

Extra

*LEARNING TO LIVE IN HARMONY WITH
NATURE AND DEVELOPMENT*

**SOUTH ASIAN ENVIRONMENTAL
EDUCATION AND TRAINING ACTION PLAN
2000 - 2005**

FOR STRENGTHENING SOUTH ASIAN SUSTAINABILITY



SACEP



UNEP

South Asia Co-operative Environment Programme - SACEP

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CONTENTS

	Page
Foreword	iii
CHAPTER I - INTRODUCTION	01
South Asian Region	
The Key Challenges	
Environmental Concerns of the Region	
Efforts in Environmental Management	
CHAPTER II - OVERVIEW	07
The Role of EE&T in Sustainable Development	
Recent Trends and Concerns	
Regional Co-operation	
CHAPTER III - REVIEW	11
Formal Education	
Non-Formal Education	
Planning and Decision Making	
Public Awareness and Peoples Participation	
CHAPTER IV - THE ACTION PLAN	18
Definition	
Mission	
Purpose	
Goals	
TARGET AREAS	
Formal and Non Formal Education	
Planning and Decision Making	
Public Awareness and Peoples Participation	
Information, Networking, Communication and Collaboration	
CHAPTER V - IMPLEMENTATION STRATEGY	27
Formal and Non Formal Education	
Planning and Decision Making	
Public Awareness and Peoples Participation	
Information, Networking, Communication and Collaboration	

FOREWORD

Environmental Education and Training (EE&T) has been recognised as an essential element in the sustainable development process by all member states of the South Asia Co-operative Environment Programme (SACEP). In fact EE&T has been one of the 14 priority subject matter areas of SACEP since its inception on the 7th of January 1982.

South Asia's achievements in the field of EE&T are many and diverse. Significant progress has been made in the integration of environmental parameters into the school curricula as well as teacher training both at pre-service and in-service level. Many Universities and Institutes of Higher Education offer courses in environmental science, health, law, engineering and management. There are hundreds of Non Governmental Organisations (NGO's) at national and provincial levels and thousands of Eco-clubs, Nature Protection Societies and Environmental Brigades at local level engaged in environmental protection and management activities throughout South Asia. This does not mean that all is well. For instance, the degree of attention paid to policy and institutional development and sensitising decision makers and community leaders on the integration of environmental considerations into the development process has been inadequate.

It is in this context that SACEP in close collaboration with the relevant governmental and non governmental agencies of the member states initiated the process for the development of the South Asian Environmental Education and Training Action Plan. This process included an identification of the existing initiatives in the member states as well as their national priorities with a view to developing a needs oriented, practical and implementable Regional Action Plan on EE&T for South Asia. Undoubtedly, the launching of the Action Plan by SACEP with UNEP assistance signifies another positive step in guiding South Asia to its ultimate goal of sustainability.

I consider it is my duty to thank UNEP for providing funding to develop the Action Plan and all the individuals, organisations and experts who actively participated in the process especially those at SACEP, CEE, UNEP-ROAP and in the respective member countries of SACEP. I am indebted to Ms. M. Raghunathan, Consultant CEE and Mr. K.H.J. Wijayadasa, Consultant, SACEP for diligently formulating this Action Plan and to, Mr. Nirmal Andrews, Regional Director, UNEP-ROAP Mr. Prasantha Dias Abeyegunawardene, Deputy Director Programmes, SACEP, Mr. Mahesh Pradhan, Environmental Officer, UNEP-ROAP and Ms. Chandima Jayasuriya, Secretarial Assistant, SACEP for their invaluable assistance and singular dedication in making this Action Plan a reality.

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11th September 2000

CHAPTER I

INTRODUCTION

The South Asian Region

The 20th century is said to have been an extraordinarily eventful century. The world during this period of one hundred years has seen spectacular political, social, cultural, economic, scientific and technological changes. One of the challenges of this period has been the growing need to find ways and means of improving the prosperity and well being of people, without compromising the environment.

This challenge is more in the South Asian region, than in other parts of the world. The South Asian region covers almost one twentieth of the earth's surface, has about 5.4 per cent of the total land area, 16 per cent of agricultural land, 3.2 per cent of forested areas which amounts to about 131.184 million hectares and supports over 20 percent of the global population.

The economies of this region have witnessed improved growth rates in the recent years. Despite this, poverty persists. The countries of the region are among the richest in terms of biodiversity and in terms of traditions and practices which have a strong basis of conservation and wise resource use. Yet, the region is today faced with serious problems of environmental degradation, acute population pressure and unsustainable development.

The Key Challenges

Some of the most pressing problems of South Asia include air and water pollution; depletion of both renewable and non-renewable resources; haphazard solid waste disposal; unsustainable agricultural practices; loss of biodiversity; unplanned urbanisation; poverty; population pressure; over consumption and wasteful production. More often than not industrial growth and urbanisation in the region have been at the cost of the environment.

The challenges to sustainable development are staggering in number, scale and complexity. The region needs to develop and to modernise in less wasteful ways than is the current paradigm, without losing the sound social and cultural values and practices which underpin the traditional way of life. The region needs to find alternative paths to an alternative goal; a goal which ultimately is the true goal of development; an environmentally sound and sustainable quality of life, which is socially just and equitable.

However, there can be no ready-made solutions to these problems and concerns. The region has a difficult task ahead of it. It has to learn from the failures of the developed world and achieve economic development with minimum damage to its environment, for this alone can bring sustainable development. Even more important, the region has to look to its own traditions and practices to evolve new paradigms of sustainable development.

