance of ecological infrastructure. Water conservation accounts for about half of the total projects supported under NREGA, with 850,000 water conservation works funded and completed from 2006 to 2008. For example, in the District of Jalaun (Uttar Pradesh), NREGA provided training and jobs for villagers to develop solutions to their heavily silted water harvesting infrastructure, alleviating their water shortage. In 2007-2008, more than 3,000 new soak pits, together with hand pumps, were constructed. This has helped conserve an estimated five million litres of water.

In its short history, NREGA has produced many such success stories across the country. In promoting to inclusive growth and the restoration of ecological infrastructure, the programme also has a strong impact on empowerment of poor or marginalized groups. It has contributed to boosting the average wage for agricultural labourers more than a quarter over its three-year history.

Source :

<http://www.unep.org/greeneconomy/SuccessStories/RuralEcologicalInfrastructureinIndia/tabid/29868/Default.aspx>

The threat to natural resource endowments in South Asia need not be re-emphasized. Countries in the sub-region need to pursue measures that reduce production and trading costs through sharing of basic resources. Recognizing the need for regional cooperation in sharing and management of natural resources, the South Asia Co-operative Environment Programme (SACEP) was established in 1982. More information on SACEP and their work in this space has been elaborated in the table in Annexure 1.

Enhancement of South Asian cooperation will also result in strengthening of implementation systems at the sub-regional level. While several initiatives have been undertaken with the help of SAARC, many of them suffer from lack of adequate implementation arrangements. Some of the key implementation systems that will require

attention to address South Asian cooperation for sustainable development are:

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

4.11.1 Sustainable Development Planning and Programming

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

Current thinking, planning, programming and monitoring of sustainable development activities around the globe are essentially driven by conceptual research and thinking from the industrialized world. Hence, they don't necessarily reflect the values, and ethos of developing nations who are in fact culturally rich and diverse civilizations. There is a need for a new global sustainability ethic. The experience of Bhutan in officially adopting the concept of Gross National Happiness index as the measure of the nation's progress is interesting. Taking the clue from this pioneering policy initiative, it would be appropriate for countries of the sub-region to explore developing a composite South Asian Happiness Index. Such an index would provide a much-needed counterweight to the purely economic indices of progress that currently define and underlie economic, environmental and social development policies.

4.11.2 Institutional Mechanisms

There are several regional agreements and initiatives under the broad head of SAARC. However, most of them do not have robust institutional arrangements to pursue their mandates. Many of them are inter-governmental panels or a skeletal organization with 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.

Strengthening Institutional mechanism also includes promoting regional initiatives with robust inter-governmental institutions. This includes the South Asian Food Bank; South Asian Disaster Preparedness and Management System; and the South Asian Health Alliance for poverty eradication. Information on the work carried out by each of these inter-governmental institutions is provided in the table in Annexure 1. There are immense benefits of having Trade and economic policies like SAPTA and SAFTA supported by SAARC, the proposed South Asian Technology Bank and the South Asian Development Bank till such time as a formal South Asian Economic Union is crystallized. There are quite a few regional initiatives by civil society that have a bearing on sustainable development in the region. This includes those such as South Asian Forum for Environmental Journalists, Climate Action Network South Asia (CANSA), Regional and International Networking Group (RING–South Asia), Community Led Environment Action Network (CLEAN-South Asia), South Asia Alliance for Poverty Eradication (SAAPE), South Asian Watch on Trade, Economic and Environment (SAWTEE) and South Asia Youth Environment Network (SAYEN). Information on the work carried out by each of these networks are also provided in the table provide in Annexure 1. Similarly, business associations in the region also maintain their network links through the SAARC Chamber of Commerce and Industry and other alliances. All these initiatives promoted by the civil society and business associations need to be

strengthened and encouraged. It would be useful for SAARC and other intergovernmental bodies like SACEP to encourage and work much more with these regional initiatives at a nominal cost.

4.11.3 Resource Mobilization Arrangements

Sustainable development in South Asia has essentially to be driven by public and private investments from within the countries. Micro credit programmes in Bangladesh, now accelerating rapidly in India and other countries of the region, have demonstrated the power and potential of internal resource generation through innovative mechanisms. It is only the potential of internal resource generation – even from the poor – that can leverage external finances with pride and dignity. Preferential trade and the proposed SAFTA need to be pursued urgently and aggressively since they can go a long way in triggering and accelerating economic growth in the region. SAFTA may facilitate more cooperation between Chambers of Commerce of the different countries and this would, in turn, lead to cross border investments helping to foster people-to-people trade and more peaceful relations between these countries. The SAARC countries need to re-look and re-evaluate the business opportunities in intra-regional trade and trade generating joint ventures. Intra-regional trade between SAARC countries will play a major role in mitigating problems related to food security, energy poverty, etc. An increase in the volume of regional trade would require confidence building measures, along with dismantling of tariff and non-tariff barriers that impede the growth of trade in South Asia. The World Bank Global Development Finance report indicates that private sector financial flows to developing countries has increased. However in South Asia, this flow is virtually to India with marginal flows to the other countries. The proposed regional enabling environments – like the South Asian Technology Bank, South Asian Development Bank and SAFTA for production and trade – can enhance these private investments significantly. These arrangements can also facilitate negotiations from a position of strength, taking into consideration the specific requirements of the region.

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

India Sustainability Watch

India Sustainability Watch (ISW), conceptualized by Development Alternatives (DA) seeks to track the progress of India's development process towards sustainability based on its values and imperatives. It is a process that captures empirical evidence for a synthesized and balanced perspective. ISW is initiated with the state as a unit of reference. All parameters for the state as a whole are initially tracked from the most credible available data and information. No primary data collection is attempted. The focus is on analyzing the available data and information to provide a synthesized perspective. The methodology can be adapted for other units of reference comprising spatial clusters like regions within the country, districts and urban areas – including cities and towns. It may also serve as a global comparator among nations, and will also be relevant to the private sector, CSOs and government agencies to track the progress of their initiatives.

Source: National Strategies and National Councils for Sustainable Development, 2012 by Development Alternatives.

4.11.4 Monitoring and Evaluation Systems

The three sets of proposed activities for regional cooperation – poverty eradication, trade and economic activities, and sharing and management of natural resources – aimed at sustainable development are complex and diverse. SAARC will have to set up independent

mechanisms for supportive supervision and monitoring of the three sets of activities. Expertise can be drawn from time to time as required from among the government, private sector and civil society individuals and institutions. Ensuring transparency and accountability, a common strategy for the government and NGOs can be formulated and joint monitoring programmes can be launched. Indicators of progress can be developed, based on regional sustainable development priorities agreed to and endorsed by member states as their commitments to the regional and global community. This should be backed by good management to ensure coordination of mechanisms and processes, and to identify and resolve potential conflicts.

