

IUCN Pakistan Programme

**Northern Areas Strategy for
Sustainable Development**

Background Paper

**Environmental
Education**

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Environmental Education



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TABLE OF CONTENTS

List of Acronyms	vi
Foreword	vii
Executive Summary	ix
1. Introduction	1
1.1. Education Status in the Northern Areas	2
1.2. Environmental Education	4
2. Issues and Trends	7
2.1. Inadequate Teaching System	7
2.1.1. Ineffective Follow-up/Monitoring & Evaluation	7
2.1.2. Lack of Refresher /Tailor- Made Courses	7
2.1.3. Lack of Teaching Material	7
2.2. Diffused information about environmental concerns in the Curriculum	8
2.2.1. Environmental Education	8
2.2.2. Gender	8
2.2.3. Integration with line departments	8
2.3. Lack of Technical Expertise	8
2.3.1. Resource Persons/Master Trainers	8
2.3.2. Training	8
2.4. Lack of Supportive Institutional Mechanisms	8
2.4.1. Lack of coordination within the Education Sector	8
2.4.2. Lack of Institutionalisation	8
3. Consequences of Inaction	11
4. Current Initiatives	13
4.1. Education Department	13
4.2. Indigenous Knowledge	13
4.3. NGO Initiatives	13
4.3.1. World Wide Fund for Nature (WWF)	13
4.3.2. Mountain Areas Conservancy Project (MACP)	14
4.3.3. Aga Khan Education Services Pakistan (AKESP)	14
4.3.4. Aga Khan Rural Support Programme (AKRSP)	14
4.3.5. Aga Khan Cultural Services Pakistan (AKCSP)	14
4.3.6. Water and Sanitation Extension Programme (WASEP)	15
4.3.7. Building and Construction Improvement Programme (BACIP)	15
4.3.8. Karakoram Area Development Organization	15
4.3.9. Hunza Education Resource Project	15
4.3.10. Himalayan Wildlife Project	15

4.3.11. Balour Advisory and Social Development Organisation (BASDO)	16
4.3.12. NGO Networks	16
<hr/>	
5. Stakeholders	17
5.1. Formal Education Sector	17
5.1.1. Northern Areas Education Department	17
5.1.2. Northern Areas Education Project (NAEP)	17
5.1.3. Aga Khan Education Services Pakistan	18
5.1.4. Pakistan Education Council (Al-Mustafa Schools)	18
5.1.5. Al-Azhar Model Schools	18
5.1.6. Marafi Foundation Pakistan	18
5.1.7. Religious Schools	18
5.2. Teacher Education	18
5.2.1. College of Education, Gilgit	18
5.2.2. Other Teacher Education Colleges	19
5.3. Non-Formal Education Sector	19
5.3.1. Social Welfare Office Northern Areas	19
5.3.2. Aga Khan Health Services Pakistan (AKHSP)	19
5.3.3. Prime Minister's Programme for Family Planning and Primary Health Care	19
5.3.4. Language Enhancement and Achievement Programme (LEAP)	19
5.3.5. Naunehal Development Organization (NDO)	20
5.3.6. Aga Khan Rural Support Programme (AKRSP)	20
5.3.7. Arts Councils	20
<hr/>	
6. The Way Ahead	21
6.1. Aim	21
6.2. Objectives and Strategic Interventions	21
6.2.1. To enhance the role of the formal/non-formal education sector for conservation and sustainable development:	21
6.2.2. To incorporate environmental aspects and sustainable development approaches in the curriculum and training programmes:	22
6.2.3. To build the capacity of stakeholders for effective implementation of the Environmental Education Background Paper:	22
6.2.4. To encourage and assist in building cross-sectoral linkages with all sector background papers of NACS:	22
6.2.5. To ensure incorporation of gender related issues in all sectors of education:	22
6.2.6. To ensure continuous support and input from all stakeholders during the formulation and implementation of Environmental Education Background Paper:	23
6.3. Roles and Responsibilities	23
6.3.1. Northern Areas Administration	23
6.3.2. Planning and Development Department	23
6.3.3. Department of Education	24
6.3.4. NGOs	25

6.3.5. EE Interest Group/Roundtable	25
6.3.6. Non-Formal Sector	26
6.4. Conclusion	27

LIST OF ACRONYMS

AKCSP	Aga Khan Cultural Services
AKESP	Aga Khan Education Services Pakistan
AKHSP	Aga Khan Health Services Pakistan
AKRSP	Aga Khan Rural Support Pakistan
BACIP	Building and Construction Improvement Programme
B.Ed	Bachelor of Education
CT	Certificated Teacher
DFID	Department for International Development
HERP	Hunza Education Resource Project
EE	Environmental Education
FBT	Field Based Training
IED	Institute of Educational Development
IUCN	World Conservation Union
KADO	Karakoram Area Development Organisation
LEAP	Language Enhancement and Achievement Programme
MACP	Mountain Areas Conservancy Project
NA	Northern Areas
NAA	Northern Areas Administration
NAEP	Northern Areas Education Project
NCS	National Conservation Strategy
NACS	Northern Areas Conservation Strategy
NDO	Naunehal Development Organization
NEP	National Education Project
NGO	Non-Governmental Organization
NRM	Natural Resource Management
PEC	Pakistan Education Council
PTC	Primary Teaching Certificate
SPCS	Sarhad Provincial Conservation Strategy
SAP	Social Action Programme
WWF	World Wide Fund for Nature
WASEP	Water and Sanitation Extension Programme

FOREWORD

The Northern Areas have a unique and critical role to play in the sustainable development of Pakistan. Although they span a relatively small geographical area, the Northern Areas serve as a vital catchment for the Indus River, upon which a majority of Pakistan's irrigated agriculture and hydroelectricity depends. The Northern Areas also contain the nation's most important natural forests, extensive mineral reserves, and a wealth of biodiversity. Dramatic scenery, some of the world's highest mountains, and a rich cultural and archaeological heritage make the Northern Areas one of the most visited tourist destinations in the country.

Over the last several decades, however, many of the Northern Areas' natural resources have come under increasing pressure, as a result of a growing human population and the opening of the Karakoram Highway. At the same time, it has become increasingly recognised that the isolated nature of many of the region's communities, coupled with the Northern Areas' high-altitude and fragile environment, poses special constraints and challenges to development. Perhaps more so than in any other part of Pakistan, there is a need in the Northern Areas to ensure that social and environmental considerations are fully integrated into the development process.

In response to these concerns, the Northern Areas Administration began the preparation of a Northern Areas Strategy for Sustainable Development in 1999, with the financial assistance of the Swiss Agency for Development and Cooperation, and the Norwegian Agency for Development Cooperation; technical support has been provided by IUCN–The World Conservation Union. The Strategy addresses a broad range of social, economic and environmental issues, and seeks to provide a comprehensive policy framework for the sustainable development of the region. It responds directly to the provisions and recommendations of the National Conservation Strategy, adopted by the Government of Pakistan in 1992.

