



Northern Mountain Conservation Programme

A R E T R O S P E C T I V E

1996-2008

Northern Mountain Conservation Programme

1996-2008

A Retrospective

Dedication



This Retrospective Report is dedicated to our esteemed leaders, friends and colleagues who gave their lives on 23 September 2006 for their belief in the positive conservation of Nepal.

We acknowledge all 24 souls that lost their lives that day and it is with special affection that Ms Yeshi Lama will be remembered by the people of Dolpa for her smiling face, understanding manner and untiring work for the Northern Mountain Conservation Programme.



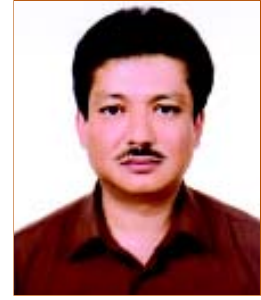
Foreword

The Department of National Parks and Wildlife Conservation, in collaboration with WWF Nepal, has been involved in the conservation of natural communities of flora and fauna, such as medicinal plants and the endangered snow leopard, in Shey Phoksumdo National Park since 1996 through its implementation of the Northern Mountain Conservation Programme (NMCP).

The Department is dedicated to the conservation of a network of 16 Protected Areas - national parks, wildlife reserves, conservation areas, a hunting reserve, and buffer zones that cover more than 19% of the total land mass of the country. We are also dedicated to the protection of all natural communities of flora and fauna including many rare, threatened, endangered and endemic species \ in our Himalayan country.

We acknowledge the work that WWF is doing to help us conserve our nature and build the capacity of local people to work towards the sustainability of their own neighbourhood landscapes. In particular, here we acknowledge WWF Nepal's work in Dolpa and Mugu, particularly the Shey Phoksundo National Park area and look forward to working with WWF Nepal in the years to come.

Shyam Bajimaya
Director General
Department of National Parks and Wildlife Conservation



Preface

Shey Phoksumdo National Park (SPNP) and buffer zone represent a unique trans-Himalayan landscape and ecosystem that harbours a rich diversity of medicinal and aromatic plants and wildlife including one of nature's most beautiful creatures - the snow leopard. But with beauty comes challenge and I am proud to say that WWF Nepal took up this challenge in 1996 along with the Department of National Parks and Wildlife Conservation (DNPWC).

In the years since the programme was first launched many achievements have been made in SPNP and its buffer zone. In addition, many changes have taken place in the country, not least political changes and the loss of the country's top conservationists and friends in 2006. Since the launch of the NMCP, we also experienced an armed-conflict, which at times affected our activities. In more recent times we have also seen the emergence of a "New Nepal" which we hope will bring peace and prosperity to the country, while enabling its citizens to preserve its wonderful and unique biodiversity and species for our future posterity.

I personally have been involved in the NMCP since its conception and inception. At that time I clearly remember that people were suspicious of outsiders and no one would voice their opinions, certainly not women. It took four or five years of our and our partner organisations' presence in Dolpa before communities and individuals were empowered to voice their concerns over their own rights and needs. Today the local people who survive on trans-Himalayan trade, pastoral activities and subsistence agriculture amidst a harsh climate and geography, have become true stewards of the biodiversity of area. To me this is the biggest achievement we have made - enabling local communities in this remote and rugged pristine wilderness to come forward and be counted.

I take this opportunity to acknowledge the support of our donors, particularly USAID; the Ministry of Foreign Affairs, Finland; the WWF Network (WWF-UK, WWF-Finland, WWF-US, WWF-Germany), Kadoorie Agriculture Aid Agency, SNV Nepal, Mr S Rankin, and CARE Nepal. I would also like to thank our partners, the Department of National Parks and Wildlife Conservation as well as our implementing partners and project staff, current and former; consultants; experts; friends, and well wishers for their continued support over the years. I make special reference to the project staff for their perseverance, dedication and hard work, ensuring the programme's success in making a difference in the conservation of biodiversity, even during the trying time of the armed conflict.

Anil Manandhar
Country Representative
WWF Nepal



Purpose of this Report

WWF Nepal works in one of the earth's most diverse landscapes, ranging from almost sea level to the highest point in the world. The variety of plant and wild life is staggering. As the years go by the challenges to preserve nature become almost as high as Mount Everest itself. Global warming, climate change and ever increasing anthropogenic interference have put untold pressure on our planet. While working within WWF's global strategy, we at WWF Nepal are fighting to build the capacity of every man, woman and child to preserve the riches they very often don't realise they are holding in their hands. One way we are doing this is by improving their livelihood and organisational capacities so that conservation of, for example, the endangered snow leopard, does not seem outwith their grasp. We are also supporting the government to realise the targets of its plans and strategies in biodiversity conservation. In addition, we are working at landscape level on our Global 200 Ecoregions, bringing governments together to help ensure the sustainability of the Himalayan Region.

This retrospective report brings you highlights of the Northern Mountain Conservation Programme, a programme that has spanned more than a decade of the most challenging of times in Nepal. While this report is not exhaustive, we hope it will give you a good idea of what has been achieved in the Shey Phoksundo National Park and buffer zone area of Dolpa and Mugu Districts.

This publication shares our lessons learned and gives some thoughts on the way forward and we hope you will take the time to read, internalise and, should you like, give us feedback on our past programme and future dreams.

December 2008

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About WWF



In almost five decades, the World Wildlife Fund has become one of the world's largest and most respected independent conservation organisations.

WWF's Mission Statement

To stop the degradation of the planet's natural environment and to build a

- Conserving the world's biological diversity;
- Ensuring that the use of renewable natural resources is sustainable, and
- Promoting the reduction of pollution and wasteful consumption.

With almost five million supporters distributed throughout five continents, WWF has offices in over 90 countries and can safely claim to have played a major role in the evolution of the international conservation movement. Infact, since 1985, WWF has invested over US\$1 billion in more than 12,000 projects.

WWF Nepal

WWF has been working in Nepal since the 1960s when it focussed on species conservation and research with strict law enforcement practices. WWF Nepal office was established in 1993. Today WWF Nepal integrates conservation with community development in an attempt to address issues of livelihoods of the people living near protected areas with the aim of involving them and enabling them to take a long term responsibility for conservation. Our focus is now on taking a landscape approach by building partnerships with donors, stakeholders, interested groups and local people.

At present, WWF Nepal's major projects link WWF's global priority to the conservation needs of Nepal. With the aim of strengthening cooperation with neighbouring countries and adopting a regional approach in biodiversity conservation to save the region's rich and varied biodiversity, we have already joined hands with the Government of Nepal and initiated coordination and cooperation with India, Bhutan and the Tibet Autonomous Region, sharing information on wildlife poaching and illegal trade in wildlife products in the trans-border areas.

About Our Partners

Working with us on the SAGUN Programme is CARE Nepal, a US based NGO who began working in Nepal in 1978. Today, CARE Nepal operates in 42 districts, with major focus on mid and far western regions, through 20 community development programmes which are wide ranging and promote equitable and sustainable livelihood by addressing the causes, rather than symptoms of poverty and social injustice. CARE Nepal works through both formal and informal partnership at multiple levels: with local NGOs; government agencies; communities; civil society groups; federations; networks, and the private sector. Partnership with local institutions is an important means of increasing the reach and sustainability of CARE programmes, while increasing the institutional capacity of partners. CARE's collaboration with the Nepal Government ensures that it's programmes complement national plans and policies.