This will also require an independent or neutral third party to act as a facilitator for formal evaluations and also for reporting to SAARC on an annual basis. The potential role of an independent or neutral third party (otherwise known as a “watch” organization or a facilitator) can be described using an India-centric example – that of the “India Sustainability Watch”.

Having these systems in place would facilitate national, regional and global reporting. The regional cooperation activities can utilize these and other case studies to benchmark their operations.

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Post RIO+20 South Asia Development Agenda Consultation Workshop

30th May 2013, Kathmandu, Nepal



Consultation Workshop for Post Rio + 20 South Asia
Development Agenda
30th May 2013

Annexure 1

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Annexure 3: Key Stakeholders and their Role in Policy-Making

A list of key environmental stakeholders at the global, regional and national level has been provided below, along with an outline of their key roles and responsibilities.

Global

United Nations Environment Programme (UNEP)	<p>UNEP, established in 1972, has its headquarters at Nairobi, Kenya. UNEP works to encourage sustainable development through sound environmental practices everywhere. Its activities cover a wide range of issues, right from the promotion of environmental science and information to an early warning and emergency response capacity to deal with environmental disasters and emergencies.</p>
United Nations Commission on Sustainable Development (CSD)	<p>The United Nations Commission on Sustainable Development (CSD) was established by the UN General Assembly in December 1992 to ensure effective follow-up of UNCED. It is responsible for reviewing progress in the implementation of Agenda 21 and the Rio Declaration on Environment and Development, as well as providing policy guidance to follow up the Johannesburg Plan of Implementation (JPOI) at the local, national, regional and international levels. JPOI reaffirmed that CSD is the high-level forum for sustainable development within the United Nations system.</p>
Global Environment Facility (GEF)	<p>The GEF unites 183 countries in partnership with international institutions, civil society organizations (CSOs) and the private sector to address global environmental issues while supporting national sustainable development initiatives. Today, GEF is the largest public funder of projects to improve the global environment. An independently operating financial organization, GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. The GEF also serves as a financial mechanism for the following conventions:</p> <ul style="list-style-type: none"> • Convention on Biological Diversity (CBD) • United Nations Framework Convention on Climate Change (UNFCCC) • Stockholm Convention on Persistent Organic Pollutants (POPs) • UN Convention to Combat Desertification (UNCCD) • GEF, although not linked formally to the Montreal Protocol on 'Substances That Deplete the Ozone Layer' (MP), supports implementation of the Protocol in countries with economies in transition.

UNDP-UNEP Poverty- Environment Initiative (PEI)	<p>The Poverty-Environment Initiative (PEI) of the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP) is a global UN-led programme that supports country-led efforts to mainstream poverty-environment linkages into national development planning. The PEI provides financial and technical assistance to government partners to set up institutional and capacity strengthening programmes and carry out activities to address the particular poverty-environment context. For example, PEI assists planning agencies to consider P-E linkages, including climate change, in formulating economic and development policies, and helps environment agencies to engage with these policy processes more effectively. PEI also supports civil society to engage in planning processes, making sure the voice of the poor is heard.</p>
United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)	<p>ESCAP is the regional development arm of the United Nations for the Asia-Pacific region. Made up of 62 member States, it is the largest United Nations body serving the Asia-Pacific region with a staff of over 600. Established in 1947 with its headquarters in Bangkok, Thailand, ESCAP works to overcome some of the region's greatest challenges by providing result-oriented projects, technical assistance and capacity building to member States in the following areas: Macro-economic Policy and Development, Trade and Investment, Transport, Social Development, Environment and Sustainable Development, Information and Communications Technology, Disaster Risk Reduction, Statistics, and Sub-regional activities for development purposes.</p>
Food and Agriculture Organization of the United Nations (FAO)	<p>FAO is a specialized agency of the United Nations that leads international efforts to defeat hunger. Serving both developed and developing countries, FAO acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy. FAO is also a source of knowledge and information, and helps developing countries and countries in transition modernize and improve agriculture, forestry and fisheries practices, ensuring good nutrition and food security for all.</p> <p>FAO's mandate is to improve nutrition, increase agricultural productivity, raise the standard of living in rural populations and contribute to global economic growth. Achieving food security for all is at the heart of FAO's efforts – to make sure people have regular access to enough high-quality food to lead an active, healthy life. FAO's mandate is to improve nutrition, increase agricultural productivity, raise the standard of living in rural populations and contribute to the global economic growth. Achieving food security for all is at the heart of FAO's efforts – to make sure that people have regular access to enough high-quality food to lead active, healthy lives. UNPF's work involves promotion of the right of every woman, man and child to enjoy a life of sound health and equal opportunity. This is done through major national and demographic surveys and with population censuses. The data generated are used to create programmes to reduce poverty and address issues concerning the rights of particular minority population groups. Its main aim is to ensure that "every pregnancy is wanted, every birth is safe, every young person is free of HIV and sexually transmitted diseases, and every girl and woman is treated with dignity and respect". UNPF's work encompasses the improvement of reproductive health; including creation of national strategies and protocols, and providing supplies and services to these minority groups, as well as internal migrants and refugees, the elderly and the handicapped.</p>

United Nations Population Fund (UNPF)	<p>UNPF's work involves promotion of the right of every woman, man and child to enjoy a life of health and equal opportunity. This is done through major national and demographic surveys and with population censuses. The data generated is used to create programmes to reduce poverty and address issues concerning the rights of particular minority population groups. One of UNPF's aims is to ensure that "every pregnancy is wanted, every birth is safe, every young person is free of HIV and sexually transmitted diseases, and every girl and woman is treated with dignity and respect". Its work involves the improvement of reproductive health; including creation of national strategies and protocols, and providing supplies and services to these minority groups, as well as internal migrants and refugees, the elderly and the handicapped.</p>
The World Bank	<p>The World Bank is an international financial institution that provides loans to developing countries for capital programmes. The bank supports a wide array of investments in areas such as education, health, public administration, infrastructure, financial and private sector development, agriculture, and environmental and natural resource management. It also supports developing countries through policy advice, research and analysis, and technical assistance. The World Bank has two ambitious goals: End extreme poverty within a generation and boost shared prosperity.</p>
Asian Development Bank (ADB)	<p>ADB is a regional development bank established on 22nd August, 1966 to facilitate economic development of countries in Asia. From 31 members at its establishment, ADB now has 67 members - of which 48 are from within Asia and the Pacific and 19 from outside. The main devices for assistance are loans, grants, policy dialogue, technical assistance and equity investments. ADB is committed to helping developing member countries evolve into thriving, modern economies that are well integrated with each other in the world through investments in infrastructure, health care services, financial and public administration systems; or, helping nations prepare for the impact of climate change for better management of their natural resources.</p>