In parallel, *The State of the Environment and Development in the Northern Areas* summarises in a single volume the key information gathered during the preparation of the NASSD. It is the first report of its kind to be produced for the Northern Areas, which provides a succinct, up-to-date and readily accessible analysis of the status of the most important environment and development sectors in the Northern Areas, including information on major trends and issues, the responses taken by both government and civil society to date, and strategic options for the future. It also provides a baseline against which future change can be measured and establishes the context and foundations for the Northern Areas Strategy for Sustainable Development.

During early consultations at the tehsil level, and with key governmental and non-governmental organizations 16 areas of intervention were identified as being critical for the NASSD. These include sectors like: water; agriculture; forestry; biodiversity; rangelands and livestock; the private sector; energy; urban

environment; and cultural heritage and sustainable tourism. In addition, some crosscutting themes were identified as crucial to each sector, including population, poverty and environment; communication for sustainable development; environmental education; NGOs; gender, environment and development; environmental health; and governance.

To address the needs of each of these areas, basic information was gathered through consultations and literature reviews. This data was analysed through background papers commissioned on each of the sectors and themes identified. The draft of each paper was shared with the larger community of stakeholders of the NASSD as well as experts in the relevant field of knowledge.

The papers follow a similar format: analysis of the current situation; issues; past and present initiatives in the sectors and thematic areas along with the lessons learnt; stakeholders; and recommended policy and action measures. The authors have also addressed cross-sectoral linkages and environmental concerns for the sake of more integration in planning for sustainable development.

There were constraints to developing these Background Papers and in some cases these hurdles were only partially overcome. These included the fragmented and scattered nature of information, the prevalent culture of not sharing information, contradictory and unreliable data, lack of thinking on cross-sectoral linkages and integrated planning, and lack of expertise in developing linkages with the environment.

Parts of the information of the papers were then incorporated into the State of the Environment and Development (SoED) and the main strategy, i.e., NASSD. However, since the Papers contain a wealth of extremely useful information, a decision was taken to produce a series of NASSD Background Papers.

Considering the need and importance of timely sharing information with the stakeholders, these papers are being produced without extensive editing. The authors have sole responsibility for the views expressed and data presented.

EXECUTIVE SUMMARY

The Northern Areas are experiencing a number of social, environmental and natural resource management problems, which are increasing steadily. Despite the initiatives taken by the NAAdministration to address these issues, there remains a dire need for a strategic framework to prioritise and guide activities, promote cross-sectoral coordination and ensure the incorporation of environmental considerations into the development process.

The NACS-Support Project aims to provide this strategic framework in the form of the Northern Areas Conservation Strategy (NACS). Furthermore, background papers have been developed on the sectors identified during the public consultation process of the project. The background papers would contain current status, issues and trends, and recommendations for the specific sector. The process-oriented development of background papers ensures greater participation of stakeholders through extensive consultation. In this connection, the Environmental Education Background Paper of NACS provides recommendations for capacity building and facilitates mainstreaming of environmental concerns into the education processes.

To develop this paper, the current status of formal and non-formal education sectors and current initiatives taken by the government and non-governmental agencies was analysed to identify gaps. This study showed that the existing environmental education initiatives taken by various formal and non-formal sectors are activity based and there is a lack of coordination among the organizations undertaking these initiatives. This situation identified a need to not only develop cohesion in the existing efforts but also to take environmental education forward as a full-fledged programme. To this end, exploratory meetings, scoping exercises and workshops were organized to ensure that a participatory approach is adopted by involving various stakeholders for their input into the design and formulation of the Paper. Furthermore, the Education/Communication Interest Group played an integral role in providing input for the identification of the objectives and strategic interventions.

The EE Background Paper recommends the need for the integration of environmental aspects into the curriculum/programmes of the formal and non-formal education sectors, development of resource persons, capacity building of stakeholders and development of material to supplement the EE activities. Moreover, it draws upon the roles and responsibilities of key development actors regarding its implementation. Since the strategy development is an ongoing process it suggests a mechanism to review it during both the formulation and implementation stages.



1. INTRODUCTION

The integration of environmental concepts into the programmes of the formal and non-formal education sectors and the capacity building of stakeholders for its implementation need a framework that could provide objectives and strategic interventions and identify roles & responsibilities. This paper gives the details of the Environmental Education Strategy for the Northern Areas Education Sector.

The Northern Areas (NA) directly administered by the Federal Government occupy some 72,500 square kilometres of the northern part of Pakistan, bordering with China, Afghanistan and India. They are dominated by one of the most mountainous landscapes on earth, with an arm of the Hindu Kush to the West, the lesser Himalayas to the South, the Karakoram to the East and the Pamir to the North. The Killer Mountain, Nanga Parbat and K2 are also located in the NA.

Although the population is relatively small (approximately 1 million according to the Social Action Programme 1992-2000), it is linguistically and ethnically diverse. There are at least 12 different language groups, reflecting a legacy of cultural change, migration and conquest over thousands of years. Religious domination varies in the form of different sects, from the Sunni Muslims in Kohistan to Ismailies in Hunza and Ghizer and Shias, Noorbakhshis in Baltistan and Nagar valleys.

The completion of the Karakoram Highway in 1982 ended the physical isolation of the Northern Areas, but opened the region to an unprecedented influx of developers, immigrants, and tourists. This has resulted in accelerating the rate of socio-economic problems; rapid population growth, increased need for health and education, rapid urbanization, and ecological changes such as deforestation, loss of biodiversity and degradation of water and soil quality.

The Northern Areas Administration (NAA) and some NGOs have been working to improve the socio-economic and ecological conditions of the areas. Despite this there is still a need for a strategic environmental framework, which can prioritise and guide activities, promote cross-sectoral coordination and ensure the incorporation of environmental considerations into the development planning process at an early stage. In order to address this need the NAA has taken the initiative in the form of the NACS - Support Project, with the technical assistance of IUCN - The World Conservation Union.

The goal of the NACS is to improve the social, economic, cultural and ecological well being of the people of the NA. To achieve this goal, the incorporation of environment into the development process has been adopted as one of the major principles. For this purpose, it is essential that effective environmental education programmes are put in place, which would not only foster awareness but would also lead to informed action.

1.1. Education Status in the Northern Areas

The literacy rate in the Northern Areas is 33%. Apart from the efforts made by the Government, NGOs such as the Aga Khan Education Services (AKES), Marafi Foundation and Pakistan Education Council (PEC) are also working in the education sector through a number of school networks. The AKES has set up 127 schools. It has also set up two prototype schools in order to enhance female education in the NA. Similarly the private sector has entered the education sector by setting up about 179 schools. The Army is also supporting the efforts to improve the education standards in the Northern Areas by setting up Army Public Schools.

The female literacy rate is considered to be 100 percent in a few villages dominated by the Ismaili sect. The major factor contributing to this is the awareness and promotion of female education among the community members by their spiritual leader, late Sir Sultan Muhammad Shah. His contribution included setting up of a chain of Diamond Jubilee Schools in remote villages.

Although there are some areas in the southern part of Diamer district, which do not even have a single female school, owing to traditional norms regarding women's status in the society, the situation is slowly improving because of the initiatives taken by some local NGOs.