Environmental Concerns of the Region

The major environmental issues of the region are;

- Land Degradation
- Deforestation
- Water Quality and Quantity
- Atmospheric Pollution
- Loss of Biodiversity
- Degradation of Marine and Coastal Resources
- Unplanned Urban and Industrial Development

Land Degradation

In most countries of the region, soils suffer from varying degrees of erosion and degradation mainly due to rapid rates of deforestation, poor irrigation and drainage practices, inadequate soil conservation, steep slopes, and overgrazing. Water erosion is extensive and severe in areas where precipitation is high.

The average population density for South Asia is 186 persons per square kilometre. 39 per cent of the total land area is considered to be arable. Population growth will continue to exert pressures on land resources. Increased dependence on intensive agriculture and irrigation may result in salinisation, alkalinisation and water logging, particularly in irrigated lands that are not managed properly. This is a serious concern in the region.

◆ Deforestation

In the Asian region the lowest per capita forest cover is found in South Asia, at 0.08 hectares. Due to industrialisation, agricultural expansion, and forestry product trade, deforestation remains one of the major environmental concerns in the region. Rapid population growth has contributed to depletion of forests not only through land clearing for cultivation but also through overharvesting of forests for fuel wood, round wood, timber and fodder.

◆ Water Quality and Quantity

The region has arid and semi arid areas as well as humid tropical areas with high precipitation. It has some of the world's largest rivers, numerous small rivers and natural lakes. In spite of this, the per capita water availability is low in most of the countries. The demand for water will continue to rise in the region in parallel with population growth. Water pollution is caused mainly by domestic sewage, industrial effluents, and runoff from activities such as agriculture and mining. The problem of pathogenic pollution is quite severe in South Asia. Pathogens generally come from domestic sewage that is discharged untreated into watercourses. South Asia is severely affected by organic matter pollution. Discharge of mine tailings and development of industrial areas with direct discharge of pollutants into neighbouring river systems has resulted in hot spots of heavy metal pollution in some countries. Untreated domestic and industrial wastes are discharged directly into canals and rivers, thereby polluting the water. The demand for water for domestic and industrial uses is increasing in the region consequent to the high rates of urbanisation and industrialisation.

◆ Atmospheric Pollution

One of the important implications of economic growth in Asia and the Pacific over the last three decades has been the increased demand for energy. The rapid growth in energy demand and especially the region's reliance on coal translate into a significant increase in air pollutants as appropriate technological interventions have not been made. Urban air pollution is a serious problem in many major cities of the region. Significant health threats also arise from indoor air pollution resulting from the use of low-quality solid fuels, such as coal, wood, crop residues, and dung for cooking and heating in lower-income urban households and in rural areas throughout the region.

Fly ash generated from the mining of coal is also a significant problem in the region. An estimated 35-40 million tons of fly ash are generated by thermal power plants every year, and only 2-3 per cent is being reused. The accumulation of fly ash adds suspended particulate matter into the air and leads to air quality deterioration.

Transboundary air pollution is a problem that has accompanied economic growth and high energy consumption. The effects of coal burning tend to spread over a large area, resulting in acid deposition in areas near the coal burning plants as well as further away.

◆ Loss of Biodiversity

The region encompasses a wide variety of biogeographic zones, and includes the world's highest mountain system, rainforests, and coral reefs. Almost all the countries of the region also depend heavily on direct harvesting of biological resources. The flora and fauna of the region are more threatened now than ever before. The drive for increased agricultural production has resulted in the loss of genetic diversity. Terrestrial biodiversity loss in various ecosystems has been identified as a major concern.

The underlying causes of losses of biological diversity in the region include international trade particularly in timber which results in forest habitat losses; population growth leading to accelerated rates of land use change; poverty in conjunction with demand leading to unsustainable consumptive use of "common access resources"; the introduction of non-native species leading to destruction of predator/prey equilibrium; and improper use of agrochemicals leading to loss of aquatic species.

Other major reasons for biodiversity loss include loss of keystone species, extensive deforestation and habitat loss, increased trafficking in animals and animal body parts, large-scale conversion of land for agriculture and the construction of large scale dams and highways.

◆ Degradation of Marine and Coastal Resources

The marine resources of the region are economically important to many countries. Coastal and marine pollution is mainly due to direct discharge from rivers, surface runoff and drainage from port areas, domestic and industrial effluents, and various contaminants from ships. River waters are generally heavily contaminated by municipal sewage, industrial effluents, and sediments. The major sources of heavy metal contamination are industrial effluents and dumping of land-based solid waste into the sea.

High concentrations of lead, cadmium and mercury also pollute the water. Moreover, there is increasing evidence of these toxic substances getting into the food chain. The sources of marine pollution from sea-based activities include marine transportation and offshore mineral exploration and production activities. Accidental oil spills have been frequently reported.

Increased use of agro-chemicals is also a matter to be considered. Use of pesticides, which contributes to enhanced agricultural productivity, appears to be increasing. Loss of coastal habitats includes substantial loss of mangroves for the construction of shrimp ponds and for paddy rice cultivation, with negative impacts on commercial fisheries that rely on species using the mangroves as nursery areas. A major cause for concern throughout the region is overfishing and the use of destructive fishing techniques, particularly in the highly diverse coral reef systems.

◆ Unplanned Urban and Industrial Development

The environmental stress generated by urbanisation in the region has been categorised as relating to poverty and arising from economic growth and affluence. The rise of cities has been accompanied by a proliferation of slums and squatter settlements without access to basic infrastructure, clean water and sanitation, with associated health risks. Further, the lack of basic infrastructure results in environmental degradation. It is expected that a large share of the world's urban poor will continue to live in South Asia.

Environmental concerns resulting from economic growth and affluence of urban areas include congestion; increasing air and water pollution; loss of productive agricultural land; loss of coastal habitats to conversion and land reclamation; over extraction of ground water resources resulting in land subsidence; and deforestation as a consequence of increased demand for construction timber.