Regional

South Asian Association for Regional Cooperation (SAARC)	<p>SAARC, an organization of South Asian nations, was established on 8 December 1985 when the governments of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka formally adopted its charter providing for the promotion of economic and social progress, cultural development within the South Asia region and also for friendship and cooperation with other developing countries. It is dedicated to economic, technological, social, and cultural development emphasising collective self-reliance. Its seven founding members are Sri Lanka, Bhutan, India, Maldives, Nepal, Pakistan, and Bangladesh. Afghanistan joined the organization in 2007. It is headquartered in Kathmandu, Nepal. The SAARC Secretariat is supported by the following Regional Centres established in Member States to promote regional cooperation. These centres are managed by Governing Boards comprising representatives from all the Member States, SAARC Secretary-General and the Ministry of Foreign/External Affairs of the Host Government. The Director of the Centre acts as Member Secretary to the Governing Board which reports to the Programming Committee.</p> <ul style="list-style-type: none">● SAARC Agricultural Centre (SAC), Dhaka● SAARC Meteorological Research Centre (SMRC), Dhaka● SAARC Tuberculosis Centre (STC), Kathmandu● SAARC Documentation Centre (SDC), New Delhi● SAARC Information Centre (SIC), Nepal● SAARC Energy Centre (SEC), Pakistan● SAARC Development Fund (SDF), Bhutan● SAARC Forestry Centre (SFC), Bhutan● SAARC Human Resources Development Centre (SHRDC), Islamabad● SAARC Coastal Zone Management Centre (SCZMC), Maldives● SAARC Disaster Management Centre (SDMC), India● SAARC Cultural Centre (SCC), Sri Lanka
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<p>South Asia Cooperative Environment Programme (SACEP)</p>	<p>SACEP is an inter-governmental organization, established in 1982 by the governments of South Asia to promote and support protection, management and enhancement of the environment in the region. SACEP is headquartered in Colombo. Its member countries are Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.</p> <ul style="list-style-type: none"> • To promote cooperative activities in priority areas of environment of mutual concern; • To ensure that these activities are beneficial individually and collectively to the member states of the region; • To extend support as needed through the exchange of knowledge and expertise available among the member countries; to provide local resources towards implementation of projects and activities; and, to maximize the impact of support received from donor countries and other sources. <p>SACEP is responsible for the coordination of project activities and is working alongside various partners and networks for the South Asian Seas Programme (SASP), South Asia Environment and Natural Resources information Centre (SENRIC) and South Asia Coral Reef Task Force (SACRTF).</p>
<p>International Centre for Integrated Mountain Development (ICIMOD)</p>	<p>ICIMOD, a regional inter-governmental learning and knowledge sharing centre that serves the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and is based in Kathmandu, Nepal. ICIMOD supports regional trans-boundary programmes through partnership with regional partner institutions, facilitates the exchange of experience, and serves as a regional knowledge hub. ICIMOD strengthens networking among regional and global centres of excellence. Overall, ICIMOD works to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living in them.</p>
<p>Climate Action Network South Asia (CANSAs)</p>	<p>The Climate Action Network-International (CAN-I) is a global network of over 700 Non-Governmental Organizations (NGOs) in 95 countries working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels. The network’s members work to achieve this goal through the coordination of NGO strategy on international, regional and national climate issues and information exchange. CAN-I has seven regional offices which co-ordinate these efforts in Africa, Central and Eastern Europe, Europe, Latin America, North America, South Asia, and Southeast Asia. The regional office of CAN-I in South Asia is ‘CANSAs’ (or Climate Action Network South Asia).</p> <p>CANSAs has been on the driving seat to pursue “climate change and development” issues, both internally within the region and outside. It is a credible platform for South Asian civil societies to come together and collaborate on climate change issues. With an organizational membership of 60 NGOs in six countries of South Asia, one of the major strategies of CANSAs has been to enable outreach of civil societies in all South Asian countries. This process has been guided by two broad Asia Reports, which are hailed as concrete documents of high quality and are a powerful medium</p>

	<p>objectives: Putting across the view point of South Asia from a position of strength during negotiations and contributing to CAN International’s policy advocacy and lobbying work; secondly, targeting SAARC towards a regional cooperation, at least from the Climate Change perspective.</p>
<p>South Asia Alliance for Poverty Eradication (SAAPE)</p>	<p>SAAPE is a regional network of civil society organizations, consisting of mass movements, NGOs, activists and professional individuals such as academicians and journalists. It facilitates participation in decision-making processes at all levels in order to create pro-poor and inclusive policies for eradicating poverty and establishing peace in the South Asia region. Its two-pronged approach entails the protection and promotion of fundamental rights of the poor and excluded to food, employment, governance and justice and to strengthen and expand civil society initiatives for improving access of the poor and excluded to decision making processes. SAAPE members include many of the major groups and alliances working in regional thematic focus groups on food sovereignty, labour rights, justice and democracy, peace and demilitarisation and gender equality. Within each country, focal organisations network with other social organizations and actors fulfilling different roles. SAAPE was founded in Kathmandu in December 2001, as a result of a joint commitment stated in 2000 in Manesar, India, by 200 civil society actors and likeminded agencies from Europe, like Eurostep. SAAPE's regional secretariat is held by the Rural Reconstruction Nepal (RRN). Its policy and strategies are formulated in the General Assembly, consisting of all members, which convenes every three years. Representatives of the Country Focal Organizations (CFOs) meet annually at the Annual General Meeting. SAAPE places emphasis on decentralised and participatory decision-making on the basis of consultation and consensus.</p> <p>Since 2001, SAAPE has developed into a unique and high profile alliance. Membership has grown from 23 members in 2001 to more than 300 in 2008. One of the major achievements is the publication of the 2003 and 2006 Poverty South Asia Reports, which are generally considered authentic and of high quality and are a powerful instrument for lobbying and advocacy purposes. Other activities of SAAPE include seminars and workshops at the Asian Social Forum (2003 and 2005) and the World Social Forum (2004); co-organising CSO meetings parallel to the SAARC as 'the people's SAARC' (in 2004, 2005, 2007, 2008 and 2010); lobbying the EU on several issues, including development cooperation with Asia and the post tsunami reconstruction; regularly publishing SAAPE newsletters; supporting national campaigning on many issues such as food sovereignty, child rights, Dalit issues and bonded labour.</p>
<p>South Asian Watch on Trade, Economic and Environment (SAWTEE)</p>	<p>South Asia Watch on Trade, Economics & Environment (SAWTEE) is an NGO based in Kathmandu, Nepal, and operating through 11 network members from five South Asian countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lanka. Its mission is to build capacity among concerned stakeholders in South Asia, by equipping them with knowledge, information and skills to voice their concerns particularly in the context of liberalisation and globalisation.</p>