Table 1: Summary of Schools (1999-2000)

Location	Gender	Mosque	Community	Non-formal	Primary	Middle	High	Total
A. GOVERNMENT								
Urban	Boys	0	0	0	19	10	11	40
	Girls	0	8	0	11	5	9	33
	Mixed	1	18	9	6	1	0	35
	Total	1	26	9	36	16	20	108
Rural	Boys	16	56	12	309	96	68	557
	Girls	2	118	16	70	25	11	242
	Mixed	3	300	49	89	16	6	463
	Total	21	474	77	468	137	85	1,262
G. Total		22	500	86	504	153	105	1,370
B. PRIVATE								
Urban	Boys	0	0	0	5	1	2	8
	Girls	0	0	0	1	1	2	4
	Mixed	0	0	0	28	13	7	48
	Total	0	0	0	34	15	11	60
Rural	Boys	0	0	0	36	5	1	42
	Girls	0	0	0	15	8	7	30
	Mixed	0	0	0	175	69	18	262
	Total	0	0	0	226	82	26	334
G. Total		0	0	0	260	97	37	394
Total (A+B)		22	500	86	764	250	142	1,764

Source: Annual Census 1999-2000

There are a total of 18 (government, community and private) inter/degree colleges in the Northern Areas. These include five girls' colleges and five boys' colleges in District Gilgit, four colleges, two for girls and two for boys in Skardu District, two

colleges for boys in Diamer District and one college each for boys in District Khaplu and Ghizer respectively. The number of male and female students in the colleges of the Northern Areas is approximately 2500. There is no university in the area and therefore people tend to go to bigger cities for higher studies.

Curriculum development is a Federal responsibility, particularly in case of the Northern Areas, where only limited books on subjects such as social studies, geography and science are developed up to class five. However, there is growing awareness of the fact that unless environmental concepts are incorporated into the existing curriculum, it cannot fulfil emerging needs. The Education Department of the Northern Areas has taken lead in this process by redeveloping the primary level curriculum by incorporating environmental issues, under the Northern Areas Education Project (NAEP).

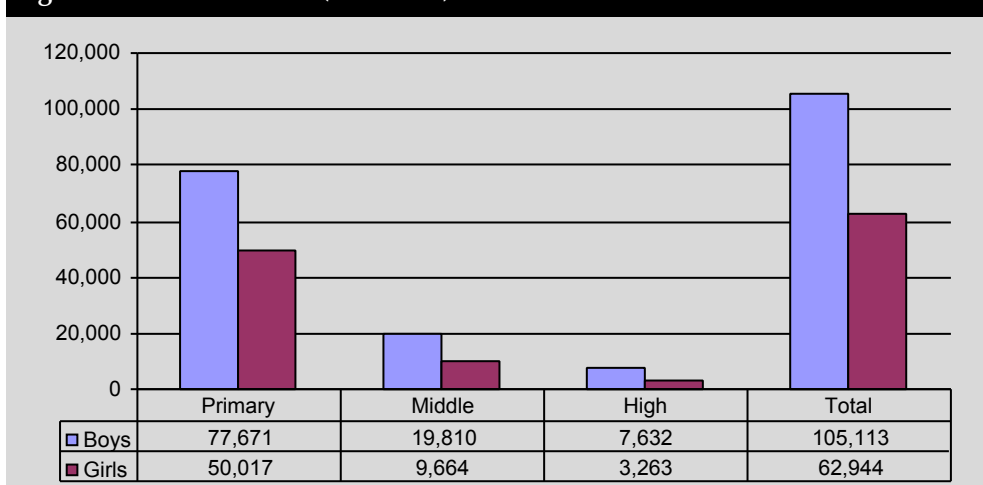
Boys' participation rate for primary, middle and high classes for the years 1998 – 99 was 80%, 63%, and 39% respectively, while, female participation rate for the same years was 56%, 28% and 17% for primary, middle and high classes. The following table and chart describes the enrolment rate for boys and girls at the primary, middle and high school levels for the year 1999 - 2000.

Table 2: Enrolment by Stage and Gender (1999-2000)

Stages	Urban			Rural			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Primary	11,348	8,661	20,009	66,323	41,356	107,679	77,671	50,017	127,688
Middle	4,342	2,860	7,202	15,468	6,804	22,272	19,810	9,664	29,474
High	2,454	1,308	3,762	5,178	1,955	7,133	7,632	3,263	10,895
Total	18,144	12,829	30,973	86,969	50,115	137,084	105,113	62,944	168,057

Source: Annual Census 1999-2000

Figure 1: Enrolment Rate (1999-2000)



Source: Annual Census 1999-2000

The average dropout rate for both boys and girls was 8.5% at the primary level and 16.6% at the secondary level (Source: Annual School Census 1999-2001).

Table 3: Average Dropout Rate at the Primary Level (1999-2000)

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Avg. Total
15.6%	9.0%	8.5%	9.4%	0.0%	8.5%

Source: Annual School Census 1999-2000

Table 4: Average Dropout Rate at the Secondary Level (1999-2000)

Grade 6	Grade 7	Grade 8	Grade 9	Avg. Total
14.6%	13.0%	22.3%	93.0%	16.6%

Source: Annual Census 1999-2000

1.2. Environmental Education

The significance of awareness raising and education to bring about "attitudinal change" of human beings towards the environment emerged when the world community became aware of the fact that majority of the factors contributing to environmental degradation are caused by human activities. Thus Environmental education has been promoted as an effective tool to facilitate the process of fostering awareness and to encourage people to adopt environment friendly lifestyles in order to minimize environmental depletion.

The definition of environmental education drawn up in a conference called by IUCN-The World Conservation Union in Nevada, is as follows:

Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness among humans, their culture and biophysical surroundings. Environmental education also entails practice in decision-making and self-formulation of a code of behaviours about issues concerning environmental quality (Neal Philip & Joy).

UNESCO also formulated the following definition of environmental education in 1977:

Environmental education fosters clear awareness of and concern about economic, social political and ecological interdependence in urban and rural area; provides every person with opportunities to acquire the knowledge, value, attitudes, commitment and skills needed to protect the environment; creates new patterns of behavior of individuals, groups and society as a whole towards the environment.

An Intergovernmental Conference on Environmental Education was held at Tbilisi in 1977. The Tbilisi Declaration is the basis of the educational component in Agenda 21, the global framework for action adopted by the United Nations Conference on Environment and Development, in 1992.

According to Agenda 21:

Education is critical for promoting sustainable development and improving the capacity of people to address environment and development issues. It is

also critical for achieving environmental and ethical awareness, values and attitudes, skills and behavior consistent with sustainable development and for effective public participation in decision making.

Box 1: Approaches to Environmental Education

To fully understand the concept of environmental education the following three approaches have been identified (Lucas 1979):

- m Education in the environment describes any form of learning outside a traditional classroom-teaching situation. It can be thought of as learning via direct experience, and has strong links with outdoor education.
- m Education about the environment is concerned with providing information on the environment and environmental issues. Such learning gives people a basic understanding of the environment and some of the problems and solutions, which face us in making decisions every day.
- m Education for the environment develops attitudes and values. It arms us to make choices, which will maintain and improve the quality of the environment; it seeks to change our behaviour. Education for the environment should encourage people to participate and to believe that their efforts can have an impact on the quality of the environment.