With growing economic activities and consumerism, the quantity of solid wastes generated is growing rapidly. Furthermore, large quantities of industrial and hazardous wastes resulting from the expansion of industries that use chemicals in the region have exacerbated the waste management problem. The problem of solid waste management is increasing. The key issues regarding solid waste management are the environmental health implications due to inadequate coverage of waste collection; improper storage prior to collection; and poor standards of disposal.

Efforts in Environmental Management

A recent trend in all the countries of South Asia has been the strengthening of governance structures for environmental protection. A large number of environmental institutions have been established in the public sector, including environment ministries and independent environment agencies. These bodies need to be strengthened if they are to fulfil their mandated roles. Legislation, regulatory standards, and environmental planning procedures related to public works, particularly environmental impact assessments, are the most common instruments of environmental management. Serious efforts are also being made by industries and research institutes to develop new environmentally friendly technologies and to incorporate environmental considerations into production processes.

The active presence of a large number of Non-governmental and Community-based organisations has contributed to shaping policy and thinking with regard to environmental issues not only at the national level but even at the international level. Several policies, programmes and projects have been implemented to combat land degradation in the region. These include watershed management, soil and water conservation, sand dune stabilisation, reclamation of waterlogged and saline land, forest and range management, and replenishment of soil fertility in croplands by use of green manures and cultivation of appropriate crops.

Various watershed management projects operate in critically affected or degraded areas, which help in reducing the extent of land degradation in targeted areas. Integrated watershed management programmes in many of the countries have been instrumental in rehabilitating eroded land and preventing further degradation. In some places, rehabilitation of desertified lands through plantations and fixation of mobile sand dunes by shelterbelts and checker barrier fences has been successful. To tackle the problem of deforestation, national Governments have taken steps to protect forested areas, such as establishing forest parks and wildlife conservation areas, and afforestation.

Governments in the region have responded actively to the issue of biodiversity conservation by participating in biodiversity conventions and taking measures to protect biologically rich areas. Progress in designating protected areas is widespread. Different measures are being taken by many countries to meet the growing demands for clean and safe water and to safeguard water quality. These include water reuse/recycling, seawater desalinisation, legislation, environmental impact assessment, establishment and enforcement of water and effluent standards, protection of wetlands, and use of economic incentives. Numerous efforts are made in the region, to bring air pollution problems under control. Vehicular emissions are a significant problem in all major cities. Programmes on setting emission standards for vehicles, as well as requiring manufacturers to meet strict standards for all new vehicles are being implemented.

In South Asia there are four essential prerequisites to achieving the goal of environmentally sound and sustainable development. They are; sound environmental management, integration of environment and development, minimising environmental degradation and pollution and eliminating the root causes of environmental degradation such as poverty, population pressure, over consumption and wasteful production.

It is manifestly clear that the ability of a country to achieve sustainable development will be determined firstly by the capacity of its people and secondly by the capacity of its institutions. Chapter 36 of Agenda 21 on Education Awareness and Training states that education including public awareness and training should be recognised as a process, by which human beings and societies can reach their fullest potential. Consequently, EE&T is a sine qua non for achieving the goal of sustainability.

The target groups for EE&T are diverse, ranging from children through youth and women to community leaders and decision makers. Currently, South Asian countries are in the process of formulating and implementing many plans, programmes and projects aimed at environmental conservation, management and sustainable development. Most of them are directed towards improving legislation, institution building, technology transfer, promoting participatory management, and use of indigenous knowledge.

In the implementation of these programmes Education, Awareness and Training are critical factors. Likewise urgent interventions are necessary in human resource development for integration of EE&T into formal and non formal educational streams, greater institutional co-ordination, co-operation and networking and systematic sharing of knowledge, experiences and resource materials.

CHAPTER II

OVERVIEW

The Role of Environmental Education and Training in Sustainable Development

"Sustainable Development is a process of change in which the exploitation of resources, direction of investment, orientation of technical development and institutional change are made consistent with present as well as future social and economic needs". (World Commission on Environment and Development 1987)

Environment and development problems are complex. There are no generalised and simplified solutions to these problems. It is so because environment is an all-encompassing subject and is related to the various other dimensions, like economic development, social setting, culture, laws and policies. Any decision which affects the environment will, sooner or later, affect the people, the development patterns, the policies, and vice versa. When environment and development concerns are merged, a better set of goals evolve. This includes a better quality of life, satisfaction of basic human needs, sustainability of development, respect for the biosphere and concern for the needs of future generations. For any sustainable development effort to be effective, it needs the involvement and approval of various sectors of the society. People will be interested in its success only when they are convinced that such efforts would be beneficial to them. This requires an understanding on their part of environmental issues and concerns and their links to development. This is the role that environmental education has to play in sustainable development.

"An effective educational system is described as the fundamental prerequisite for sustainable development. The core themes of education for sustainability include lifelong learning, interdisciplinary education, multicultural education partnerships, and empowerment." (Earth Summit 1992)

The need for environmental education and training has been explicitly recognised by government policies of the countries of the South Asian region, and in many cases, policy directives exist for the incorporation of Environmental Education and Training into mainstream education. Many countries in the region have already initiated the process of re-orienting formal education to meet the needs of a sustainable future. They have also recognised the need for creating widespread environmental awareness among the general population, as well as sensitising key groups of decision-makers. Training for better environmental management is another area, which the countries of the region are turning their attention to. Many governments, NGOs, and regional and international agencies in the region are creating systems and structures for training key professionals in a range of environmental skills, tools and techniques for sustainable development.

Recent Trends and Concerns

Recent trends in environmental education and training in the region reflect the concerns of people and societies in transition. The countries of the region are going through rapid, though uneven, development and economic expansion. Poverty and rapid industrialisation and an expanding urban population have led to severe environmental degradation throughout the region.