NGO Partners

DESERT (Dolpo Education, Social, Environment and Research Team) is a local NGO working in the field of education and conservation running a Junior Ranger Programme in the schools of Dolpa and Mugu. DESERT works in partnership with the DDC and Government offices based in Dolpa.

DADTAG (Development Association of Dolpo Tourism and Generation) is a local NGO working for community development and tourism promotion.

Himali Jadibuti Sarokar Samaj is a Dolpa based local NGO, working for the promotion and advocacy of policy issues in relation to NTFPs and MAPs.

BDS-MAPS is a joint undertaking of IDE Nepal, Winrock International, ANASB, Lotus Opportunities and WWF Nepal, working in six districts. It has been in Dolpa for four years working on the promotion, cultivation and market linkages of NTFPs, as well as capacity building of NTFPs traders etc.

Sarbangin Bikas Sewa Samaj is a Dolpa based local NGO working in community development, infrastructure, poverty elevation and human rights.

FECOFUN Dolpa Chapter, a branch of a national level NGO, works in development of community forest, with a common forum of 62 FUGs in Dolpa, 18 BZFUGs in SPNP BZ. The Dolpa Chapter has worked with NMCP in forest management and capacity enhancement. Its national chapter works for good governance and advocacy in natural resource management.

HJSS (Himali Jadibuti Saroka Samaj) is a Dolpa based local NGO.

KIRDARC (Karnali Integrated Development and Research Centre) is a Karnali based local NGO works in all five districts of the Karnali Region especially in education, both formal and informal, capacity building, basic infrastructure support, human rights, advocacy and empowerment of marginalized community.

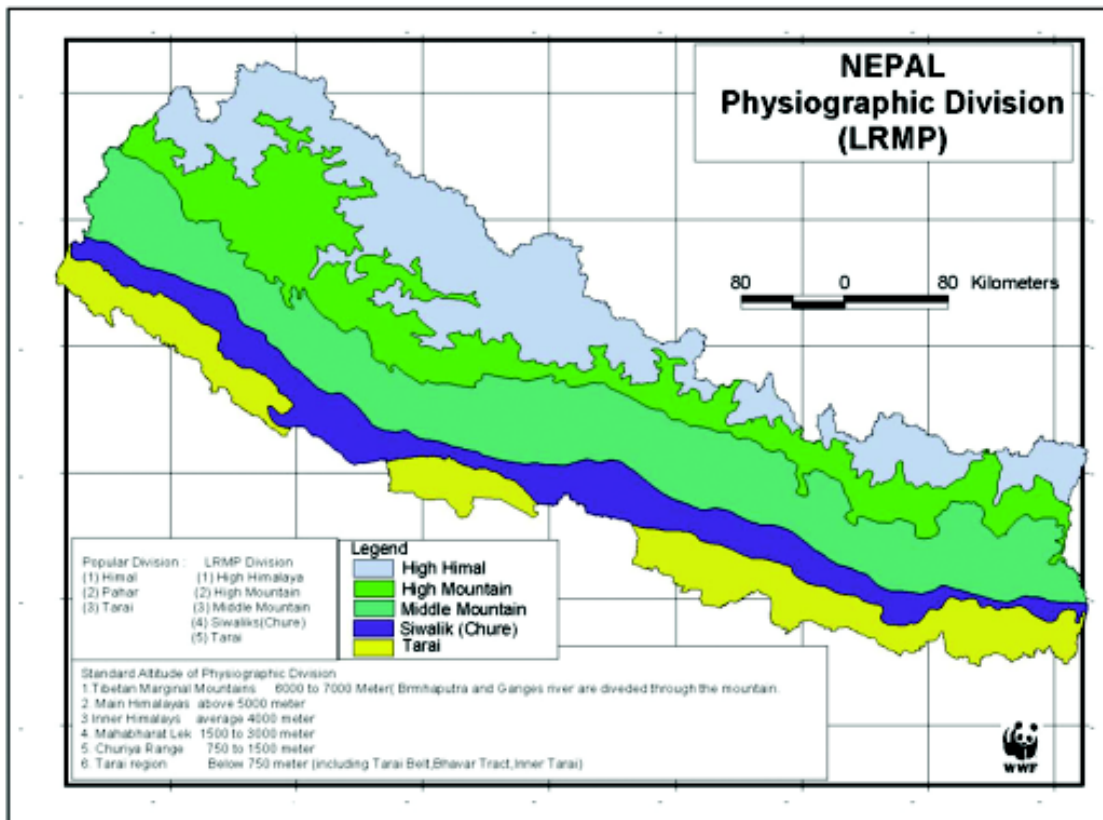
Himalayan Amchi Association is a national level NGO, working with WWF in the promotion of the Amchi tradition in Dolpa, cultivation and awareness of NTFPs/MAPs in mountain areas, development of an Amchi curriculum, advocacy for Amchi recognition etc.

Government Line Agencies (GLAs)

- Department of National Parks and Wildlife Conservation (DNPWC)
- Shey Phoksundo National Park
- District Development Committee, Dolpa
- District Forest Office
- District Health Office
- District Women Development Office
- District Agriculture Office

Abbreviations and Acronyms

ANASB	Asia Network of Sustainable Agriculture and Bio-resources
APU	Anti Poaching Unit
BDS-MAPS	Business Development Services, Marketing and Production Services
BZ	Buffer Zone
BZFUG	Buffer Zone Forest User Group
BZMC	Buffer Zone Management Committee
BZUC	Buffer Zone User's Committee
CBAPOU	Community Based Anti Poaching Operation Unit
CBO	Community-Based Organisation
DAD-TAG	Development Associations of Dolpo Tourism and Generations
DDC	District Development Committee
DESERT	Dolpo Educational Social and Environmental Reservation Team
DFO	District Forest Office/r
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forest
FECOFUN	Federation of Community Forest Users, Nepal
FUG	Forest Users Group
GLAs	Government Line Agencies
GIS	Geographic Information System
GON	Government of Nepal
ICS	Improved Cook Stove
IDE	International Development Enterprises
I/NGO	International/ Non-Governmental Organisation
ISLT	International Snow Leopard Trust
IUCN	The World Conservation Union
MAP	Medicinal and Aromatic Plants
NGO	Non Governmental Organisation
NMCP	Northern Mountain Conservation Programme
NPWC	National Parks and Wildlife Conservation
NTFP	Non-Timber Forest Products
PPI	People and Plant Initiative
PHPA	Public Hearing, Public Auditing
PRA	Participatory Rural Appraisal
PWBR	Participatory Well-Being Ranking
SPNP	Shey-Phoksundo National Park
SLCC	Snow Leopard Conservation Committee
THCC	Traditional Health Care Centre
UC	Users' Committee
UG	Users' Group
VDC	Village Development Committee
WHS	World Heritage Site
WWF	World Wide Fund for Nature



Nepal - Overview

Nepal has long been thought of as a fabled Shangrila where gods and men live together in harmony; both attracted to the beauty of the high mountains and the abundance of natural resources. In more recent times, however, men have somehow moved out of harmony with the rhythm of nature and it can be imagined that the gods are in despair as they witness the destruction of their handiwork. With high mountains to the north, middle hills and lowland Terai to the south and flowing rivers, snow mountains and a rich variety of plant and wildlife, in recent decades this underdeveloped country has experienced a population boom which is, literally, eating into its unique biodiversity.