According to the Pakistan National Conservation Strategy, environmental education:

- m Focuses on sustainable development in the entire system of formal education and at all levels
- m Adopts a holistic perspective to environmental education
- m Centres sustainable development education on practical problems relating to the student's immediate environment
- m Aims at instilling an ethic of conservation
- m Lets education on sustainable development grow from within the existing system rather than be added to it
- m Launches comprehensive non-formal education programmes to reach that segment of the population not now reached by education because of either poor access or literacy problems
- m Incorporates sustainable development issues into all relevant non-formal education programmes.

Box 2: Goals of Environmental Education

The goals of environmental education, adapted from the Tblisi declaration are:

- m To foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas.
- m To provide every person with an opportunity to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.
- m To create new patterns of behaviour of individuals, groups and society as a whole towards the environment.

To achieve the above goals and for the true success of the NACS Education Background Paper, the focus would be on involving all the stakeholders in the promotion of EE activities, thus educating, fostering awareness and enhancing capacity about the principles of sustainable development. This will help them to

develop skills and attitudes necessary to understand and appreciate the interdependence of humans, their culture and biophysical surroundings.

This Paper is distinctive in the sense that a participatory approach has been adopted. It has involved all stakeholders, partners and intermediaries including the Education Department, The Aga Khan Education Services, Northern Areas Education Project, WWF, AKHS and the private sector at every step, through scoping exercises, workshops and discussions at forums such as interest groups and roundtables. The outline was presented to the Education/Communication Interest Group for detailed discussions. The input provided by the members was incorporated into the Paper. Moreover, teachers, students and parents too were involved in a number of activities to ensure their full participation.

In order to seek expert opinion, the Interest Group formed an Education Core Group consisting of academicians and educationists both from within the interest group and from outside. These experts had been intensively involved in EE activities in their respective organizations, even before the initiation of IUCN activities in Northern Areas. Their experience and knowledge brought value addition to the entire process of consultations. This Core Group held a one-day workshop specifically to discuss the objectives and strategic interventions and gave their feedback, which has been incorporated accordingly. A one-day review workshop was also organized involving all stakeholders as a final step to deliberate upon the Paper. During the workshop, the stakeholders themselves identified priority areas and their roles and responsibilities for implementation. In other words, the EE Background Paper is in reality, the reflection of the feedback of the stakeholders obtained through various activities. This two-track approach has resulted in making its development a dynamic process rather than simply producing a document. At the same time, the implementation of various activities through demo-projects is assessing the practicality of the Paper.

As a future step NACS will facilitate the stakeholders in the development of an action plan in light of their identified roles.

2. ISSUES AND TRENDS

The issues identified through the consultative process were categorized into the following four broad areas.

2.1. Inadequate Teaching System

2.1.1. Ineffective Follow-up/Monitoring & Evaluation

Follow-up, monitoring and evaluation mechanisms play a significant role in the effective implementation of any programme or project. They help in course correction and tracking of activities resulting in the achievement of the desired objectives. Unfortunately, in the education sector such mechanisms have not been developed and therefore there are no means of assessing the performance of teachers and teaching approaches. Although, the annual school results are taken as performance indicators, due to many flaws in the examination system these indicators are less reliable. As a consequence, the educators and teachers pay less attention towards learning and enhancing their teaching skills. This situation leads to ineffective teaching and gradual decline of the education standards.

2.1.2. Lack of Refresher/Tailor- Made Courses

Training and capacity building are essential for the professional growth of individuals in an organization. This becomes more important in the context of the teaching system because increase in knowledge and information through research has caused rapid changes in approaches that professionals have to be equipped with, in order to discharge their duties effectively and efficiently. In the Education sector the process of learning is given low priority compared to other components such as examination and developments of infra structure of the school. Educators and teachers are rarely exposed to short-term refresher or tailor made courses. There are few exceptions such as AKESP, which arranges short-term courses for their teachers. However, in absence of an effective monitoring and evaluation system training/courses do not show desired results.

2.1.3. Lack of Teaching Material

Teachers in government schools have no access to supplementary teaching material in order to make their teaching more effective. The Education Department has not promoted this method of teaching. Reference books and other related material are not available in government schools. Also, teachers do not use audio visual aids and teaching models, which are low cost and readily available to make their lessons more effective.

2.2. Diffused information about environmental concerns in the Curriculum

2.2.1. Environmental Education

In the existing curriculum there is plenty of basic information on the environment. This includes information on forests, agriculture and industries. However, no effort has been made to link the environment and the effects of its degradation on the human life. Due to this, the teachers are unable to inculcate environmental concerns into their lesson plans. This situation creates a need for the incorporation of environmental issues into the curriculum.

2.2.2. Gender

The teaching material and textbooks are not gender sensitive. One of the causes of the persisting gender imbalances is because no effort is made to address this issue in the education system.

2.2.3. Integration with line departments

Educators and teachers feel that though there are several subjects on natural resources the current teaching system hardly has any link with the respective line departments. These departments undertake a lot of research in various fields, which needs to be shared or integrated with the teaching system in order to increase the knowledge of the students. Moreover, integrated thinking will result in integrated planning, which is a prerequisite to attain the objectives of sustainable development.

2.3. Lack of Technical Expertise

2.3.1. Resource Persons/Master Trainers

Since environmental education is a relatively new subject in the NA education sector therefore, no resource person or master trainer is available to give further training to the educators and teachers. The Aga Khan Education Services (AKES) took some initiatives for providing training on environmental education in Diamond Jubilee Schools but due to a dearth of resource persons it could not be furthered. Similarly the Education Department willing to take full-scale initiatives in environmental education also faces the same problem.

2.3.2. Training

Special training is required in order to develop the capacity of master trainers and resource persons in environmental education. However, due to shortage of funds the Education Department cannot arrange these.

2.4. Lack of Supportive Institutional Mechanisms

2.4.1. Lack of coordination within the Education Sector

During consultations an important issue identified was the lack of coordination among various stakeholders of the education sector. In the Northern Areas a

number of interventions in the education sector have been made by many international organizations, NGOs and by the private sector in addition to the Education Department. Every organization has been pursuing its own objectives and mandate without developing linkages with similar ongoing initiatives. This has given rise to the possibility of duplication and wastage of resources. Keeping in view this gap, the organizations are striving to develop maximum coordination but in the absence of a "Common Forum" that could facilitate coordination among stakeholders, the desired results cannot be achieved.

2.4.2. Lack of Institutionalisation

A potential barrier in taking forward the EE activities in the education sector is the lack of institutionalisation of systems that would facilitate the integration of environmental education into the programmes, projects and activities of the Education Department. For instance, a majority of the educators and teachers complained that although they realize the importance of environmental education and want to promote it in their respective schools, they are unable to do so due to a lack of support from the management. Similarly environmental education has not been integrated into the co-curricular activities and programmes of the non-formal education sector.