Countries in the region are recognising the immensity of the challenges they are facing, and the vital role that environmental education can play in helping meet the challenges of sustainable development. They are also recognising the role of NGOs and the need for community participation. The need to start from children of school going age and reach out to a wide variety of age groups is also accepted. A range of innovative programmes for various levels are being developed and implemented in the region.

At the formal level, all the countries have incorporated environmental content into the school curriculum, generally as an area of study at the lower levels, and through the infusion approach at the primary upper or middle school levels. Considerable efforts for teacher training have also been made. In fact, many countries in the region are today at a stage where they are looking back to review the environmental education and training efforts in schools and plan fresh approaches. At the higher education level, environmental education efforts are gathering momentum, with more and more universities introducing environment-related courses.

The countries have also recognised the need for peoples' participation in sustainable management of resources and the need for education and awareness to achieve this. A common learning from the wide array of experiences is that where people are aware and involved in solving environmental problems, where there is a sense of participation, where people and their governments work together, solutions emerge.

Efforts to facilitate these processes are being made. The urgent need to reach out to and sensitise decision-makers in various sectors is being recognised. Efforts in this direction are also emerging. A shortage of resources; of trained personnel to plan, manage and implement environmental education and training programmes; of resource materials which are relevant to the local context, are some of the common areas of concern. Some of the other issues are how environmental education and training can counter rapidly changing lifestyles, which are sweeping across the region and putting an enormous pressure on resources. There is also a concern as to how there could be a move away from a 'product orientated approach' to environmental education and training (i.e., production of posters or organisation of a rally), to a more strategic, "process-oriented effort", which is part of an overall plan to achieve the goals of sustainable development.

Another concern of environmental educators is that there is not much experience in evaluating the outcomes and effectiveness of environmental education and training. Without evaluation, educators are not able to prove that environmental education and training can make a difference. Therefore, there is a danger in not giving environmental education and training the space or resources within environmental management efforts they deserve.

Regional Co-operation

"Countries should co-operate with each other to produce educational tools that include regional environment and development issues and initiatives, using learning materials and resources suited to their own requirements." (Agenda 21)

Agenda 21 recognises that no one nation can achieve sustainable living on its own. While national plans and strategies are crucial, international co-operation needs to support and supplement these efforts. Regional and sub-regional organisations are also called upon to contribute. In fact the potential for co-operation between the South Asian nations is enormous; in particular co-operation towards greater economic integration; towards the communications revolution; towards technology transfer and sharing; towards sustainable growth patterns; and towards education and training.

The benefits of such co-operation are immense, with the foremost being that duplication of efforts can be avoided, thereby saving resources including time, man power and money, as well as natural wealth, because sharing means sharing costs. These benefits assume greater significance in the light of the fact that the need for Environmental Education & Training is so pressing, and its goals so complex and demanding that international and regional co-operation need to supplement national efforts.

Since the Earth Summit in 1992, there has been a great deal of emphasis on regional environmental co-operation. Every five years, a State of the Environment Report for Asia and the Pacific is prepared by ESCAP, with assistance from members of the Interagency Committee on Environment and Sustainable Development.

Member states of the South Asia Co-operative Environment Programme (SACEP), namely *Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka have been implementing SACEP's Strategy and Programme I & II, since 1992. (currently Afghanistan is not an active member of SACEP)

The Priority Subject Matter Areas of SACEP are as follows;

- | | |
|---|--|
| ◆ Conservation of Biodiversity | ◆ Sustainable Human Settlements Development |
| ◆ Sustainable Tourism Development | ◆ Waste Management |
| ◆ Management of Coral Island Ecosystems | ◆ Science & Technology for Sustainable Development |
| ◆ Management of Fresh Water Resources | ◆ Education & Training |
| ◆ Desertification | ◆ Energy & Environment |
| ◆ Environmental Legislation | ◆ Air Pollution |
| ◆ Participatory Forest Management | |
| ◆ Sustainable Agriculture and Land Use | |

Environmental Education and Training is one of the Priority Subject Areas of the South Asia Co-operative Environment Programme. SACEP has facilitated the development of education material, and also has worked to develop a plan for co-operation in environmental training with financial and technical assistance from ADB, NORAD and other donors.

Hitherto, UNEP's Network for Environmental Training at Tertiary Level in Asia and the Pacific (NETTLAP) has made a significant contribution to the enhancement of environmental expertise of decision makers, policy formulators and tertiary level educators and trainers in the region through the establishment of a self sustaining network of trained educators, trainers and experts at the higher education level.

The International Union for the Conservation Nature and Natural Resources (IUCN) in partnership with the Centre for Environmental Education in India (CEE) has launched the South and South East Asian Network for Environmental Education (SASEANEE) for networking among environmental education experts of the region.

Given the commonality of concerns and conditions in the region there is considerable scope for regional co-operation and collaboration. An Information Clearing House Mechanism on EE&T requirements, opportunities, resources and transfers could lead to grater sharing of knowledge, experiences and expertise. In programming assistance of UNEP, ESCAP, UNESCO, and UNDP should prove to be invaluable in providing technical assistance. With regard to project funding the Co-operation of bilateral and multilateral donors will be sought.

CHAPTER III

REVIEW

Formal Education

Status

The importance of Environmental Education and Training (EE&T) is recognised at all levels in all the countries of the region. Most of the countries in the region have incorporated environmental considerations into the school curricula. This is being done as a separate content area at the lower level, and through infusion at the higher levels. Topics such as environment, conservation, pollution, health, hygiene etc. are included in the curriculum. In many countries, the debate as to whether environment should be introduced as a separate subject at all levels is ongoing.

It is also recognised that the content has to be transacted through activity based and child centred approaches. Where it is not incorporated into school curricula, supplementary reading is sometimes provided at different levels. Availability and access to relevant and appropriate resource materials for Environmental Education & Training in schools is felt to be a barrier in many cases.