Flora and Fauna

Because of the country's diverse topography ranging from almost sea level to 8,848m, there are over 6,500 known species of trees, shrubs and wild flowers. Fauna flourishes with a diversity of over 800 species of birds, being 10% of the world's species, and a host of mammals ranging from the magnificent Royal

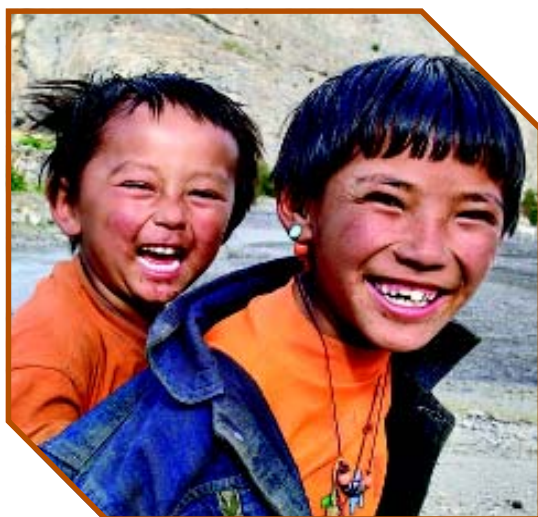
Bengal Tiger in the southern lowlands to the beautiful and rare snow leopard in the high mountains.

While the ever increasing human population means traditional forest and grazing areas are being cleared for agricultural land, it is also true that traditional, culture based systems of managing natural resources in the high mountains opens up the possibility to conserve flora and fauna.

People

The people of Nepal are as diverse as its landscape. Within the Himalayan zone the people are Mongoloid of Tibetan descent and are known in Nepali as Bhotiya or Bhote. With few exceptions, these people are Buddhist and have a similar culture to Tibetans. Indeed, people from Tibet have been trading and settling in Nepal for thousands of years.

In the western midlands the area is dominated by Khas, an Indo-Aryan people whose language evolved into present day Nepali. During the 12th century Bahun and Chhetris joined the Khas in these areas and the fluidity of that time allowed ambitious families



Innocent faces in Saldang School

to adopt higher castes, for example powerful Chhetris from among the Khas and Magar castes became Thakuris. Today, the Hindu, Bahun and Chhetris have spread throughout the country, and remain the most numerous.

The Terai, or flat lowland area, was virtually uninhabited until the 1950s due to its dense forest

lands which gave rise to diseases such as malaria. Tharus, the largest ethnic group in the Terai, are animist with no clear origin, one theory being that they originated from India during the time of the Mogul wars. Today the Terai is home to many migrants from the midhills, attracted by the wide expanses of, potentially agriculture, land. Tensions regarding ownership rights continue to this day.

Livelihoods

The majority of Nepalis still live off the land, owning or working on family run substance farms. In the mountains arable land is at a premium with many households only being able to produce sufficient food for five months in a year. In areas such as Dolpa, trading with Tibet and other areas in Nepal and pastoral activities have been the traditional means of livelihood. In more recent times, however, Tibet has access to goods from China, reducing their need for products from Dolpa. Other income opportunities are rare in mountain areas, and may include gathering of local NTFP (non-timber forest products) such as medicinal plants, and migration for work elsewhere.

Nepal Facts

Data Profile	2000	2005	2006	2007
World view				
Population, total (millions)	24.42	27.09	27.64	28.11
Population growth (annual %)	2.3	2.0	2.0	1.7
Surface area (sq. km) (thousands)	147.2	147.2	147.2	147.2
GNI per capita, PPP (current international \$)	810	960	1,010	1,040
People				
Fertility rate, total (births per woman)	4.0	3.1	3.1	..
Adolescent fertility rate (births per 1,000 women ages 15-19)	124	118	116	..
Contraceptive prevalence (% of women ages 15-49)	37	..	48	..
Births attended by skilled health staff (% of total)	12	..	19	..
Mortality rate, under-5 (per 1,000)	86	63	59	..
Malnutrition prevalence, weight for age (% of children under 5)	..	..	39	..
Primary completion rate, total (% of relevant age group)	66	75	76	..
Ratio of girls to boys in primary and secondary education (%)	77	90	93	..
Environment				
Forest area (sq. km) (thousands)	39.0	36.4	..	..
Agricultural land (% of land area)	29.3	29.5	..	..
Annual freshwater withdrawals, total (% of internal resources)	..	..	..	..
Improved water source (% of population with access)	83	..	89	..
Improved sanitation facilities, urban (% of urban population with access)	..	..	..	..
Energy use (kg of oil equivalent per capita)	42	..	45	..
Electric power consumption (kWh per capita)	334	338	..	..
Economy	58	70	..	..
GDP (current US\$) (billions)				
GDP growth (annual %)	5.49	8.18	8.94	10.21
Inflation, GDP deflator (annual %)	6.2	3.1	2.8	2.5
Agriculture, value added (% of GDP)	4.5	6.5	6.7	8.6
Industry, value added (% of GDP)	41	36	35	34
	22	18	17	17

Source: World Development Indicators database, September 2008



2.1 Depletion of Natural Resources

As mentioned, farming has long been a tradition in the lowlands and hills of Nepal, but in the high Trans-Himalaya mountains, a more nomadic traders life was the norm. Being in a rain shadow, the land of the Trans-Himalaya, or Northern Mountains, is mostly dry and barren yet it still boasts a diverse vegetation consisting of juniper, birch and willow trees; wild roses; ferns, and rhododendrons among others. Over 400 species of medicinal and aromatic herbal plants are found, including the caterpillar fungus Yarsagumba. The medicinal plants are a valuable trading resource and have formed the basis of local health practices and have provided income for generations. Today these resources have become ecologically vulnerable due to over harvesting, particularly by illegal traders, creating species imbalance and increasing the potential for soil erosion on steep hillsides.

The felling of trees for fuel causes both soil erosion and severely depletes forests. This has not gone unnoticed as household members, usually women, have to travel further and further afield to obtain the necessary fuel wood and animal fodder. In fact, in Upper Dolpa, timber for building houses is

It is estimated that each of the 900 households in the area will cut down one green tree every year to obtain "*diyalo*", or tapers from the core of the tree, to use for light.

transported by yak for many days from the more forested lower part of the district.

2.2 Conflict between Humans and Wildlife

Over 30 species of mammals are to be found in the Northern Mountains including predators such as snow leopards and grey wolves. As populations grow and the habitat of these animals and their prey is encroached, conflict between herder and predator increases. Until recently the only solution the herders could see was to kill the predators in order to avoid further kills or out of anger and frustration at losing valuable livestock.