However, one institution, the College of Education Gilgit has made environmental education a part of the teaching system and the subject is being taught once a week to the trainees of B.Ed, CT and PTC training courses.



3. CONSEQUENCES OF INACTION

Over the last decade, the Northern Areas have been experiencing a multitude of socio-economic and environmental problems. A high population growth rate (3.8% annually according to Social Action Programme), increasing poverty and lack of management have all resulted in increased pressure on the natural resources. If the current trend continues it is likely to have serious consequences on the population, as they are heavily dependent on these resources for their sustenance.

Furthermore, a number of globally significant wildlife species such as musk deer, snow leopards, markhors, Himalayan ibex, woolly flying squirrels, and brown bears are found in the Northern Areas. These are under threat owing to human activities resulting in loss of their habitat, and excessive hunting by locals and outsiders (WWF Website – Species of Special Concern).

More importantly, the consequences would not only be affecting the Northern Areas but would also have negative national impact. The Indus River, which partly originates from the NA is a source of freshwater and alluvial soil for the whole country. Pakistan having an agrarian economy is wholly dependent on this River for agriculture. The depletion in and the pollution of its water supplies would adversely affect the entire agricultural system and these effects would be felt both upstream and downstream of the River.

In order to tackle these problems there is a need to create environmental awareness at all levels in the society.



4. CURRENT INITIATIVES

4.1. Education Department

The Education Department of the Northern Areas is currently in the process of curriculum development for primary classes under the Northern Areas Education Project (NAEP) funded by DFID and implemented by the British Council. One of the prime objectives of the process is to incorporate environmental aspects into the proposed curriculum. IUCNP extended its assistance by providing training to curriculum developers on developing environmental education material to be incorporated into the existing curriculum. As a result, environmental concerns have been successfully incorporated into the curriculum of classes from 1 to 5.

The College of Education, Gilgit has taken a lead in making environmental education an integral part of its training courses. A Teachers' Manual (Learning for Life) was developed for this purpose. As a result EE has been introduced as a subject that is taught to pre-service and in-service trainee teachers. Similarly, efforts are underway to incorporate environmental issues in Field Based Training Programme.

4.2. Indigenous Knowledge

Due to the physical isolation of the Northern Areas, the local people have lacked access to the outside world for centuries. As a result they developed and adopted practices derived from nature to sustain their limited natural resources. Their indigenous management practices and systems ensured sustainable use of natural resources and strict adoption of land use planning, keeping in view the scarcity of cultivable land.

The construction of the Karakoram Highway has opened the area to the outside world in recent years. Although this has led to a considerable decline in the traditional methods in the urban areas, indigenous knowledge is still transferred from generation to generation. This knowledge can be utilized in developing resource material for EE activities.

4.3. NGO Initiatives

4.3.1. World Wide Fund for Nature (WWF)

WWF, an international NGO working for conservation of nature, initiated an environmental education programme in 1996. Since then, it has carried out various activities, involving students, teachers and community activists. WWF is implementing a number of projects including a DFID funded project, Karamber Valley Project, Mountain Areas Conservancy Project and a European Union Project, mainly focused on conservation and environmental education.

Some of the activities undertaken under the projects include the following:

- m Raising public awareness
- m Teacher's training
- m Provision of educational aids
- m Training workshops for communities in conservation
- m Supplementary material for curriculum development.

4.3.2. Mountain Areas Conservancy Project (MACP)

The Mountain Areas Conservancy Project (MACP) funded by GEF, UNDP and the Government of Pakistan, is intended to promote sustainable use of biodiversity in Pakistan's Karakoram, Hindu Kush and Western Himalayas mountain ranges, through a community based conservation approach. This programme is based on the results of the Biodiversity Project, a GEF Pre-Investment Facility Project (PRIF) in Northern Areas. IUCN-The World Conservation Union is implementing the MACP project.

The tasks to be completed by MACP include:

- m Involving women in conservation
- m Develop village, valley and conservancy level conservation plans
- m Implementing a broadly based conservation awareness programme
- m Introducing sustainable use demonstration projects
- m Enhancing scientific knowledge of biodiversity in the conservancies
- m Revising current wildlife laws
- m Developing conservancy level trust funds
- m Enhancing the capacity of government departments

IUCN has sub-contracted the Conservation Education component of MACP to WWF for implementation. WWF is responsible for output 2 in which the following initiatives have been identified:

- m Develop and implement a communication strategy
- m Implement a Schools in Conservation Programme
- m Operationalise informal conservation awareness programme
- m Enlist the support religious leaders in conservation activities

An EU funded project has also been developed to provide support to the conservation education activities of MACP. This component will launch education and awareness raising activities in three conservancies

4.3.3. Aga Khan Education Services Pakistan (AKESP)

The Aga Khan Education Services (AKES) has initiated some EE activities including research studies, plantation drives, seminar and speech/essay writing contests. Similarly, AKES is currently implementing the training component of the FBT Programme, in which an environmental component is being integrated with the assistance of the NACS-Support Project.

4.3.4. Aga Khan Rural Support Programme (AKRSP)

In 1992 the Forestry Section of AKRSP launched an awareness-raising programme through nature clubs. For this purpose, IUCNP's Education Programme in Karachi developed activity packs on water and soil through a consultative process and conducted an intensive training programme for club leaders. In Baltistan, Adult

Literacy Centres have been launched and environment is being integrated into the curriculum. Now AKRSP, Gilgit has taken the initiative of environmental sensitisation of its valley foresters, by including a full-day session on environment.

4.3.5. Aga Khan Cultural Services Pakistan (AKCSP)

AKCSP is endeavouring to preserve the cultural heritage of the area, for the promotion of ecotourism. For this purpose, apart from using the existing forums, it has identified other interest groups including private companies and local influential people, to motivate them to develop local formal institutions to undertake its initiatives. Currently, the NACS – Support Project is working with AKCSP on a pilot project regarding land use planning in Shigar Valley of Baltistan.

4.3.6. Water and Sanitation Extension Programme (WASEP)

The overall objective of WASEP is to reduce water related diseases in the NA. For this purpose WASEP has adopted the strategic approach of integrating water supply, sanitation, health and hygiene education. It has a target of covering 108 villages (100,000 population) by the year 2001.

4.3.7. Building and Construction Improvement Programme (BACIP)

BACIP aims at developing and promoting measures that would enable the communities to make sustainable improvement in housing and to enhance their investment in the built environment.

4.3.8. Karakoram Area Development Organization

The Karakoram Area Development Organization (KADO) is an NGO working in the Hunza region. It has a component on environment, under which it is effectively carrying out various activities including awareness raising programmes, Environment Day celebrations and installation of garbage bins in central Hunza.

4.3.9. Hunza Education Resource Project

The Hunza Education Resource Project (HERP) has established Environmental Clubs in more than 16 English medium schools in Hunza region. These clubs hold monthly meetings in which activities related to the environment are discussed and action plans are prepared for implementation in schools. A newsletter has also been launched.