Environmental Education is included in the teacher education curriculum through programmes at pre-service and in-service level. Workshops for teacher trainers and on-site educators are also conducted to build their capacities as efficient trainers. However, EE&T as a subject in the teacher training programmes is still not uniformly available.

At the college level, while there are courses in environmental science and management in most countries, they are still emerging disciplines. Environmental education for students of various disciplines either through a separate course or through infusion into various subjects is not yet widespread.

Capacities and Capabilities

In most cases, in-service teachers have received some orientation in EE&T content and methods. However, these have generally been through short, once and for all training interventions.

Textbooks have been rewritten in many cases to include environmental content. Some resource materials have been developed. Government institutions and NGOs have developed some capacity to create such material. NGOs have also, in many cases, developed innovative co-curricular programmes such as for eco-clubs, and their experiences are a resource, which can be built upon.

Problems and Constraints

The generally centralised systems of curriculum development and textbook preparation make it difficult to make EE&T locale specific. The syllabus load and examination driven education systems in the countries are a barrier to activity-oriented, experiential approaches. Lack of resources is a barrier to providing EE experiences uniformly across the countries. Teacher training and motivation are also not provided for at desired levels.

Another concern in regard to EE&T in the formal system and with regard to all awareness efforts in general is that environmental educators are not really sure how to evaluate the impact of their efforts. This becomes a major obstacle to the educator's own efforts, and also in proving the efficacy of environmental education efforts to policy makers and funding agencies. This may be one of the reasons for the low priority given to EE&T in South Asia.

The existing curriculum is book knowledge based and examination oriented. Quite often curricular components are not relevant to local conditions nor are they constructed around scientific or ecological concepts. Many countries lack minimum educational infrastructure. There is no national policy or legislation on environmental education.

Requirements

While the systemic issues in the formal education system would need to be addressed within each country, at a regional level, it would be of use to share the Environmental Education & Training approaches and experiences of the respective countries. This would be particularly useful as many of the countries are in the process of introducing environment as a separate subject at the middle school level, in addition to the infusion approach.

In addition, some mechanisms to share and adapt resource materials is crucial so as not to waste time and resources in developing materials on similar concerns and issues.

Curriculum development and textbook preparation should be based on scientific and ecological concepts. It should be more locale specific. Efforts should be made to draw lessons from indigenous knowledge and local experiences. Priority attention should be given to the formulation of a national policy on EE. The educational infrastructure needs substantial improvement and greater investment.

Non-Formal Education

Status

Eco-clubs, Nature Camps, Environmental Brigades etc. are gaining popularity in all the countries. They have made an impact as extremely effective catalysts in imparting awareness, knowledge, attitudes and skills among children and youth. Often the governments offer support to such programmes. In some cases, they take the lead in facilitating or even organising such efforts.

Capacities and Capabilities

Several NGOs in all the countries of the region have developed innovative co-curricular and extra-curricular non-formal programmes. They have established linkages with schools in making these available to students. Some amount of resource materials have been developed and teacher skills built up to handle these programmes.

Problems and Constraints

As of now, these programmes, though successful, are extremely limited in their reach. Resources, in terms of finances, resource materials, and training are quoted as barriers to scaling up. It is also felt that the reach and popularity of these programmes may be more in the urban and economically better off areas.

While generally such activities are recognised as being important by the educational system, the reality is that within the school system, there are constraints of time and pressures of the syllabus which make it difficult to devote the required time to such activities.

Non formal education is the weakest link in South Asia. There is no co-ordinated effort to address the environmental learning needs of the adult community. Raising awareness and eliminating illiteracy are two essential prerequisites.

Requirements

The need for appropriate, locale-specific material, in the local languages, which will help educators carry out interesting and innovative programmes, has been widely recognised. Finding ways to scale up these programmes is important.

Capacity building of NGOs and teachers to plan, organise and sustain innovative programmes is required.

There is an urgent need to address the environmental learning needs of the community. Raising awareness and eliminating illiteracy must be achieved through the expansion and targeted utilisation of the electronic and print media. Non formal education should be specifically targeted to the poor both in urban and rural areas.

Planning and Decision Making

Status

With regard to training on environmental issues, most of the countries in the region take advantage of opportunities offered through bilateral, multi-lateral and regional agencies for training of various levels of personnel. In most cases, the pre-service training of bureaucrats now incorporates environment and sustainable development issues. There are only a few opportunities however, for in-service training of all levels of government personnel, or for sensitising personnel who are not working in environment related departments, though their work may have major impacts on the environment. While there are efforts to reach out to and sensitise decision-makers in the private sector, these are occasional, one-shot efforts.

With regard to training of environmental educators there are opportunities for capacity building in this area. While this is a multi-stakeholder issue, there is scope for all the stakeholders to come together and evolve a joint vision.

All the countries, in fulfilment of their obligations under International Conventions and Treaties, are undertaking EE&T with regard to these specific issues. However, these may be often done quite separately and distinctly from the ongoing efforts and activities of the concerned governmental agencies.

Capacities and Capabilities

A good amount of capacity has been built up through experiences and international exposures in the departments and agencies that are concerned with the environment.

Problems and Constraints

Sustainable development requires the involvement of several stakeholders, both from within the government and outside. However, there are no adequate opportunities for all the stakeholders to increase their capacities with regard to these issues. This is especially true of the non-environment related government departments which have major impact on the environment.

Some of the practical problems with regard to training and capacity building of personnel is that there is not much incentive to undergo such training. Also, trained personnel may often be transferred to positions where they may not be able to use their training.

As far as environmental education is concerned, there are few forums where decision-makers from various sectors involved in planning and implementing EE&T can meet or work to build capacities and capabilities. Decision-makers feel that while they would like to know about experiences, resources, training opportunities from other similar situations, they do not easily have access to such information.