2.3 Traditional Versus the Modern

Livelihoods

In areas where trading is the traditional livelihood and where a barter system is still used, as throughout much of the Trans-Himalaya area, the amount of trade done these days appears to be reducing with an

"When the Shey Phoksundo National Park was created, the power was taken from the Gompa, yet the national park rules were not enforced. The park needs to make 'policemen' who will enforce the rules relating to conservation. But for the best results, if Buddhist philosophy was introduced in schools, or a specific school of Buddhism created, incorporating the history of Dolpa, then it would help conservation in the future. Relating religion to conservation is a very good idea," **Rimpoche Tulko, Namgunm Monastery, Dolpa**

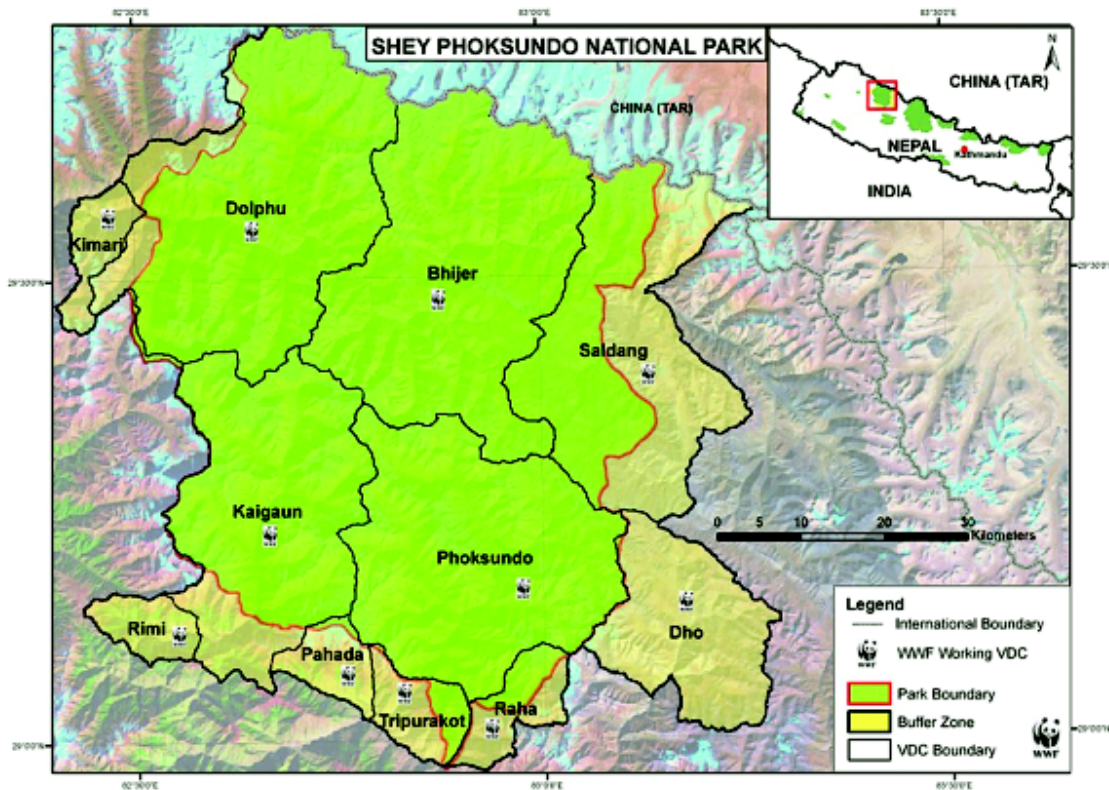
increase in industrialisation in the traditional market areas (such as China and other parts of Nepal). Along with Trans-Himalayan trade, pastoral activities have largely supported the people of the mountains. However, in recent years, patrol activities have been jeopardized because of the degradation of pastures and the ban imposed by the Autonomous Region of Tibet on grazing of livestock across the border from Nepal to Tibet. It is therefore necessary to find some other sustainable income. Unless that happens, and until households rise above subsistence level, it is very difficult to promote conservation of valuable plants, predatory animals and fuel trees.

Tourism has been taking place in Nepal since the 1960s and as tourists become more adventurous the government has opened up more and more areas, including remote mountain areas. However, despite the increase in the number of tourists coming to Dolpa, locals are not gaining enough benefits from this industry due to several reasons including lack of infrastructure to attract large numbers of visitors, and lack of organised facilities such as porters and lodges. In addition, the high permit fees set by the government keep the numbers of tourists relatively low and limited to organised groups, who normally bring all their resources, including food, with them.

Decline in Traditional Knowledge and Practices Related to Natural Resources Management

The unique culture of the people of Dolpo was developed as a survival strategy; lifestyle, traditions and customary practices and livelihoods are a manifestation of the way people interact with and use their knowledge of their immediate environment. However, erosion of traditional rules and laws has created both conflict and confusion. In the distant past, the King of the area would have had a say in the conservation of forests. Later that responsibility was passed to the lamas in the Gompas (monasteries). Both these "caretakers" threaded into daily lives a respect for all life, including predators, and a fair system of felling trees and collecting plants as per the need of each household or community. In modern times, the caretaker responsibility was taken by the government in the form of creating conservation areas such as national parks and reserves whose job it is to protect the biodiversity of the area. People in remote areas, having had little experience of the central government, do not have the same incentive to follow the government's rules and regulations, leading to greater deforestation, over-harvesting and human/ wildlife conflict.





3.1 Dolpa District

This mysterious "hidden land" borders and has strong cultural ties with Tibet; indeed the original Dolpa people came from the upper Ngari¹ Region of Tibet. The name Dolpa itself comes from the Tibetan word "dol" which means overflowing. This refers to the abundance of natural and mineral resources as well as to its rich religious significance.

Dolpa District is not only rich in biodiversity but is splendid in culture with many sacred and auspicious places, surrounded in myth and a rich Buddhist tradition. Self-governing before the unification of Nepal, the people of Dolpa are still fiercely independent, partly because of their geographical location; far from the central government. Traditionally these poor herders and traders depend on the land for meadows and pastures, forests and non-timber forest products (NTFPs). In more recent years the pressure on the land has been growing due to an increase demand for house timber; an increase

in the number of outsiders harvesting medicinal plants such as Yarsagumba and the closing of traditional pastures in Tibet (caused by an end of the China/ Nepal agreement in the mid 1980s). There has also been an increase in conflict between predators and livestock, leading to retaliation killings and a reduction in the numbers of rare species such as snow leopard. Poaching of rare species and rare plants is also a worrying trend.

Animal husbandry is traditionally very important with the number of livestock reflecting the wealth of the family. At the high altitudes yaks are valuable as they are adapted to the harsh, cold environment and yak caravans can still be seen trading across the border to Tibet and into other Nepali mountain area, exchanging salt and medicinal plants for food grain.

Medicinal plants are economically important for trade, as well as being used by local Amchis (traditional Tibetan doctors) to treat ailments. This ancient art of healing is based on the herbs and

¹ "Dolpo The Hidden Land", Amchi Namgyal, SNV, Kathmandu, 2005

natural products of Tibet and the high Himalayas. Diagnosis is by pulse and urine analysis and treatments are based on the Amchis assessment of the functioning of the three humours: wind, bile and phlegm, imbalance of which brings about illness. It combines the teaching of Buddha with a holistic approach to healing both the body and the spirit. A qualified Amchi must not only have knowledge of the herbs and medicinal plants but of religious philosophy, astrology and traditional painting.

The majority of the population in Dolpa are Buddhists but it is also one of few remaining areas in the world where the Bon religion is practised. Bon and Buddhism co-exist; Bon being practised widely in Tibet before Buddhism took hold. In the early phase, Bon had similarities with animistic shamanist² religious forms. In its current form the Bon religion still places greater emphasis on spirits and deities than on philosophy and retains its profound respect for nature and emphasis on physical, natural and spiritual environments. To this day there also remains an on-going debate as to whether the Bon religion is the origin of Amchi medicine -Amchi Sherab Tenzin Lama from the Samling Bon Monastery, Dolpa refers to Amchi medicine as a Bon "hidden treasure".