4.3.10. Himalayan Wildlife Project

The Himalayan Wildlife Project funded by GEF/UNDP Small Grants Programme started working to preserve the wildlife and to conduct research on the brown bear and other species in Deosai since 1993. The objective of the project is to establish a functional National Park in Deosai by 1998, with administrative and management systems that provide continued protection to the flora and fauna in Deosai with active participation of the local communities. For this purpose they are conducting awareness raising programmes in collaboration with MACP's Education Component.

4.3.11. Balour Advisory and Social Development

Organisation (BASDO)

The Balour Advisory and Social Development Organization (BASDO) is working for conservation and environment in Northern Areas. It provides support to the conservation and urban environment related activities of various large NGOs. BASDO is a member of IUCN- The World Conservation Union.

4.3.12. NGO Networks

Valley Based NGO Networks are active in fostering awareness about environmental issues at grassroots level both in urban and rural areas. These networks can prove to be effective channels for dissemination of information directly to the communities. Shimshal Natural Trust in this regard has moved a step ahead by launching an organized awareness-raising programme and carrying out activities by involving school children.

Similarly some other small NGOs including Al-Amin Foundation, Al-Khair, and Kasunar in Gilgit town, while, NGOs like Burchang social welfare Org, Waliul-Aser Org, SKIDO, HAWA Org, Baltistan, NRM social welfare Org Gupis, Hatun Welfare Org, NSWA Hunza are actively involved in a number of activities related to the environment.

The impact assessment of current EE initiatives is difficult because the implementation has been activity based rather than focused on the development of a comprehensive programme on need basis. Nonetheless, these activities have succeeded in creating awareness within the organizations. Another reason for the low level of impact is the lack of linkages between the existing initiatives. The NACS Education Background Paper is expected to address these gaps specifically by developing strong linkages between the existing initiatives and creating synergy in the efforts.

5. STAKEHOLDERS

5.1. Formal Education Sector

5.1.1. Northern Areas Education Department

The Northern Areas Education Department is striving hard to enhance the literacy rate and to promote quality education. It has set up primary, middle and high schools in almost every village either by itself or has facilitated non-governmental organizations and the private sector in doing so.

The Education Department is very conscious of the newly emerging needs in this sector such as teacher's training, environmental education, curriculum development, monitoring and evaluation. It has developed a mechanism of building partnerships and collaborating with donor agencies and other organizations to develop projects, in order to build its capacity to address the new challenges. The Northern Areas Education Project (NAEP), which provides assistance in the development of new curriculum, training of teachers and a mechanism for monitoring & evaluation, is one of the outcomes of this approach. The Education Department has also worked in collaboration with the Aga Khan Education Services in Field Based Training (FBT) Programme and IUCN-The World Conservation Union.

The Education Department also places a lot of emphasis on co-curricular activities. Boy scouts and girl guides are officially launched in every tehsil level high school. These provide a platform to the students to participate in healthy social activities.

5.1.2. Northern Areas Education Project (NAEP)

The Northern Areas Education Project (NAEP) is the British Government's contribution to the larger, World Bank funded, Northern Education Project (NEP). NEP is in turn, part of the Pakistan Government's Social Action Programme (SAP). There are 6 distinct components in the project including teachers' training, improving skills of teachers and trainers, upgrading textbooks and teaching material, testing and assessment, monitoring and evaluation and community participation. The NACS-Support Project is working on the first three components with NAEP and further discussions will facilitate future collaboration for the rest of the components.

5.1.3. Aga Khan Education Services Pakistan

The Aga Khan Education Services (AKES) has set up 124 schools at the primary and middle level and 2 at the higher secondary level. Its major ongoing activities include operating formal schools, coaching centres, teachers' training programmes, establishment of a Professional Development Centre and a Female Development Programme for higher education. It has also established prototype schools in order to enhance the quality of female education in the Northern Areas. These schools

also concentrate on co-curricular and extra-curricular activities in addition to the curricular activities.

5.1.4. Pakistan Education Council (Al-Mustafa Schools)

The Pakistan Education Council has set up a chain of schools called the Al-Mustafa Model schools. There are a total of 1038 students with a staff of 37 teachers.

5.1.5. Al-Azhar Model Schools

The local community established the Al-Azhar Primary School in June 1990 to meet the needs for an English medium school in the Northern Areas, which has been upgraded, to higher secondary school. In 1997 a commerce college was also set up under the same banner.

5.1.6. Marafi Foundation Pakistan

The Marfi family of Kuwait established the Marafi Foundation under which several projects are being operated. The main projects of the Foundation include establishment of a hostel in Karachi, for students from NA who intend to pursue their higher education in the city, provision of financial aid to professional students, establishment of vocational schools for women in Khaplu, and training of midwives, doctors and dispensary staff.

5.1.7. Religious Schools

In the Northern Areas every sect has its own system of religious education. Some religious institutions are run independently by Trusts, while others rely on donations.

Some institutions have a centralized system and uniform syllabus throughout the country. Most significantly, they are present in the remotest areas where even the government schools have not been set up. Although NACS has been careful in having too close a relationship with these institutions due to the sensitive situation created by communal tensions in the area, representation of these institutions has been ensured on the basis of sectoral interest groups and roundtables.

The representation of religious schools in the interest groups is very limited and will not be enough to provide an opportunity to these institutions to play their role as intermediaries in fostering awareness about sustainable development principles. There is a dire need to initiate linkages with religious institutions and the clergy in order to integrate environmental concerns into their programmes. This can best be achieved by giving them the understanding that environmental messages are not in contradiction with popular Islamic teaching but in fact are reflections of these.

5.2. Teacher Education

5.2.1. College of Education, Gilgit

The provision of proper training enables teachers to make their teaching more effective. For this purpose, the College of Education, Gilgit offers Certificated Teacher (CT) Programme, Primary Teaching Certificate (PTC) and Bachelors in Education (B.Ed) courses to pre/in-service teachers. Another college was started in

1999, for female teachers in Skardu district, under the Northern Areas Education Project (NAEP). Initially this College provided 8 months training to senior female teachers in order to develop them as master trainers. Now, 24 female in-service and pre-service teachers have completed the PTC course. The College is currently being run in a hired building while construction of the campus is underway.

The NA Education Department may consider replacing the CT and PTC courses with the Diploma in Education course being implemented by the Punjab University.

5.2.2. Other Teacher Education Colleges

The Aga Khan Education Services (AKES) also arranges training programmes for the teachers of Diamond Jubilee Schools. The Professional Development Centre (PDC, an extension of the Institute for Educational Development, (IED, AKU Karachi) is extending short term training courses to the teachers.

5.3. Non-Formal Education Sector

5.3.1. Social Welfare Office Northern Areas

The Social Welfare Office is working in the field of adult education in addition to a number of other activities. It started an Adult Education Programme in the Northern Areas in 1982-83. Presently, 2 permanent centres, one for male and the other for female are functioning there. Both centres have two teachers each.

5.3.2. Aga Khan Health Services Pakistan (AKHSP)

The Aga Khan Health Services Pakistan, a renowned NGO working in the health sector started working in the Northern Areas in 1974. It developed a strong structure of extension workers including Community Health Workers and Lady Health Visitors (LHV) at the grassroots level. Through these extension workers AKHSP promotes health education by arranging special sessions at the community's doorsteps. Further training programmes are being arranged intermittently for senior LHVs and Field Directors.