While EE&T has policy support in all the countries of the region, often, priorities, strategies and action plans have not been worked out. Also, EE&T may not always be fully integrated into the policies and programmes of the ministries and departments.

Requirements

Opportunities for decision-makers to become aware of and to discuss experiences and newer developments in Environmental Education and Training from the other countries of the region would be useful. These could be both through electronic means, as well as through training programmes, workshops, seminars, etc. Within a country, mechanisms for those involved in Environmental Education & Training to meet, to share experiences, evolve a common vision and to build up synergies would be desirable.

Public Awareness and Peoples Participation

Status

Government Organisations (GOs) and Non Government Organisations (NGOs) are active in developing and implementing innovative non-formal EE&T programmes. Often they work together on such programmes. Media is sensitive and has been playing an important role in focussing attention on environmental issues. Several NGOs are involved in creating mass awareness through community programmes, development of resource materials, developing and screening of audio-video materials on environment related themes.

In almost all the countries, NGOs work closely with communities to raise awareness on several issues: conservation of biodiversity; sustainable resource management; sustainable use of wetlands and their management; water pollution; sustainable livelihoods, etc. In many cases, public participation is explicitly recognised in government policy as integral to sustainable resource management and sometimes, such efforts are supported by the governments.

Capacities and Capabilities

NGOs in all the countries have developed the capacities to formulate and implement innovative public awareness programmes and also to work closely with communities.

Problems and Constraints

Resources to reach out effectively to the large mass of the people is a constraint in many cases.

While institutions and NGOs have gathered experience in working with communities, there is not always a systematic and strategic approach to EE&T planning and implementation. There is a need for capacity building of environmental educators in this regard.

There is a wealth of experience in each of the countries. However, documentation of these experiences and opportunities to learn from the successes and failures is not common.

While several kinds of innovative public awareness programmes are taking place, certain opportunities have not been taken advantage of. One of these is the opportunity to reach out to visitors to zoos and heritage sites including protected areas and monuments. Another area is that of information technology. While the information technology revolution has taken the region by storm, the use of these advances for furthering EE&T and awareness is not being exploited.

Requirements

Capacity building of environmental educators to systematically plan and implement EE&T programmes, and to manage them, is the key to the effective and resource-efficient development of EE&T in the region.

There is a need to create forums and opportunities for environmental educators to get together to share, analyse and evaluate experiences and learnings. Training programmes in key areas where there is a low level of activity (e.g., use of IT, use of heritage sites), could be a way of giving a thrust to these activities.

CHAPTER IV

THE ACTION PLAN

Definition, Mission, Purpose and Goals

Definition

Environmental Education & Training is an interactive learning process that develops awareness, skills, understanding and sharing of environmental information to enable people to manage the environment in an environmentally sound and sustainable manner.

Mission

The overall mission is to strengthen the capacity of South Asian people to embark on a steady course of social and economic development in harmony with the imperatives of ecological conservation and sound environmental protection and management based on South Asian ethical, cultural and civic values and in close co-operation and collaboration with all players and partners.

Purpose

The primary purpose of the Action Plan is to present an overall regional framework to educate and train people to deal with major environmental problems such as degradation of ecosystems, depletion of natural resources, loss of biodiversity, soil, water and air pollution and haphazard urbanisation and industrialisation.

Also, it is aimed at sensitising people on the need to eliminate the root causes of environmental degradation such as poverty, population pressure, overpopulation, wasteful production, human greed and underdevelopment.

Above all, it attempts to focus on the need to move forward from the traditional environmental protection and conservation approach to an integrated and holistic sustainable development paradigm.

Goals

- ❖ To promote the incorporation of Environmental Education and Training into the formal and non formal education systems in South Asian countries with view to integrating ecological, social and economic considerations into the development process with due regard to indigenous knowledge and cultural characteristics and the need to target local, regional and international environmental issues.
- ❖ To assist South Asian Countries to build capacities and capabilities in Environmental Education and Training with a view to sensitising the planners, decision makers and community leaders on development processes especially in relation to policy planning, institutional development, project formulation and implementation.
- ❖ To promote the advancement of knowledge, skills, attitudes and behavioural patterns in all communities, groups, organisations and institutions conducive to the acceptance and application of environmentally sound and sustainable policies such as participatory management, equitable distribution and environment friendly lifestyles.
- ❖ To promote and foster the dissemination and exchange of information, data, expertise and resources supportive of Environmental Education and Training through formal and informal networks, forums and mass communication systems at local, national, regional and international levels.

TARGET AREAS

To achieve the goals of the Action Plan the following target areas have been identified

Target Area 1: Formal and Non formal Education

Target Area 2: Planning and Decision Making

Target Area 3: Public Awareness and Peoples Participation

Target Area 4: Information Networking, Communication and Collaboration

Target Area 1: Formal and Non formal Education

Goal

To promote the incorporation of Environmental Education Training into the formal and non formal education systems in South Asian countries with a view to integrating ecological, social and economic considerations into the development process with due regard to indigenous knowledge and cultural characteristics and the need to target local, regional and international environmental issues.

Needs and Objectives

- 1.1. To incorporate Environmental Education and Training into the entire spectrum of the formal education system with a view to integrating environment and development drawing on socio cultural traditions and indigenous knowledge and targetting all critical local regional and international environmental and sustainable development issues.

Actions and Outputs

- (a) To promote the development of curricula, teaching materials and teaching aids with a view to integrating natural resource conservation, sound environmental management and sustainable development concepts into all levels of formal education from primary to senior secondary level.
- (b) To assist selected Regional Centres of Excellence to undertake specialised certificate, diploma and degree courses in EE&T through distance education utilising the Open University System, Mass Communication and Information Technology.
- (c) Activate a Regional Project for the collation, development and dissemination of EE&T resource materials for use in formal and non formal education and training both by way of adoption and translation and commissioning and development of educational material on selected themes which are applicable across national boundaries.