	<p>Its objectives are:</p> <ul style="list-style-type: none"> • To analyse various provisions of the World Trade Organization (WTO) Agreements and functioning of the system so as to promote social justice and economic equity at the national, regional and global levels. • To conduct programmes aimed at enhancing participation of least developed countries and land locked countries in the global trading system. • To facilitate the process of regional integration within South Asia from the non-governmental side. • To establish linkage and promote cooperation with other organizations having similar objectives. • To conduct research and advocacy programmes on trade, economic and environmental issues affecting the South Asia region.
<p>South Asia Youth Environment Network (SAYEN)</p>	<p>The South Asia Youth Environment Network brings together youth with a vision of promoting sustainable development in South Asia. Set up in July 2002, SAYEN is linked to TUNZA, UNEP's strategy for engaging young people in environmental activities and in the work of UNEP. Centre for Environment Education (CEE), India, hosts the Secretariat for SAYEN, which has a membership of all the eight SAARC countries. SAYEN has a membership of over 5000 individuals and organizations. UNEP's Regional, sub-regional and National Youth Advisors support the SAYEN secretariat at CEE in planning and implementing activities in the region. This gives youth the opportunity to hone their leadership skills and for SAYEN, the rich pool of young creative individuals. The key activities of SAYEN include Networking and Information Servicing, Capacity Building, Documentation, Developing resource materials and Creating Awareness Programmes for youth. SAYEN organizes capacity building programmes to help youth understand sustainable development issues, challenges and efforts through participating in ongoing projects and initiatives.</p>
<p>Bay of Bengal Programme Inter-Governmental Organization (BOBP-IGO)</p>	<p>BOBP-IGO is a fisheries advisory body established in 2003 under the BOBP-IGO Agreement to enhance co-operation among member-countries, other countries and organizations in the Bay of Bengal region and provide technical and management advisory services for sustainable marine fisheries development and management to its member-countries. The contracting parties of the organization are Bangladesh, India, Maldives and Sri Lanka. The major programmes of the BOBP-IGO are improving monitoring, control and surveillance (MCS) of fishery resources in the member-countries; improving safety and health of fishing communities; taking the Code of Conduct for Responsible Fisheries to the grassroots level; improving health and hygiene in fisheries including reduction of post-harvest losses; and adapting to climate change and livelihood enhancement programmes for small-scale and artisanal fisheries in the Bay of Bengal. The headquarters of the Organization is in Chennai, India.</p>

Community Led Environment Action Network (CLEAN-South Asia)

CLEAN-South Asia programme aims to mobilise community responsibility for environmental improvement and low carbon lifestyles in major cities and towns of South Asian countries through a network of schools and NGOs linked with government, business, academic and other institutions. CLEAN-South Asia is both a network and a programme wherein groups of NGOs and schools systematically assess the environmental quality and carbon footprint to generate useful data, create awareness, take ameliorative action and advocate/ influence policy makers to take decisions. It mobilises children and youth for scientific inquiry into environmental issues, adds practical education to what they have learnt in class rooms and, at a very young age, encourages them to interact with decision makers. The CLEAN-South Asia programme includes participation of all stakeholders in the preparation of a regional/national action programme for sustainable development.

National

Given below are the names of the nodal agencies/ministries, the highest decision making and coordinating bodies on all matters relating to the protection, conservation and improvement of the natural environment in each of the South Asian member states. These agencies are responsible for planning, promotion, coordination and overseeing the implementation of environmental policies and programmes. The primary concerns of these agencies are implementation of policies and programmes relating to conservation of the country's natural resources including its lakes and rivers, biodiversity, forests and wildlife, ensuring the welfare of animals, and the prevention and abatement of pollution. These agencies also play a pivotal role as a participant of the United Nations Environment Programme (UNEP), apart from others such as South Asia Co-operative Environment Programme (SACEP), International Centre for Integrated Mountain Development (ICIMOD) and the United Nations Conference on Environment and Development (UNCED).

Afghanistan	National Environmental Protection Agency (NEPA)
Bangladesh	Ministry of Environment & Forests
Bhutan	National Environment Commission
India	Ministry of Environment & Forests (MoEF)
Maldives	Ministry of Environment and Energy
Nepal	Ministry of Science, Technology and Environment
Pakistan	Ministry of Climate Change
Sri Lanka	Ministry of Environment and Renewable Energy

Annexure 4: Regional Policies and Programmes

S. No	Regional Policies and Programmes
1.	International Partnership for Expanding Waste Management Services of Local Authorities
2.	South Asia Network for Security and Climate Change
3.	South Asia Youth Environment Network
4.	SAWEN –South Asia Wildlife Enforcement Network
5.	South Asia Seas Programmes
6.	South Asia Environment & Natural Resources Information Center
7.	South Asia Coral Reef Task Force (SACRTF)
8.	SAARC Coastal Zone Management Center
9.	SAARC Climate Change Action Plan
10.	Thimphu Statement on Climate Change

1. International Partnership for Expanding Waste Management Services of Local Authorities

International Partnership for Expanding Waste Management Services of Local Authorities (IPLA) was launched during the CSD-19 Intersessional Conference on Building Partnerships for Moving Towards Zero Waste in New York in May 2011 to address the needs of Local Authorities (LA) in expanding waste management services with a goal to help LA's move towards a Zero Waste scenario on a global level.

IPLA is structured to represent a knowledge network that emphasizes practice. It would focus on LAs/ public waste utilities, emphasizing linkages between waste and resource and build capacities of LAs to facilitate implementation of waste management projects and expansion of related services.

The goal of IPLA is to increase the capacity of local authorities (LAs) for sustainable waste management towards a resource efficient and zero waste society, achieving livable and sustainable cities.