5.3.3. Prime Minister's Programme for Family Planning and Primary Health Care

This programme was launched in 1994 and is presently being implemented in all 5 districts of the Northern Areas. Its objectives are to address the Primary Healthcare needs of the communities, bring about community participation, improve the utilization of health facilities and expand Family Planning Services. It has a total of 954 Lady Health Workers (LHW) working towards the achievement of these objectives.

5.3.4. Language Enhancement and Achievement Programme (LEAP)

The Language Enhancement and Achievement Programme (LEAP), a project of AKES provides short-term training courses with special emphasis on the English language. For these short-term courses both the Government and AKES nominate in-service teachers.

5.3.5. Naunehal Development Organization (NDO)

The Naunehal Development Organization (NDO) was established in 1985 to develop Health, Education and Environmental Services in the Northern Areas. It provides funds for 6 schools and has established 11 Literacy Centres for the women of Nagar valley to enhance the literacy rate of women. Over 600 women across Nagar are engaged in an adult literacy programme at these literacy centres.

5.3.6. Aga Khan Rural Support Programme (AKRSP)

AKRSP works for the social and economic development of the communities. It plays a vital role in mobilizing the community at the grass-roots level. One of its achievements is the mobilizing of women to participate in the social and economic development process through women organizations (WO). The forestry section of AKRSP Baltistan has started Adult Literacy Centres for the women of Baltistan. These centres provide education to hundreds of women.

5.3.7. Arts Councils

The Karakoram Arts Council, Gilgit Arts Council and other literary circles including Halqai Arbab-e-Zoq Gilgit attract a large number of people to stage shows and other entertainment programmes, providing fun and education simultaneously.

6. THE WAY AHEAD

To address environmental issues in the Northern Areas and to work towards the sustainable development of its people and resources it is necessary to have a strategic framework that outline interventions in this regard. The development of the NACS is one step in this direction. Environmental Education forms an essential part of the NACS as it is now understood that it plays an important role in raising awareness and changing people's attitudes towards the environment in addition to providing them with the capacity to take informed decisions. This Background Paper supports the overall sustainable development initiatives in the NACS through identifying EE activities and interventions. The following aims objectives and roles & responsibilities have been identified for EE.

6.1. Aim

To encourage informed participation and environmentally responsible behaviour for the sustainable development of the Northern Areas, by promoting environmental awareness and education.

6.2. Objectives and Strategic Interventions

6.2.1. To enhance the role of the formal/non-formal education sector for conservation and sustainable development:

- m Advocate and support the incorporation of environmental aspects into the initiatives of the education sector.
- m Support environmental capacity building initiatives of the formal and non-formal education sectors.
- m Support and encourage the education sector to develop follow-up mechanisms to assess teachers and their ability in delivering the acquired environmental knowledge to the target groups.
- m Support the establishment of environment clubs, boy scouts and girl guides organisations in educational institutions of NA.
- m Support and encourage environmental extra/co-curricular activities in the formal and non-formal education sectors.
- m Work with different forums (Arts Councils, literary circles etc) to develop awareness raising programmes with special reference to the environment.

6.2.2 To incorporate environmental aspects and sustainable development approaches in the curriculum and training programmes:

- m Undertake advocacy with the Curriculum Wing of the Education Directorate under the Northern Area Education Project (NAEP) to ensure the incorporation of environmental aspects into the curriculum
- m Encourage and provide assistance to the Curriculum Wing and the private education sector in designing and developing supplementary material for classroom teaching.
- m Support textbook writers to develop EE material to be incorporated into the curriculum.
- m Support the incorporation of environmental education as a permanent teaching component in the College of Education Gilgit
- m Encourage the education colleges to design short/long term environmental courses for pre-service and in service teachers.
- m Support the Education Directorate and the NGOs working in the education sector in the development of teaching material for pre-service and in-service trainee teachers e.g. PTC/CT/FBT/B.Ed.
- m Promote integration of environmental education into the curriculum and training programmes of the private, non-formal sectors and religious institutions.

6.2.3. To build the capacity of stakeholders for effective implementation of the Environmental Education

Background Paper:

- m Assist and encourage the development of EE master trainers in all educational sectors.
- m Sensitise all key actors of the development process (line agencies, elected bodies, private sector) in order to develop an understanding about environmental concerns.
- m Build the capacity of extension networks of line agencies and NGOs for dissemination of EE to the grassroots level.
- m Support the development of linkages between environmental and EE initiatives of NACS and other projects such as MACP.

6.2.4. To encourage and assist in building cross-sectoral linkages with all sector background papers of NACS:

- m Facilitate all NACS background papers to incorporate EE as a cross-cutting theme in order to assist in awareness raising activities
- m Ensure the flow of effective communication between all NACS roundtables and interest groups.

6.2.5. To ensure incorporation of gender related issues in all sectors of education:

- m Ensure gender sensitivity in developing environmental education material
- m Ensure participation of women in NACS fostered forums and in NACS related programmes on environmental education.

6.2.6. To ensure continuous support and input from all stakeholders during the formulation and implementation of Environmental Education

Background Paper:

- m Establish and support the Environmental Education Roundtable comprising of representatives from education, media, NGOs, clergy, academicians, educationists and from other roundtables to discuss education and awareness raising issues
- m Ensure flow of communication between the Roundtable and all stakeholders
- m Support the development of a monitoring and evaluation mechanism for the Roundtable to ensure the effective implementation of the Background Paper.
- m Assist the process of creating ownership for the Roundtable, between Government and other partners.

6.3. Roles and Responsibilities

6.3.1. Northern Areas Administration

The NACS Support Project is the initiative of the Planning & Development Department (P&DD) of the Northern Areas Administration (NAA); therefore, the P&DD has a primary role in the process of strategy formulation and implementation. The continuous support and co-ordination of NAA will facilitate all relevant key players (line departments, NGOs, private sector etc.) to identify their responsibilities. It would also assist them to coordinate their efforts in the development of an action plan for implementation, in light of the guidelines provided by the Education Background Paper (one of the components of NACS). In addition, the NACS Support Project has fostered a forum (Education and Communication Interest Group/Roundtable) to seek input from stakeholders and to ensure their active participation in the formulation and implementation process. The Northern Areas Administration's acknowledgement and support in terms of notification will develop ownership for the Roundtable among all governmental and non-governmental agencies.

6.3.2. Planning and Development Department

The P&D Department is leading the strategy formulation and implementation process. The responsibility of overall development planning, financing and monitoring of the developmental activities of the Northern Areas rests on the P&D Department. In this scenario, it has to play a fundamental role in the integration of environmental issues in the development plans through the procedures of project screening and approvals of PC 1, 2, 3, and 4. Similarly, it can ensure the adoption of the principles of sustainable development in the projects recommended by the Northern Areas Council.

The Environment Section can assist all line departments in coordinating their efforts towards achieving the objective of sustainable development of the Northern Areas by providing a continuous feedback from the Education/Communication Roundtables.