Needs and Objectives

- 1.2. The need to develop a cadre of professionals in environmental education and training has not been uniformly addressed in all the countries. Most of the training programmes draw upon experiences and expertise from within the country and there are no opportunities for regional co-operation.

Actions and Outputs

- (a) To set up a programme to support the development of a cadre of environmental educators and master trainers in the region with emphasis on biodiversity conservation, sustainable management and development, information technology for EE&T and environmental education evaluation.
- (b) To formulate and implement a Regional Project to establish an Environmental Education Resource Centre at national level specialising in integrating EE&T into non formal training curricula such as agriculture, public health, food and nutrition, and industrial safety, etc., to incorporate indigenous knowledge and cultural perspectives into EE&T programmes; and to collect, develop and disseminate information and resources for training of educators and master trainers.

Target Area 2: Planning and Decision Making

Goal

To assist South Asian countries to build capacities and capabilities in Environmental Education and Training with a view to sensitising the planners, decision makers and community leaders on development processes; especially in relation to policy planning, institutional development, project formulation, implementation and evaluation.

Needs and Objectives

- 2.1. While there is policy support for EE&T activities in all South Asian countries, they do not have clearly articulated and comprehensive EE&T strategies and action plans. To assist national governments by developing a common framework and methodology for the formulation of national EE&T strategies and Action Plans with stakeholder participation including governments, NGO's, private sector, planners, decision makers and community leaders.

Actions and Outputs

- (a) To launch a Regional Project to develop the framework and methodology for raising environmental awareness, popularising environmentally sound and sustainable development concepts, streamlining legislation and enforcement and promote use of economic instruments among policy makers, decision makers and community leaders.
- (b) To organise a Regional Workshop to develop the framework and methodology to formulate national EE&T strategies and Action Plans incorporating policy, planning, decision making, institutional framework and implementation arrangements including stakeholder participation in planning implementation and review of progress.

Needs and Objectives

- 2.2. There is a need to sensitise South Asian Governments, political leaders, communities, NGO's and private sector on the overarching and lasting benefits that will accrue from pursuing environmentally sound and sustainable policies strategies, programmes and projects at all levels and by fulfilling various commitments and objectives under international environmental Conventions and Treaties.

Actions and Outputs

- (a) Conduct a Regional Workshop to develop the framework and methodology for sensitising policy makers, decision makers, community leaders, etc; on integration of environment into development; sustainable production, consumption and distribution practices, peoples participation in development and implementation of Treaties and Conventions.

Target Area 3: Public Awareness and Peoples Participation

Goal

To promote the advancement of knowledge, skills, attitudes and behavioural patterns in all communities, groups, organisations and institutions conducive to the acceptance and application of environmentally sound and sustainable policies such as participatory management, equitable distribution and environment friendly lifestyles.

Needs and Objectives

- 3.1. To make a positive contribution to the development of knowledge, skills, attitudes and mindsets in all communities, sectors, groups and organisations with a view to improving their capacities and capabilities to conserve, protect and manage the environment and its resources in an environmentally sound and sustainable manner through greater public awareness and optimum peoples participation.

Actions and Outputs

- (a) Develop the regional framework and methodology for conducting training courses at national level for environmental educators, master trainers, opinion leaders and environmental activists especially involving youth and women; on communication skills, facilitation methods, motivation and effective use of educational and resource materials.
- (b) Develop a Regional Programme for the formulation and implementation of pilot projects at national level in participatory management of coastal fisheries, forests, ecotourism, recycling of agricultural waste, etc; with a view to developing replicable training modules in environmentally sound and sustainable management practices.

Needs and Objectives

- 3.2. There is a need for increased public awareness of environmental issues geared to motivating communities to organise themselves to better manage the sustainable use of natural resources. While optimum peoples participation is the key to sound environmental management such participation can be obtained only through the introduction of ways and means of equitable sharing of resources, profits and benefits of conservation and development.

Actions and Outputs

- (a) Establish a Regional Project to train environmental activists, community leaders, local officials, and NGO representatives on environmental management by consultation and with the participation of the community with emphasis on poverty reduction, equity, social justice and power sharing at local level.

Target Area 4: Information, Networking, Communication and Collaboration

Goal

To promote and foster the dissemination and exchange of information, data, expertise and resources through formal and informal networks, forums and mass communication systems at local, national, regional and international levels.

Needs and Objectives

- 4.1. To recognise the importance of information dissemination, sharing and networking as critical factors in effective environmental protection, sustainable resource management and change over to environment friendly lifestyles. Also, considering the magnitude of the task; to encourage collaborative and co-operative action among governments, NGO's citizens groups, business communities, professional groups and such other national, regional and international organisations and institutions especially mass media.

Actions and Outputs

- (a) Initiate a Regional Training Programme on the effective utilisation and management of information, networking, communication and collaboration in all relevant fields of EE&T, more particularly information technology, sharing of experiences and success stories, building synergies and use of mass media and distance education.

Needs and Objectives

- 4.2. To establish a forum for information sharing, networking and collaboration among policy and decision makers, environment educators and trainers, NGO's and business leaders and environmental activists of the region exploiting to the benefit of all the similarities and commonalties in state and problems of the environment as well as socio economic and cultural conditions.

Actions and Outputs

- (a) To create a cyber forum by way of a website for environmental decision makers, educators, trainers, activists and professionals to share information on successful programmes, resource materials, new experiences and discuss learnings in relation to the integration of environmental education and training into the sustainable development process. The website will provide a comprehensive database on EE&T materials available in South Asia; latest state of the environment reports; EE&T policies, strategies and action plans of the region and a record of EE&T initiatives undertaken by SACEP member states in fulfilment of their obligations under various environmental Conventions and Treaties.