Through IPLA:

- The capacity of LAs and municipalities will be empowered by better access to tools, technologies, investment opportunities, and international financial mechanisms in the area of municipal waste management.
- A dynamic interface between the local authorities and private sector will be built, thereby facilitating public-private partnerships and creating conducive investment climate for expanding waste management services.
- Improved urban management towards realizing livable cities in participating LAs.

2. South Asia Network for Security and Climate Change

The South Asia Network for Security and Climate Change (SANSaC) was established in 2010 in Dhaka to promote peace building in climate affected contexts. It is a knowledge and action network which works to advance the understanding of the ways in which climate change and climate variability interact with existing pressures on development, governance and security in the South Asia region.

Through research, dialogue and training, network partners aim to build up the resilience of institutions, civil society and affected communities to climate change and insecurity by:

- Facilitating stronger regional and national understanding of the social, political and economic impacts of climate change; and
- Promoting regional cooperation.

We aim to achieve this goal by

- Supporting localized research at the subnational level across the region
- Sharing knowledge across borders around current best practice and lessons learned.
- Dissemination of findings and policy analyses on the security implications of climate change across the region
- Acting as a regional advocacy group on critical in-country and regional issues
- Enabling network members to participate in highly relevant events to collectively put forward our common position for the greatest impact
- Creating an ongoing forum for relevant stakeholders to explore linkages between climate change and security
- Promoting knowledge, capacity and actions that build community resilience to climate change and insecurity

- Dialogue and capacity building to strengthen the knowledge and capacities of national governments and responsible institutions in the region.

3. South Asia Youth Environment Network

The South Asia Youth Environment Network brings together youth with a vision of promoting sustainable development in South Asia. Set up in July 2002, SAYEN is linked to TUNZA, UNEP's strategy for engaging young people in environmental activities and in the work of UNEP. Centre for Environment Education (CEE), India, hosts the Secretariat for SAYEN, which has a membership of all the eight SAARC countries. SAYEN has a membership of over 5000 individuals and organizations. UNEP's Regional, sub-regional and National Youth Advisors support the SAYEN secretariat at CEE in planning and implementing activities in the region. This gives youth the opportunity to hone their leadership skills and for SAYEN, the rich pool of young creative individuals. The key activities of SAYEN include Networking and Information Servicing, Capacity Building, Documentation, Developing resource materials and Creating Awareness Programmes for youth. SAYEN organizes capacity building programmes to help youth understand sustainable development issues, challenges and efforts through participating in ongoing projects and initiatives.

Vision

Sustainable Development in South Asia

Mission

Our Mission is to ensure effective Youth participation reflecting our perception, in decision making process to promote Sustainable Development in South Asia.

Goals

1. Mobilize Youth for Sustainable Development in the South Asian region.
2. Youth participation for advocacy on Sustainable Development in South Asia.
3. Youth participation to influence decision-making processes at National and Regional levels.

4. SAWEN South Asia Wildlife Enforcement Network

SAWEN South Asia Wildlife Enforcement Network is a regional network of eight countries of South Asia; Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The Environment Ministers of South Asia at the 11th Meeting of the Governing Council of the South Asia Cooperative Environment Programme (SACEP) held on May 2008 in Jaipur, India announced their support for the formation of SAWEN. They also urged for the establishment of South Asia Experts Group on Illegal Wildlife Trade under "Jaipur declaration". This experts group consisted of relevant technical representatives from the eight member countries which meet periodically to provide a forum for the development of regional programmes through networking, sharing and effective dissemination of knowledge and information. In addition, a meeting held during the Kathmandu Global Tiger Workshop in October 2009 in Nepal among the representatives from South Asia's Tiger Range Countries (Bangladesh, Bhutan, India, and Nepal) also acknowledged the dire need of SAWEN and agreed to move forward to materialize it. South Asia's initiative to create SAWEN was also discussed at a workshop session during the first Asian Ministerial Conference on Tiger Conservation, held in HuaHin, Thailand in January 2010.

5. South Asia Seas Programmes

The South Asian Seas Programme was adopted in March 1995 and is supported by five countries of the region (Bangladesh, India, Maldives, Pakistan and Sri Lanka). The South Asia Cooperative Environment Programme (SACEP) has been privileged to participate in this work, and is now serving as the Action Plan secretariat. The Regional Seas Programmes of UNEP have several common elements. The process of establishing a Regional Seas Programme usually begins with the development of an action plan outlining the strategy and substance of a regionally coordinated programme, aimed at the protection of a common body of water. The action plan is based on the region's environmental challenges as well as its socioeconomic and political situation.

The overall objective of the SASAP is to protect and manage the marine environment and related coastal ecosystems of the region in an environmentally sound and sustainable manner.

The objectives are to:

- Establish and enhance consultations and technical co-operation among states within the region.
- Highlight the economic and social importance of the resources of the marine and coastal environment.
- Establish a regional co-operative network of activities concerning subjects/projects of mutual interest for the whole region.

6. South Asia Environment & Natural Resources Information Center

To facilitate easy exchange and access to information for the development of the region, the Regional Environmental and Natural Resources Information Centre (RENRI) was established in July 1990 with the support from the Asian Development Bank.

The broad objectives of RENRI were:

- Establishment of an environmental and natural resources clearing-house within the SACEP Secretariat;
- Establishment of an environmental and natural resources information network within the SACEP membership;
- Provision of an information network system including appropriate hardware and software;
- Provision of advisory support and training for member country representatives.

South Asia Environment and Natural Resources Information Centre (SENRI) was established and sponsored by the ADB and UNEP Global Resources Information Database (UNEP-GRID). SENRI's early activities assisted UNEP RRC. AP programme on "Environment and Natural Resources Information Networking" (ENRIN) in Asia and the Pacific Region. Through the years 1994 - 1997, SENRI pursued Training, Data Management activities and presently its activities focuses on assessment and reporting.

7. South Asia Coral Reef Task Force (SACRTF)

The South Asia Coral Reef Task Force (SACRTF) has been established under the South Asia MCPA (Marine Conservation and Protected Areas) project, through funding from the European Union, to facilitate coordination in the management of coral reefs and associated ecosystems at a national level, and to promote collaborative action at the regional level, encouraging trans-boundary responses to shared environmental challenges.

The establishment of the South Asia Coral Reef Task Force (SACRTF) to facilitate the implementation of regional and international initiatives in the management of coral reefs and associated ecosystems, and to promote collaborative action, and trans-boundary responses to shared environmental challenges, was endorsed by the country governments of the 5 maritime nations of South Asia, at the SACEP Governing Council Meeting in Nepal, in January 2007.