6.3.3. Department of Education

The Education Department of the Northern Areas is endeavouring to implement the Education Policy of the Government. The new emerging concepts in development education are being duly accommodated. The Education Department has formed partnerships with various international organizations, as a result of which, the Northern Education Project has been launched. Through this project a number of initiatives including curriculum development, teachers training and material development have been undertaken. The NACS-Support Project has extended assistance for the incorporation of environmental issues into the project.

Although, the Education Department is aware of the importance of integrating newly emerging concepts in education, it has to work proactively to accommodate them at the policy level. Some of the initiatives being taken by the Department are as under:

6.3.3.1. Integration of environmental aspects into curriculum

The primary class curriculum in the Northern Areas is being redeveloped on an experimental basis under the NAEP project. The Education Department and the NACS Support Project have jointly arranged training workshops for curriculum developers so that environmental education material can be incorporated in the curriculum.

The task of the Education Department now is to get this curriculum approved by the Federal Bureau of Curriculum, Islamabad. Another important step would be to institutionalise the integration mechanism of environmental aspects into the entire curriculum development process. Likewise, another project can be developed to take forward the curriculum redevelopment process to higher secondary classes.

6.3.3.2. Integration of environmental education in the College of Education

The College of Education, Gilgit offers Primary Teachers Certificate (PTC), Certificated Teachers (CT) and Bachelor of Education (B. Ed) courses of one-year duration to pre-service and in-service teachers. Providing specific training in environmental education to the instructors would directly benefit the trainees and ultimately their students. The Teacher's Manual (jointly developed by IUCN Pakistan and the College of Education, Gilgit) has been introduced in the College on an experimental basis to facilitate the integration of environment into classroom teaching.

The Teachers' Manual needs to be modified in order to make it more effective for instructors. Furthermore, a permanent follow up mechanism is needed, which can be pursued during the teaching practice of the trainees. This exercise will help in assessing the performance of the trainees, thus, providing feedback for further improvements.

6.3.3.3. Integration of environmental education with Field Based Training(FBT) Programme

About 80 master trainers are based in all five districts of the Northern Areas who impart training continuously to the teachers. This programme is initiated under

NAEP; and AKES is collaborating in the training of the master trainers. The integration of EE into the training programmes of master trainers will not only facilitate the process of EE transmission to the teachers, but will also compliment the parallel efforts in this respect.

6.3.3.4. Human resource development

Since the last two years the Education Department has initiated the process of developing resource persons within the Department, in collaboration with NAEP, AKES and NACS-Support Project. These efforts to an extent have overcome the problem of lack of master trainers to deliver environmental education. However, in the wake of the recently developed curriculum and keeping in view other activities mentioned above, more attention needs to be given to initiatives like Training of Teachers and Instructors of College of Education Gilgit.

6.3.4. NGOs

All NGOs/organizations/projects such as AKES, The British Council and DFID working in the education sector would need to channel their efforts towards the integration of environmental issues into their teaching and training programmes. The strength and resources of other organizations must also be examined before embarking upon any activity.

The Steering Committee for the Northern Education Project (NEP) can play a very important role in consolidating the EE initiatives taken by different organizations. This will help in efficient resource use, by avoiding duplication of activities.

6.3.4.1. WWF Pakistan

WWF has broadened the scope of its EE activities in Northern Areas through DFID and EC projects. In addition, IUCN Pakistan has sub-contracted the Mountain Areas Conservancy Project's (MACP) EE component to WWF Pakistan for implementation.

6.3.5. EE Interest Group/Roundtable

The roundtable (introduced in NCS and SPCS) proved to be a good mechanism for greater involvement of stakeholders in the formulation and implementation of the strategy. Basically this forum works like a think-tank, giving policy level recommendations to governmental/non-governmental agencies and for conflict resolution.

The roundtable can identify, generate and mobilize resources required to address the gaps/needs of the formal/non-formal education sectors regarding environmental education. It can ensure and oversee the integration of themes such as gender, in the programmes of the education sector. Similarly, it can monitor activities in order to bring cohesion into the efforts made by different organizations towards the promotion of environmental education. Moreover, communication with other roundtables will create a synergy in the activities.

The interest group/roundtable can develop a mechanism for monitoring and evaluation during the implementation of the Background Paper. This mechanism will ensure the incorporation of feedback from stakeholders and lessons learned into the Paper.

However, the effectiveness and recognition of the roundtable in concerned quarters will mainly depend upon the members' involvement. One of the recommendations is to make the composition of the Roundtable comprise of high quality professionals. This is because a professionally developed forum can provide guidance and assistance not only to the formal and non-formal education sectors, but also to all organizations where the need arises. The quality output will also pave the way for the Government's notification of the roundtable, binding all governmental and non-governmental organizations to consider the recommendations made by it.

6.3.6. Non-Formal Sector

The NGOs working in non-formal education sector contribute a lot in raising awareness in the NA. The effect of these efforts can be multiplied by integrating environmental aspects into their programmes. For this purpose the development of proper linkages between the EE Roundtable and other initiatives and projects working in environmental education would be needed, in order to seek professional input.

6.3.6.1. Print/Electronic Media

As an informal channel of education the media would play a pivotal role in the implementation of the EE Background Paper. Its role would entail awareness raising, sensitisation and information dissemination through various programmes such as talk shows and dramas.

6.3.6.2. Private Sector

The private sector, especially the industrial sector, in the Northern Areas is at a NAcent stage as compared to any other part of the country. The integration of environmental concerns at this stage would help to prevent the depletion of natural resources and preserve the beauty of the NA from the expected hazards of economic activities.

6.3.6.3. Local Bodies

Local bodies have gained prime importance at the grassroots level in light of the Government's devolution plan. These bodies would be responsible for proposing development projects and therefore, would play an important role in ensuring that sustainable development approaches are adopted in developing new projects.

6.3.6.4. Pakistan Army Education Corps

The Pakistan Army is providing enormous support to the Government's effort for increasing literacy and increasing the quality of education. It manages several Army Public Schools in the Northern Areas that cater to hundred of students. Co-curricular activities are an important component of the education system in these institutions and therefore it is essential that environmental education is incorporated in these.

6.3.6.5. Judiciary

Judges have also been identified as potential implementers of the NACS particularly with respect to the urban environment. The development of linkages

between the NACS Support Project and judiciary would help in facilitating its implementation.

6.4. Conclusion

The local communities of the Northern Areas are heavily dependent on natural resources for their livelihood. As such the degradation of the environment is likely to have serious implications for them. However, there is no quick or easy solution to his problem. It requires comprehensive long-term efforts and simultaneous actions on all fronts.

Environmental education and awareness raising programmes can play a major role in seeking appropriate solutions to environmental problems and ensuring informed participation of the people for long-term change. Keeping this in mind, the objective of the NACS EE Background Paper would be to raise awareness of the people regarding environmental issues, build capacity of key stakeholders and develop linkages with on-going initiatives and other background papers.

The overall goal is that the mainstreaming of environmental issues, capacity building and stakeholders' participation should ultimately lead towards the sustainable development of the Northern Areas.

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