Table 1 | Landuse Types in SPNP

Shey Phoksundo National Park		
S.N.	Landuse Type	Area (ha)
1	Forest	11,355
2	Shrubland	1,468
3	Grassland	122,260
4	Rocks/rockoutcrops	182,072
5	Others	38,345
	Total	355,500

3.2 Mugu District

Two of the Village Development Committees (VDCs) NMCP is working in fall in Mugu District. Kimri and

Table 2 | District Indicators

	Life Expectancy	Adult Literacy	Years of Schooling	CDP per Capita (\$)	HDI	Ranking (75 Districts)
Nepal	60.98	48%	2.75	1,310	0.471	
Kathmandu	69.57	64%	4.41	1,862	0.772	1
Dolpa ³	52.52	29%	1.59	1,279	0.371	67
Mugu	44.07	28.1%	1.78	1,104	0.304	75

Source: Nepal Human Development Report 2004 Empowerment and Poverty Reduction, UNDP (<http://www.undp.org.np/publication/html/nhdr2004/annex2.pdf>)

² <http://www.tapriza.org>

³ It should be noted that there is considerable difference in conditions, physical and indicatory between upper and lower Dolpa which are not reflected in district wise figures and indicators.

Dolphu are part of SPNP and have a similar topography to the other VDCs we are working in Dolpa.

Mugu district is sparsely populated and covers 21,351 km². Like Dolpa, many people rely on animal husbandry and trading for their livelihoods.

3.3 Shey Phoksundo National Park and Buffer Zone

Covering over 3,555 km² and gazetted in 1984, this is Nepal's largest national park and the only one whose micro-climatic condition, ecology, ecosystem and flora and fauna resemble the Tibetan desert type. With altitudes ranging from 2,000 to 6,883 metres, the park and its buffer zone have a sub-temperate to Trans-Himalayan climate which produces 15 forest types, 196 species of birds, 32 species of mammals, 28 species of butterflies, six species of reptiles, and more than 400 species of medicinal plants. The park takes up 7.6% of the total area of Dolpa District, with 30% of the total forest coverage being found here.

Shey Phoksundo National Park (SPNP) is extremely valuable ecologically as it provides the main habitat for the endangered snow leopard, musk deer, wild yak, and Tibetan antelope as well as a diverse floral life. Other animals found in the park are blue sheep, the main prey of the snow leopard; goral; Himalayan tahr; wolf; jackal; Himalayan black bear; jackal; Himalayan weasel; Himalayan mouse hare; musk deer, and langur and rhesus monkeys. Rich in bird life, the Imphean pheasant, blood pheasant, cheer pheasant, and snow partridge are just a few of the more common birds to be found there.

The areas which fall directly outside national park boundaries are just as rich in flora and fauna as the parks themselves. These areas are commonly called buffer zones and have their own conservation rules and regulations.



Phoksundo Falls

The fact that SPNP also encompasses one of WWFs Global 200 Ecoregions, namely the Western Himalayan Temperate Forest, makes this area more critical.

3.4 Dhorpatan Hunting Reserve

Covering an area of 1,325 km² of Baglung, Myagdi and Rukum Districts, Dhorpata is Nepal's only hunting reserve. Declared as a protected area in 1984, Dhorpatan is famous for blue sheep hunting. Ghoral, serow, Himalayan thar, barking deer, and wild boar are also hunted here.

Heavily dependent on forests for energy, fodder and timber, the people lack awareness about sustainable natural resource use and are dependant on ancient patterns of subsistence which are now taking their toll on the ecosystem. Although little information regarding endangered and other species exist, is clear is that competition between wild ungulates and livestock for pastures has resulted in widespread habitat degradation. For example, in the summer

approximately 1,300 households use Dhorpatan Valley grasslands to graze their livestock.

With similar conservation needs as Shey Phoksundo National Park, NMCP included Dhorpatan Hunting Reserve in its initial activities. Unfortunately, during 1998/ 99 this area became insecure due to the armed conflict and the Reserve staff were evacuated, legal hunting suspended and all MNCP activities ended.

Phoksundo Lake - Ramsar Site

On September 23, 2007 (the first anniversary of the demise of our leaders, friends and colleagues), Phoksundo Lake was declared a Ramsar Site. The is proof of the lake and surrounding area's rich contribution to the biodiversity of the earth.

The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an inter-governmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 1,822 wetland sites, totalling 168 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance.



Table 3 | List of VDCs and Beneficiaries

S.N.	VDC	Female	Male	Total	Total HHs
1	Phoksundo	251	258	509	94
2	Saldang	877	867	1744	406
3	Vijer	215	214	429	84
4	Dho Tarap	392	389	781	184
5	Raha	339	353	692	44
6	Tripurakot	1,054	1,038	2,092	217
7	Pahada	864	828	1,692	123
8	Kaigaon	727	694	1,421	237
9	Rimi	587	626	1,213	194
10	Kimri (Mugu District)	450	463	913	224
11	Dolphu (Mugu District)	363	407	770	137

4 Figures from WWF 1997



4.1 Northern Mountains Conservation Programme (NMCP) 1996 - 2007

In 1996, WWF Nepal in collaboration with the Department of National Parks and Wildlife Conservation (DNPWC) of the Government of Nepal started the Northern Mountain Conservation Programme, an Integrated Conservation and Development Programme (ICDP) funded by USAID. Firstly designed to safeguard the biodiversity of the wild and remote area of Shey Phoksundo National Park, in keeping with the focus, growth and development of WWF's global strategies, the Northern Mountain Conservation Programme (NMCP) matured into an inclusive programme focussing on facilitating local management of natural resources and improving the living conditions of local communities while safeguarding the regions unique natural heritage.

Programme History

To conserve the rich biodiversity of the area and to improve the socio-economic conditions of the communities living in the buffer zone, the NMCP was launched in 1996 by the Department of National Parks and Wildlife Conservation with technical and financial support from WWF Nepal and under a Grant agreement with USAID for an initial period of five years (Sept '96 - Sept '01). Covering Shey Phoksundo National Park (SPNP), which extends over nine VDCs of Dolpa District and two VDCs of Mugu District, the NMCP working area also included the buffer zone and the Dopatan Hunting Reserve.

The Early Years - A Blueprint

During the first years the programme concentrated on establishing and strengthening plantations; women's groups; eco clubs; nurseries, and tourist camp sites. With only two project staff on site, vast areas to cover; high cost and irregularity of permits

for foreign experts into Upper Dolpa, the early challenges were many. But the blueprint was set for the following years.

From Strength to Strength

Through its work to help the Government of Nepal conserve the biodiversity of the Himalayas, NMCP went on to strengthen institutions; promote sustainable forest and NTFP management to meet local livelihood needs; raise conservation awareness; support the formulation and implementation of the SPNP BZ Management Plan, and put in place species specific plans such as the Snow Leopard Conservation Action Plan.

With each year, the programme was revised and reshaped based on lessons learned in the field, taking advantage of and improving existing local strengths as well as introducing sustainable, economic viable, culturally and socially acceptable activities.

Initiatives

NMCP comprised of the People and Plant Initiative (PPI), which addressed conservation and development issues related to the use of plant

resources during the period 1997-2004, and SAGUN (Strengthened Actions for Governance in the Utilization of Natural Resources) which aimed at building the capacity of local communities in natural resources governance. SAGUN began in 2002 and is scheduled to end in June 2009. Unfortunately, due to heavy Maoist influence, all activities in Dorpatan Hunting Reserve ended during the period 1998-99.