Through extensive consultation with key regional stakeholders, the role, mandate and structure of the SACRTF was developed, and the resulting constitution document endorsed by the participants of the second regional resource coordination workshop held on the 25-27 July 2007, in Colombo, Sri Lanka. SACRTF representatives have been selected in accordance with the constitution document and regional nominations.

The South Asia Cooperative Environment Programme (SACEP), based in Colombo, is responsible for the coordination of project activities and is working alongside, the International Coral Reef Action Network (ICRAN), United Nations Environment Programme - Coral Reef Unit (UNEP-CRU), IMM Ltd, and regional partners to conduct project activities.

8. SAARC Coastal Zone Management Center

The SAARC Coastal Zone Management Centre (SCZMC) is a focal institution of the South Asian Association for Regional Cooperation which promotes regional cooperation in planning, management and sustainable development of the coastal zones, including research, training and promotion of awareness in the region. The SCZMC deals with relevant coastal resources management issues and facilitates interaction amongst institutions (ministries, coastal authorities, intergovernmental organizations, international organizations, non-governmental organizations, funding agencies, etc.) and other stakeholders involved, promotes coordination and cooperation on ICZM issues among the Member States. Also the SCZMC provides support for the promotion and development of concepts and standardizes the planning methodologies for Integrated Coastal Zone Management (ICZM).

Establishment of a SAARC Regional Coastal Zone Management Centre was realized and recommended in the SAARC Study on the Causes and Consequences of Natural Disasters and the Protection and Preservation of the Environment (SAARC, 1992). On 25th June 2005 President of Maldives His Excellency Maumoon Abdul Gayoom inaugurated the SAARC Coastal Zone Management Centre with the overall objective of strengthening and promoting regional cooperation on various issues and concerns related to coastal zone, integrating with national policies and decision making including sharing and exchange of experiences, information, data and expertise in coastal zone management, promote co-operative research programmes, technology transfer and capacity building activities.

9. SAARC Climate Change Action Plan

SAARC Action Plan on Climate Change was adopted during the SAARC Ministerial Meeting on Climate Change on 3 July 2008 at Dhaka and later endorsed by 5th SAARC Summit on August 3, 2008 at Colombo.

The Fourteenth SAARC Summit (New Delhi, 3-4 April 2007) expressed “deep concern” over the global climate change. As a follow up action, the New Delhi Declaration called for pursuing a climate resilient development in South Asia. As a way forward and a first step, Bangladesh proposed to organize an expert meeting. At the Twenty-ninth session of the SAARC Council of Ministers (New Delhi, 7-8 December 2007), the issue of climate change, particularly the increasing vulnerability of the region due to environmental degradation and climate change were discussed. The ministers felt that given all vulnerabilities, inadequate means and limited capacities, we need to ensure rapid social and economic development in our

region to make SAARC climate change resilient. They welcomed the offer of Bangladesh to hold a SAARC Ministerial Meeting on Climate Change to be preceded by an Expert Group Meeting on Climate Change.

Objectives of the SAARC Action Plan on Climate Change:

- To identify and create opportunities for activities achievable through regional cooperation and south support in terms of technology and knowledge transfer.
- To provide impetus for regional level action plan on climate change through national level activities.
- To support the global negotiation process of the UNFCCC such as the Bali Action Plan, through a common understanding or elaboration of the various negotiating issues to effectively reflect the concerns of SAARC Member States.

10. Thimphu Statement on Climate Change

Climate Change was the major focus of the sixteenth meeting of the Heads of State of SAARC (South Asian Association for Regional Cooperation), which took place in Bhutan's capital Thimphu from 28 - 29 April 2010. Eight Heads of State (HoS) adopted the 'Thimphu Statement on Climate Change', which includes establishing an inter-governmental expert group on climate change, and planting ten million trees in the region over the next five years (2010-15)¹. The statement is fairly detailed in the promises it hopes to keep, including providing capital for low-carbon technologies, a massive regional afforestation and reforestation campaign, future plans to protect archaeological monuments, strengthen understanding of shared oceans, biodiversity, mountain ecosystems, monsoon initiative, and plan for disaster risk reduction. The April 2010 Thimphu summit provided an opportunity to devise a common climate agenda as a regional group.

Listed below are the key initiatives and proposals:

1. Establish an Inter-governmental Expert Group on Climate Change to develop clear policy direction and guidance for regional cooperation
2. Commission a study on 'Climate Risks in the Region'
3. Explore the feasibility of a SAARC mechanism that will provide financial capital for low-carbon technology and renewable energy projects
4. Strengthen the understanding of shared water bodies in the region through a Marine Initiative
5. Inter-governmental Mountain Initiative to study mountain ecosystems and glaciers, and their contribution to livelihoods and sustainable development
6. Inter-governmental Monsoon Initiative on the evolving pattern of monsoons to assess vulnerability due to climate change
7. SAARC Inter-governmental Climate-related Disasters Initiative on the integration of Climate Change Adaptation (CCA) with Disaster Risk Reduction (DRR)
8. Establish institutional linkages among national institutions in the region to facilitate sharing of knowledge and capacity building programmes in climate change
9. Enhance cooperation in the energy sector to facilitate energy trade, development of efficient conventional and renewable energy sources including hydropower
10. Action Plan on Energy Conservation would be prepared by the SAARC Energy Centre (SEC), Islamabad and creation of a web portal on Energy Conservation for exchange of information and sharing of best practices among SAARC Member States

Annexure 5: Sustainable Development Practices – Case Studies

S. No	Country	Theme	Topic
1.	Bangladesh	Urban Waste Management	Urban Waste Management in Bangladesh
2.	Bhutan	Disaster Mitigation	Preventing Catastrophies: An Early Warning System in the Lunanaregion, Bhutan
3.	Bhutan	Private Sector Engagement	Linking Waste Management, Entrepreneurship, Philanthropy, and Livelihoods, Bhutan
4.	Bhutan	Sustainable Agriculture	Policy Premise for Organic Farming in Bhutan
5.	India	Water Security	Successful Initiatives: Water Panchayat in Rajasthan, India
6.	Maldives	Climate Change	Adaptation Policies in the Maldives
7.	Maldives	Climate Change	Addressing Climate Change in the Maldives
8.	South Asia Region	Environmental Degradation	Ship-breaking in South Asia: Implementing a New International Environmental Agreement
9.	India, Sri Lanka and Nepal	Community Participation	Participation in the Management of Natural Resources in India, Sri Lanka and Nepal

Case Study 1

Urban Waste Management in Bangladesh

Dhaka, with a population of 6 million within its metropolitan boundary of 344 km², 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 source such as compost, through a number of small-scale decentralized private microenterprises (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 centers of the country is expected.