Needs and Objectives

- 4.3. To promote gathering and dissemination of information on EE&T requirements, opportunities and gaps in the region with a view to facilitating training of trainers and specialists.

Actions and Outputs

- (a) The South Asian EE&T website should include a directory of EE&T requirements, opportunities and gaps in the region. This website should be updated on a regular basis. The directory should contain information on organisations, institutions, agencies and private sector sponsors involved in furthering the cause of EE&T for sustainable development in South Asia.

IMPLEMENTATION STRATEGY

Target Area 1 - Formal and Non Formal Education

OBJECTIVES	ACTIONS	AGENCY RESPONSIBLE	TIME FRAME
1.1. To incorporate EE&T into the main stream of the formal education system	1.1.(a) To develop curricula, teaching materials and teaching aids to integrate environmentally sound and sustainable development into the formal education system. 1.1.(b) To assist Universities and Higher Educational Institutions to conduct advanced courses using Open Universities mass communication and Information Technology.	SACEP, National Governments, UNESCO and NGOs	2001 to 2003
1.2. To strengthen regional Co-operation for Capacity Building in EE&T in professional and specialized fields and disciplines.	1.1.(c) To activate a Regional Project for collation, development and dissemination of EE&T resource materials applicable across regional boundaries. 1.2.(a) To assist national governments to develop a cadre of environmental educators and master trainers in EE&T for sustainable development of South Asia. 1.2.(b) Assist national governments to establish and EE&T Resource Centre at national level specialising in integrating EE&T, into non formal training curricula, incorporating indigenous knowledge and culture and sustainable development into EE&T programmes.	SACEP/UNEP/NETTAP, National Governments, and Educational Institutes SACEP/UNESCO, National Governments, Educational Institutes, Research Institutes and NGOs SACEP and National Governments SACEP/UNEP/UNESCO National Governments, Community Organisations and NGOs	2002 to 2004 2003 to 2005 2002 - 2005 2003 - 2005

Target Area 2 - Planning and Decision Making

OBJECTIVES	ACTIONS	AGENCY RESPONSIBLE	TIME FRAME
2.1. To promote the formulation and implementation of EE&T policies, strategies programmes and projects at national level to accelerate the sustainable development process.	2.1.(a) Develop and implement a Regional Project for policy makers, decision makers and community leaders on environmental awareness, policy planning, legislation, use of economic instruments and information technology. 2.1.(b) Organise a Regional Workshop to develop the framework and methodology to formulate EE&T policies, strategies, programmes projects and action plans at national level.	SACEP/UNEP/ESCAP National Governments NGOs and Professional Bodies SACEP/UNEP and National Governments	2000 - 2002 2000 - 2002
2.2. To sensitise, political leaders, community leaders, NGOs and private sector on the overarching and lasting benefits that will accrue from the integration of environmental considerations into the development process and by enlisting peoples participation in development.	2.2.(a) Conduct a Regional Workshop to develop the framework and methodology for sensitising political leaders, community leaders, NGOs and private sector on harmonising environment and development, participatory management and adopting sustainable lifestyles.	SACEP/UNEP/ESCAP National Governments, Environmental and Educational Centres & Institutions, NGOs and Private Sector	2003 - 2005

* SACEP and UNEP will collaborate in the planning, implementation, monitoring and evaluation of the different components of the Action Plan.



Target Area 3 - Awareness and Peoples Participation

OBJECTIVES	ACTIONS	AGENCY RESPONSIBLE	TIME FRAME
3.1. To build capacities and capabilities in all communities, sectors, groups and organisations with a view to creating greater public awareness and obtaining optimum peoples participation for environmentally sound and sustainable development.	3.1.(a) Develop the regional framework and methodology for conducting training courses for environmental educators, trainers, opinion leaders and environmental activities on communication, facilitation motivation and use of resource materials. 3.1.(b) Develop and implement a Regional Pilot Project in participatory management of coastal fisheries, forests, ecotourism, recycling of agricultural waste etc. With a view to developing replicable training modules.	SACEP/UNEP/ESCAP and National Governments	2000 - 2002
3.2. To educate and motivate communities to organise themselves to better manage sustainable use of natural resources through equitable sharing of resources, profits and benefits of conservation and development	3.2.(a) Establish a Regional Project to train environmental activists, community leaders, local officials and NGO representatives on the interrelationships between sound and sustainable environmental management and socio economic and cultural dimensions such as equity, social justice, poverty reduction and power sharing at local level.	SACEP/UNEP/ESCAP/UNDP, National Governments and Environmental Research Centres, Educational Institutes, NGOs and Private Sector SACEP/UNEP/ESCAP and National Governments	2002 - 2004 2003 - 2005

Target Area 4 - Information, Networking, Communication and Collaboration

OBJECTIVES	ACTIONS	AGENCY RESPONSIBLE	TIME FRAME
4.1. To bring to focus the importance of information dissemination, sharing and networking as critical factors in effective environmental protection and sustainable resource management through co-operative action among all sectors, groups and communities.	4.1.(a) Develop and implement a Regional Project on effective management of information, networking, communication and collaboration in all relevant fields of EE&T.	SACEP/UNEP, National Governments, NGO's and Private Sector	2000 - 2002
4.2. To establish a forum for information sharing, networking and collaboration among policy and decision makers, environmental educators and trainers, business leaders and NGOs	4.2.(a) To create a SACEP EE&T Website for environmental decision makers, educators, trainers, activists, and professionals to share information on successful programmes, resource materials, new experiences and discuss learnings in relation to the integration of EE&T into the sustainable development process.	SACEP/UNEP/UNESCO and National Governments	2002 - 2005