4.2 Objectives

4.2.1. Overall Objective

Facilitate local management of natural resources and improve living conditions while safeguarding the region's unique natural heritage.

4.2.2. Specific Objectives

Conserve the biodiversity of SPNP by strengthening the capabilities of the local users groups, non-governmental organizations (NGOs) and SPNP staff to carry out integrated development and conservation initiatives in the protected area and buffer zone through:-



NMCP Project Components

Forest Conservation

Sustainable forest management to improve habitat quality in forest and alpine meadows in SPNP BZ and sustain local livelihoods through community forestry, alternative energy and forest restoration, including natural regeneration and plantation.

Institutional strengthening and coordination to strengthen the capacity of SPNP BZ and affiliated institutions for effective management of SPNP BZ and enhance coordination among line agencies and organisations working at all levels in the region.

Species Conservation

Reduce the threats to the snow leopard, prey species and habitat through scientific research and monitoring, community-based conservation, including anti-poaching, human/ wildlife conflict mitigation and conservation awareness.

Sustainable Development

Bringing livelihood benefits to local communities in SPNP BZ, particularly poor and marginalized households, so as to reduce pressure on natural resources for livelihoods as well as to achieve their participation in conservation.

Communication and Education

Increasing conservation awareness among the local communities, leading to positive attitudinal and behavioural changes that support conservation, and to document best practices and lessons learned.

Policy and Advocacy

Creating an enabling environment that supports the linkages between sustainable livelihoods and landscape level conservation in the NMCP region.

- Promoting sustainable economic growth that increases local incomes
- Strengthening management systems of medicinal plants and primary health care to achieve sustainable use of plant resources
- Improving coordination and collaboration among various stakeholders for strengthened governance of natural resources conservation in the SPNP and buffer zone

4.3 Programme Components

The Northern Mountain Conservation Programme activities are categorised into five area components, all of which are interlinked and crucial to the overall objective of the Programme. Details of the activities these components are found in section 6.2 "Programme Activities".



5.1 Forest Conservation

From the beginning, the NMCP has been working to increase and conserve the forest coverage in Dolpa. Through encouraging nurseries and plantations and building communities' abilities to manage and mobilize resources through Buffer Zone Forest User Groups (BZFUGs) and Buffer Zone User Committees, NMCP has reversed the degradation of the landscape. By providing improved cooking stoves, solar lighting and micro-hydro plants, each household is contributing to saving the local forests by simply not having to cut down as many trees for heat and light. Through applied ethno-botanical research and training to promote conservation and sustainable use of medicinal plants, NMCP has tapped into local customs to both conserve Non-Timber Forest Products (NTFP) and improve medical and livelihood facilities.

Achievements

- 4 Rangeland Committees formed
- 8 forest nurseries supported
- Plantation carried out in several places
- 1 Buffer Zone Management Council and 17 Buffer Zone User Committees formed in coordination with SPNP
- 20 BZFUGs managing 6,071 ha forest area, involving 2,064 member households
- 3 MAPs Management Committees formed and mobilized
- 75 people benefitted from observation/study tours outside Dolpa
- 2 hydro electricity projects completed (1 micro hydro project of 35 KW and 1 grid extension of 50 KW, benefitting 180 and 149 households respectively)
- 4 micro hydro feasibility surveys carried out in Lower Dolpa
- 692 Solar Home Systems for lighting distributed, covering all households in Upper Dolpa
- 726 improved cooking stoves with 100 back boiler systems distributed
- Public auditing and public hearings carried out every year in each of the BZFUGs and the BZMC
- 6 Good Governance Literacy Classes (GLC) conducted, benefitting 120 women
- Institutional support to BZFUGs, Eco Clubs, Sister Groups, and the Himalayan Amchi Association with the aim of promoting good governance.
- Capacity building for 3,939 persons on forest management, wildlife conservation, skills development for income generation, and institutional development.

5.2 Species Conservation

NMCP has demonstrated that once people understand the importance of nature and the relationship between species and humans, become aware of the value of all gods' creatures, and are better able to protect their livestock from attack, they are less likely to take retaliatory action. Through forming Snow Leopard Conservation Committees (SLCCs) and providing livestock insurance schemes for compensation for livestock killed or injured by snow leopards as well as helping construct pens better able to keep out predators, a feeling of security has enabled respect for this rare animal to grow. By having their awareness raised, regularly carrying out monitoring of habitat and prey species and forming anti-poaching units, community members now view the conservation of snow leopards with pride. In addition, the teaching of the uses, cultivation and sustainable harvesting of medicinal plants to Amchis, students, and lay persons has kindled renewed interest in protecting medicinal plants and other valuable NTFP for future generations. Especially when linked with livelihoods and health care.

Achievements

- 9 Snow Leopard Conservation Committees (SLCC) formed and strengthened in both Dolpa and Mugu
- 14 local persons have been trained and are capable of monitoring snow leopard through using Snow Leopard Information Management System (SLIMS)
- SLIMS guideline prepared, updated and published
- Community-based mechanism and practice for monitoring snow leopards and maintaining

- records of depredation of livestock by snow leopards established through mobilizing SLCCs
- 6 Community-Based Anti-Poaching Operation (CBAPO) units formed and strengthened
- Supported Community-Based Anti-Poaching Operation units with field equipment
- Regular monitoring carried out for snow leopard prey base (blue sheep) and medicinal plants
- 5 snow leopard transect monitoring surveys carried out
- 3 Livestock Insurance Schemes established in Upper Dolpa
- Survey conducted to identify the livestock depredation incidents and 720 incidents recorded
- Supported field gear to park staff to strengthen the Anti-poaching Units
- 21 studies conducted on various topics (eg bird check list development, water testing, small micro-hydro test, livestock depredation etc)
- 5 medicinal plant cultivation sites established (Rimi, Pahada, Tripurakot and Phoksundo)
- Medicinal and aromatic plants and local knowledge on its attributes and use documented and published
- The findings of the People and Plant Initiative (PPI) activities and research disseminated through workshops, seminars, exchange visits, and publications, inspiring renewed interest in the ethnobotany of the country.

5.3 Sustainable Development

One of the major aims of WWF Nepal is to integrate conservation with community development in order to involve communities living inside and around protected areas to enable them to take long term responsibility for conservation. This can only be done through involving local people in conservation, addressing communities' livelihood issues and, at the same time, conserving the surrounding environment. As women take care of the household, are involved in educating their children and overseeing the family's overall health, it is seen as important to increase the capacity of women both in terms of local health care and in terms of conservation and development activities. Fifty three Sister Saving and Credit Groups were formed, allowing easy, small saving and credit facilities to be brought to the doorstep of women in all programme operated villages - a total of 1,359 households. This



Teaching locals about snow leopard conservation

is especially valuable as there is only one bank in Dolpa which often suffers from cash shortages and has almost no credit facilities.

Off farm activities have enabled women to participate in raising the income of their household. Providing training to women and other disadvantaged groups such as the poor, Dalits and Janajati groups has encouraged and supported them to take up decision making roles in institutions such as User Groups, Sister Groups etc as well as in conservation and development activities.

The development of a basic tourist infrastructure, such as trails, bridges and campsites, along with lodge management training has set the groundwork for the fuller development of Dolpa as a tourist destination, which will also bring about material benefits to the area.