Source: Sustainable Development Strategy for South Asia – 2004, UNEP

Case Studies 2

Preventing Catastrophies: An Early Warning System in the Lunana region, Bhutan

A manually operated early warning system was installed in the Lunana region by the Flood Warning Section (FWS) under the Department of Energy (DoE). In this system, two staff members from the FWS are stationed in the Lunana lake area and are equipped with both a wireless set and a satellite telephone. They use these to report lake water levels on a regular basis and issue warnings to downstream inhabitants, in the event of any indications of GLOFs. A number of gauges have been installed along the main river as well as at the lakes. These are monitored at various stations at different time intervals depending on the distance from the station and base camp. The station is in regular contact with other wireless stations in the downstream areas along the PunaTsang Chu, including the villages and towns of Punakha, Wangduephodrang, Sunkosh, Khalikhola, and Thimphu.

Source: ICIMOD 2007

Case Studies 3

Linking Waste Management, Entrepreneurship, Philanthropy, and Livelihoods, Bhutan

ShoeVival, a business venture specializing in footwear laundry and refurbishing service, has embarked on a campaign that integrates the concept of reducing, reusing and recycling waste and the art of giving and helping the poor. The campaign – Help-Shoe Bhutan – was launched in September 2011 with the simple idea of providing shoes to the poor and needy whilst

reusing and recycling old shoes. In its first phase, the campaign collected some 3,000 pairs of old shoes, and refurbished and distributed 800 pairs among urban slum dwellers, road laborers, and the poor in rural areas. Another 500 refurbished pairs are ready for distribution in April 2012. The media coverage that the campaign received helped raise awareness among the general public about the concept and significance of reducing, reusing and recycling waste. It also helped inculcate environmental consciousness and the dignity of helping the poor especially among the youth, numbering around 100, who participated as volunteers. Encouraged by the positive response from charity-based organizations, environmental groups and the public in general, ShoeVival has plans to take the campaign into a second phase in June 2012 and include old clothes in the overall scheme of things. Greener Way, a private waste management enterprise based in Thimphu, buys and recycles different types of wastes: PET bottles, papers, plastics, rubber, glasses, electronic wastes, metals, and cardboards. The company has employed 31 youth, registered 360 subscribers for door-to-door waste collection in Thimphu especially in areas where the reach of the municipality waste collection service is limited, buys waste from more than 100 rag-pickers who are largely the unemployed poor, and collected 365 metric-tons of waste since it became operational in March 2010. In environmental terms, this would have saved 3,426 adult trees, 824,100 kilowatt hours of energy, 402 barrels of oil, 786 cubic yards of landfill space, and 1,206,000 gallons of water. The figures may appear inconsequential to the outside world but for a country like Bhutan, with just over 700,000 people and one of the smallest economies in the world, it represents a significant first step towards realizing the immense potential of addressing waste problem in concert with the social and economic facets of human development.

Source: Bhutan: In Pursuit of Sustainable Development, National Report for the United Nations Conference on Sustainable Development 2012

Case Studies 4

Policy Premise for Organic Farming in Bhutan

To realize the aspiration of Bhutan as a country with environmentally clean food production systems and products as inscribed in Bhutan 2020, the country's vision document, the Ministry of Agriculture and Forests launched the National Framework for Organic Farming in 2007 – laying down the country's policy for organic farming. Bhutan's vision is to develop organic farming as a way of life and become fully organic by 2020. It is based on the premise that:

- The country is free of any significant environmental pollution due to low usage of agro-chemicals and limited industrialization and, therefore, has a competitive advantage over most other countries in the region when it comes to organic farming;
- The current farming system is still largely supported by indigenous practices involving use of forest litter and farmyard manure;
- There is a great potential of increasing and sustaining production through organic farming which combines scientific knowledge and methods to produce safe food;
- Organic farming is profoundly connected to sustainable development in terms of poverty reduction, gender equality, ensuring better health and nutrition, and sustaining the biological productivity and diversity of the natural environment;
- Organic farming is well suited for small farmers of developing countries like Bhutan;

- The global movement for clean environment and natural products is increasingly creating a niche market for organic products.

Source: Adapted from Promoting Organic Farming in Bhutan: A Review of Policy, Implementation and Constraints by Sangay Duba et al, Ministry of Agriculture and Forests, 2008.

Case Study 5

Successful Initiatives: Water Panchayat in Rajasthan, India

Rajasthan is one of the driest 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 adependent mentality took hold. Large parts of the States were listed as a dark zone as ground water table was extremely low. Responding to the crisis, 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. The TBS mobilized people by undertaking pad yatras and holding Panchayat meetings. The organization extended its activities to a holistic treatment of the catchment area of its water structures by taking up afforestation work. Over the years, TBS has built more than 4500 water harvesting structures based on indigenous technology and with locally available material. The community maintains these structures. In the process, the carrying capacity of land for fuel, fodder and food grains has increased considerably. Agricultural land under cultivation in the villages falling in the waters hed has increased from around 20 per cent in 1985 to close to 100 per cent at present. Diversification of livelihood opportunities especially dairy industry is clearly visible in the area. Five rivers of the area viz..Arvari, Ruparel, Sarsa, Bhagani & Jahajwali that had dried up earlier have become perennial.

Source: South Asia Environmental Outlook– 2009, UNEP

Case Studies 6

Adaptation Policies in the Maldives

Maldives is among those nations that are most vulnerable to the sea level rise, ocean acidification and increased storm frequency. There is serious concern about the projection that 85% of the country could be below the sea level by 2100. As the first country to view climate change as a critical national development challenge, Government of Maldives adopted a policy of identifying ten safer islands for people in their Seventh National Development Plan. This policy includes high-cost infrastructure such as sea walls and desalination plants and even artificial islands such as Hulhumalé in Malé Atoll. In addition to this, the Government has also introduced and implemented a set of policy measures under the Integrating Climate Change Risks into Resilient Island Planning in the Maldives Programme. This policy involves working with nature to increase resilience, including coastal afforestation, replenishing natural ridges, climate proofing drainage, coral reef propagation, and

mangrove planting and beach nourishment. Each island community is involved in choosing the measures that are most appropriate.