The introduction of alternative energy sources, namely solar lighting and improved cooking stoves, has not only long term potential to conserve the trees of the area but also reduces the amount of indoor air pollution traditionally caused by using pine chips for lighting and large quantities of firewood for cooking. With the reduction in this indoor air pollution, eye and acute respiratory infections are also reduced, especially among children.

Achievements

- 53 Sister Groups formed and strengthened
- Nrs 3,383,560.00 saved by the Sister Groups 17 groups, in 161 households, supported in agro-based income generating activity (IGA) programmes
- 422 households benefited from forest based IGA such as fruit tree plantations
- 105 households benefited from off-farm IGA such as carpet weaving
- 100 households benefited from off-season vegetable farming
- 2 THCC supported in Dho and Phoksundo covering 380 households
- 2 hotel management trainings conducted
- 10 campsites supported for tourism
- An endowment fund established to support stipends to girls
- Research study carried out on Yasargumba, seabuckthorn and jatamasi
- 9 improved water mills constructed and 2 renovated

Sister Groups

Buffer Zone User Committees are formally registered, legal bodies that have the right to form functional committees as required. One the most common committees or groups they help form are women's groups, often known as Mother Groups or, in the case of Dolpa, Sister Groups. These groups consist of interested community women who can gain support from each other and participate in project activities such as training and non-formal education. One role the group often takes on is that of savings and credit, allowing members to save on a weekly or monthly basis and draw money when required for a specific purpose, for example to pay a medical bill or buy a new goat.

5.4 Communication and Education

Capacity building has taken many forms, from training in forest conservation, anti-poaching and marketing of NTFPs, to conservation education to eco clubs, stipends for girl students, and aiding the capacity of park staff. As well as providing scholarships for girls and trainee Amchis, NMCP has provided non-formal education and produced booklets, signboards and newsletters to educate locals on conservation and related topics. By building the capacity of the park staff, park/ community relationships have been improved and conflict felt between park and community at the time of the establishment of the park (1998) has been, for the most part, dispelled. Networking between Eco Clubs, as well as between Amchis at district and national level, has brought about a feeling within the area that they are not facing unique difficulties. Study tours to other districts and visits by officials to Dolpa have strengthened these new networks. In addition, with the production of video films such as "Amchi" and



Meeting with Sister Group in Upper Dolpa

"Now that I have participated in a non-formal education class I realise the importance of education, even for girls. My 14 year old daughter Samjhana is now attending school. Before she was a herder but now she looks after books and pencils, not livestock! The class was an eye-opener for me. I had not thought about gender stereotypes and discrimination before, but now I do and I am making an effort to change things for the better, starting with the education of my daughter - better late than never!"

Mrs Jana Buda, farmer and member of Hamali Sister Group, Maddhu, Tripurakot VDC

the commercial film "Himalaya" ("Caravan" in Nepal) and the increase in the number of tourists, the uniqueness of Dolpa is being highlighted to the world.

Achievements

- Quarterly "Phoksundo" newsletters produced in Nepali from early 2002 to mid 2007
- "Amchi" video produced
- Video magazine aired on Nepal Television through an agreement with Nepal Federation of Environment Journalists (NEFEJ)
- Conservation education provided through conservation sign boards, snow leopard conservation books and audio visual shows
- Governance related materials published
- 6 GLC (Good Governance Literacy Classes) conducted benefited 120 women
- 53 sisters groups formed and supported
- 42 girls and boys supported for scholarships
- 46 Eco Clubs establish (28 in schools, 18 community based)
- Network among eco clubs established
- 58 basic non-formal education (NFE) classes conducted, where 1,146 participants benefited
- 17 advanced NFE classes conducted where 216 participants benefited
- 3 Amchis fully supported for services, and 4 local Amchi students supported with scholarships

- 1 institutional support to the Himalaya Amchi Association (HAA) Amchi network established
- Amchi tradition and curriculum development through the HAA
- 2 herder's education and 2 snow leopard focused NFE classes conducted in upper Dolpa benefiting, 68 persons
- 34 awareness raising programmes for 5,670 persons
- Capacity building for 3,939 persons including 710 in income generating activities, providing education for 420, community development for 411 and institutional strengthening for 1,316 people
- Supported local community to conduct the Phoksundo Conservation Festival
- Observation tours for policy makers carried out

5.5 Policy and Advocacy

With its diverse range of wild animals and plants, SPNP was put forward as a World Heritage Site. With the increased hostile activities during the Maoist/ government conflict in the 2000's, this was not followed up. Despite the conflict, however, coordination between local, district and national level stakeholders did improve and observation tours for policy makers did take place. With the implementation of the SPNP Management Plan and advocacy campaigns at all levels by BZFUGs through our partner, FECOFUN, policies have been put into place to ensure the future conservation of this area.

Achievements

- SPNP BZ Management Plan prepared and endorsed by the Government of Nepal
- Gazetting of Buffer Zone in 1998 supported
- Support to Buffer Zone User Committees and BZFUGs operations
- Local, district and national level networks in place





6.1 Objective

The primary objective is to conserve the biodiversity of SPNP by strengthening the capabilities of the local users groups, NGOs and SPNP staff to carry out integrated development and conservation initiatives in the protected area and buffer zone through promoting sustainable economic growth that increases local income, strengthening management systems of medicinal plants and primary health care, achieving sustainable use of plant resources and improving coordination and collaboration among stakeholders to strengthen governance of natural resources conservation.

6.2 Programme Activities

The major project categories of forest conservation and species conservation are inter-related and interlinked, and have the cross-cutting issues of sustainable development, communication and education, and policy and advocacy, as is clear in the following sections.

6.2.1 Forest Conservation

Objective 1: *Community-based natural resource management through forest user groups and buffer zone users committees*

Community forestry has been at the vanguard of community-based organisation and mobilization around natural resources management and use. Community Forest User Groups (CFUGs) are currently the most widespread civil society group network, covering 1.2 million hectare⁵ of forests. This extensive network is largely as a result of the formation of the Federation of Community Forestry Users, Nepal (FECOFUN), one of our partners in the NMCP, who have a membership of more than 14,000 CFUGs, or over 1.6 million households. In this regard, NMCP had also adopted the strategy of promotion of community forestry in sustainable natural resource management in SPNP BZ. Today, 18 BZFUGs have been provided with capacity building and other training by NMCP, enabling them to be capable of sustainable forest management and biodiversity conservation. In addition, BZFUGs were supported to revise Forest Operation Plans (FOPs) which aid the conservation,

⁵ Source: Community Forest Division, Department of Forest, 2008

sustainable management, registration and monitoring of natural resources. Rangeland Management Committees were also formed to manage rangelands and pastures.