Source: Geo5, Global Environment Outlook: Environment for the Future we Want, UNEP, 2012

Case Study 7

Addressing Climate Change in the Maldives

The small size and extremely low elevation of the coral islands that make up the Maldives place the residents and their livelihoods under threat from climate change, particularly sea-level rise. The highest land point is a mere 2.4 metres above sea level, and over 80 per cent of the total land area is less than 1m above sea level. At present, 42 per cent of the population and 47 per cent of all housing structures are within 100m of coastline, placing them under severe threat of inundation. Over the last 6 years, more than 90 inhabited islands have been flooded at least once and 37 islands have been flooded regularly or at least once a year. During the 2004 tsunami, many of the islands were completely submerged, illustrating their critical vulnerability.

Given the severity of anticipated sea-level rise, population relocation is viewed as inevitable. The government has planned to begin diverting a portion of the country's annual tourism revenue for the establishment of an investment fund, with a view to purchasing 'dry land' to ensure a safe haven for future evacuation. Maldives' planned evacuations in anticipation of loss of land will inevitably impact sovereignty and national identity. Although Maldives contributes very little to the problem of climate change, the government has pledged to make the country carbon neutral within a decade. Toward this goal, clean electricity would power not only homes and businesses, but also vehicles. As an added benefit, Maldives would no longer need to import expensive fossil fuels. In addition to relocation and mitigation options, Maldives has focused on reducing vulnerability to sea-level rise through adaptation measures, including undertaking detailed technical and engineering studies to identify coastal protection options; re-forestation to prevent beach erosion; cleaning litter and debris from the coral reefs – a natural barrier against tidal surges; teaching environmental science in school; and imposing rigorous environmental impact assessment on all new resorts.

Source: Trends in Sustainable Development; Small Island Developing States (SIDS), 2010; United Nations Department of Economics and Social Welfare.

Case Study 8

Local Efforts to Combat Desertification in Pakistan

To address land degradation and desertification, women of Morkhoon in the mountain desert areas of Pakistan play a critical role in natural resource management. With support from the private Aga Khan Foundation (AKF), several women's organizations provide strong institutional support to run a credit and savings programme to better manage natural resources and prevent desertification. The AKF has promoted forest plantations on the boundaries of fields, communal land, private land and other areas where original vegetative cover has disappeared. This has helped to overcome fuel wood and fodder shortages. The women have created communities to monitor forest use and grazing. They have also plants trees on family

plots and have switched from monoculture practices to crop rotation. These actions not only check the desertification process but have also provided the women with income from selling fruits from the trees.

Source: FAO 2012b

Case Studies 9

Ship-breaking in South Asia: Implementing a New International Environmental Agreement

Normally, recycling of materials is regarded as an environmental benefit, but in some cases, such as ship breaking and recycling of e-waste and batteries, the long-term exposure and labour-intensive methods used in developing countries result in negative local impacts on the environment and human health. Since the 1980s, the global centre of ship dismantling and recycling has been South Asia, with Bangladesh, India and Pakistan accounting for 70.80 per cent of the international market. The industry not only provides large volumes of recycled iron and steel, plus other materials, but also creates jobs for thousands of workers from the poorest segments of the population. The direct and indirect beneficiaries in Bangladesh alone are estimated to be half a million people. The majority of workers are young, male and functionally illiterate, often living in cramped shacks near the recycling yards, thus adding to health concerns. Obsolete ships contain a wide range of hazardous materials for which there are no adequate treatment facilities or occupational health and safety measures in the South Asian yards. Ship breaking is regarded as a “pollution haven” industry, often seeking out jurisdictions with lax environmental controls. However, in 2009, the Bangladesh High Court directed that all ship breaking yards without Department of Environment clearance should close within two weeks, and ordered new rules to be formulated requiring all ship breaking yards to obtain an environmental clearance certificate.

In recognition of these environmental dangers, the International Convention for the Safe and Environmentally Sound Recycling of Ships (the Hong Kong Convention) was adopted in May 2009 and is expected to come into force in 2015. A key requirement is to remove hazardous materials before recycling commences. The Hong Kong Convention will require signatories to ensure that ships are recycled only in countries that are a party to the convention, and in facilities that meet its work safety and hazardous waste handling requirements. An inventory of hazardous materials will need to be completed by the ship owner and provided to the recycler, so that the ability to handle the wastes can be checked. The convention will require South Asian nations to revise their legislation and invest heavily in improved procedures equipment and facilities if they want to contribute to this business.

Source: Geo5, Global Environment Outlook: Environment for the Future we Want, UNEP, 2012

Case Studies 10

Participation in the Management of Natural Resources in India, Sri Lanka and Nepal

In India, about 22 million hectares of forests are under the Joint Forest Management programme, where more than 100,000 committees formed by forest-fringe communities protect state-owned forest patches, receiving in turn a share of forest resources (MOEF 2009a). In conjunction with stringent legislation against the use of forestland for non-forestry purposes,

these measures have helped stabilize the forest cover after decades of rapid deforestation (MOEF 2009b). Additional incentives for participation have been created by a constitutional amendment that mandates decentralization and devolution of power to local authorities at district, block and village levels (MLJ 2011). In Nepal, over 14,000 community forest user groups have access to fuel wood and fodder, and are additionally provided with income-generating opportunities (DoF 2011).

A key forestry programme that integrates community development and forest conservation objectives is community forestry. There are about 340 community forests, involving some 14,000 rural households, in the country. It is projected that by the end of the Tenth FYP, some 400-community forests will have been established covering at least four percent of the country's forests. These community forests will have the potential to develop into community-based forestry enterprises to generate cash income for the local communities from the sale of wood and non-wood forest products based on sustainable harvesting plans, thereby empowering communities to engage in sustainable development. In the Eleventh FYP, the Royal Government will further strengthen mechanisms for the sustainable management of forests to generate economic benefits and reduce poverty.

Sri Lanka's new social forestry policy aims to involve poor communities directly in the decision-making process to safeguard protected forests and to provide these communities with funding to replant degraded forest areas, manage buffer zones, and develop timber farms while simultaneously adopting conservation-oriented farming practices (using stone dams, gully control measures and terracing). Partnerships between the Range Forest Office and local community organizations will be forged to enhance protection and surveillance of protected forests. Community involvement in the management of natural resources can play a significant role in reducing poverty and enhancing the sustainability of Sri Lanka's natural environment.

Source: Geo5, *Global Environment Outlook: Environment for the Future we Want*, UNEP, 2012



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