Objective 2: Nurseries and plantations to increase forest coverage

Restriction on access to grazing pastures in Tibet resulted in pressure on local forests in Dolpa to provide fodder as well as being a source of cooking fuel, light, and construction materials. In order to increase forest coverage, several steps were taken:-



Nursery

Nurseries and plantations

Nurseries were established on community land such as that at Ruma village, with irrigation pipes, technical support, support for skilled labour and seedlings provided. These community nurseries also grew fruit, fodder and other tree saplings. As communities came to realise how the replanting of forests and the planting of fruit trees would benefit them in the longer term, with the possibility of enabling them to restore damaged forest areas, demand for seedlings grew considerable. Trials, however, showed that many seeds of fodder tree species brought from outside Dolpa, such as Nimaro (*Ficus nemoralis*) and Rai Khaniyo (*Ficus semicordata*) were not successful, and thus nurseries concentrated on pines for timber and walnut trees for nuts for Lower Dolpa and the timber tree, salix for the upper regions. Selected medicinal plants were planted in pasturelands for the cultivation and sustainability of the species. A medicinal and aromatic plants (MAPs) nursery was planted at the Traditional Health Care Centre (THCC) at Phoksundo and Dho providing a regular supply of medicinal

"The land is too dry for good plantations and even if it is irrigated when the plants get to a certain height, the ground under their roots becomes too dry to support life. So we had to experiment with several different species and found that for Upper Dolpa salix trees work best, whereas in Lower Dolpa, it is pine. Thinley Lama was the first to bring saplings to Upper Dolpa. He carried them by yak, which took 15 days. But unfortunately the first batch were dry when he reached there, and resistance from the local communities was high. But he persevered and now his neighbours realise that 10-15 years after planting, the timber that will be available means they won't have to travel to Lower Dolpa to collect timber for houses etc. Later others became involved in plantation and today you can see patches of trees in Upper Dolpa, with the trend for tree plantation increasing every year."

Mr. Dhan Rai, WWF Nepal

plants to be made into medicines used by Amchis for traditional treatments.

Micro hydro

Two hydro electricity projects were carried out. One a micro hydro 35 KW, benefiting 180 households in Kota, Galli and Ralli villages of Tripurakot VDC, and the other a grid extension benefiting 149 households in Ruma and Maddhu Gaun of the same VDC. In addition, a community of 65 Dalit households also benefited. This has helped reduce pressure on forest and fuel wood consumption, contributed to a change in the socio-economic status of the area, for example there is an increased awareness through access to TV; women have more time to participate in income generating work and students study in the evening. Capacity building activities, ranging from technical training to business plan preparation, were carried out to enable communities to manage the micro hydro schemes in the future.

Solar lights and improved cooking stoves

Traditionally pine trees were used to provide light in the home. Even in more modern times fuel, such as kerosene was too expensive to purchase and carry, perhaps for many days. As well as contributing to the degradation of forests, this method of lighting affected the health of households through the amount of smoke produced. In order to conserve trees and promote better health, solar lights were introduced into households. Today all the households (692) in Upper Dolpa have solar lighting along with households in Lower Dolpa which are not connected to hydro power energy.

"The first time I saw solar lights, it felt like night was day," Thinley Lama, star of the film Himalaya

Improved cooking stoves (ICS) were also introduced into 726 households. These work by reducing the amount of fire wood required, reducing the amount of smoke in the home, and can be easily adapted with back boilers to provide hot water and greater heat generation in the room. Based on recorded feedback by households, the more recent ICS were modified and introduced to other households at a subsidized cost.



Local lady with her new ICS

6.2.2 Species Conservation

Snow Leopard Conservation Project 2006-2008

The Shey Phoksundo Region is a key habitat for the snow leopard and the Dhorpatan area is vital to the blue sheep. WWF's support has been instrumental in developing human resources in the Shey Phoksundo National Park through its Snow Leopard Conservation Project, greatly improving working



Snow Leopard

conditions for park guards. Through the management of the natural resources of SPNP and elevating the living standards of the local people the project aims to bring the local communities to a point where it is possible for them to understand and care about the conservation of snow leopards and their habitat.

Goal:

Create an information base for an action plan for snow leopard conservation in Nepal and promote public participation for its protection.

Objectives:

- Complete a series of surveys on the snow leopard, its prey species and habitats, including interactions with local communities, in three phases covering critical snow leopard habitat areas i.e. the north-western part (SPNP), the north-central part (Annapurna Conservation Area) and the north-eastern part (Kanchenjunga Conservation Area).
- Create an information base on the Snow Leopard, its prey species and habitats in an adapted format styled along with lines of the Snow Leopard Information Management System (SLIMS) adopted by the ISLT.
- Establish a cadre of well-equipped national professionals and field level wildlife technicians for snow leopard survey through in-country training and provision of survey equipment and instruments.
- Develop public awareness programmes for the protection of the species.
- Develop a mechanism of public participation for the co-existence of livestock and snow leopard.
- Develop an action plan for long term snow leopard conservation in Nepal based on scientifically correct and socio-economically relevant information.

Objective 1: Awareness and mobilization for snow leopard/ prey species/ habitat conservation

It is estimated there are only 4,510-7,350⁶ snow leopards left in the wild. Of these beautiful creatures, 350-500, or 10% of the total world population, are distributed along the northern borders of Nepal, in the districts of Mustang, Mugu, Humla and Dolpa. It



is estimated that there are 110 - 154 snow leopards in Shey Phuksundo National Park.

Despite Nepal 's continual effort to save the snow leopard, its long-term viability is threatened by the conflict between livestock depredation and retaliatory killings, poaching, and loss of habitat due to high density of livestock in grazing areas. Degradation of the snow leopards habitat continues due to grazing pressure. As snow leopards are opportunistic predators, they often kill livestock due to high encounter rates and ineffective guarding by herders, causing snow leopard-human conflict. They are known to kill sheep goats, horses and yak calves, and this is one of the main threats to their survival. In addition, snow leopard pelts, bones, and body parts are used in Traditional Chinese medicine as well as for decorative furniture and traditional attire, and thus are valuable to poachers, and an illicit trans-border market exists between the northern border of Nepal and Tibet.

Livestock Insurance Scheme

Livestock Insurance Schemes provide compensation for livestock killed or injured by a snow leopard in order to avoid retaliatory killing. This scheme was piloted in the Kanchanjunga Conservation Area and replicated in SPNP based on its success, lessons learned and best practises in Kanchanjunga. Participating households pay an insurance premium per livestock head, as agreed by the management committee. NMCP provide a topping-up grant to maintain the fund. Farmers place their claims with the Scheme Management Committee who receive

appropriate capacity building training, if their livestock is killed by a snow leopard.

The construction of leopard proof livestock pens also took place as well as awareness training for herders and livestock inventories to monitor its depredation rate highlighted depredation hotspots in different VDCs. To further mitigate loss amongst livestock injured by snow leopards, a veterinary care programme was established.

Objective 2: Regular monitoring of snow leopard and prey species

Snow leopard, their prey and habitat were regularly monitored by the park authorities as well as members of the eight Snow Leopard Conservation Committees formed by the project. Indicators are that in 2007 there was an estimated 5-7 snow leopards per 100 km² in SPNP.

Anti-poaching

With high demand for snow leopard bones, pelts and other parts, demand for blue sheep meat and musk deer musk pods, it is vital to protect these animals. To this end, anti-poaching units were established to control poaching. Due to the difficult terrain and extent of the area involved, it was vital that the community took the lead through Community Based Anti-poaching Operation Units (CBAPOs), formed and supported by NMCP. With the accompanying awareness raising and conservation training, CBAPO will continue to patrol, monitor and curb poaching in the future. The park itself is also involved in anti-

poaching activities but the sheer size of the area and the small number of staff personnel makes it impossible for them to do so alone.

"I have six ranger positions but only two are currently filled. No one wants to work in this remote area. There are 200 army personnel supposed to guard the park against poachers but they don't have training or knowledge about conservation. I know WWF has provided them some awareness training, mostly about poaching, but they still need more. During the insurgency the poaching was very bad. I remember once that a poaching team killed 18 musk deer, 12 being female. The reason to kill them was to collect the musk pods and since only males have this, these 12 females were killed needlessly. Some areas of the park are very difficult to even access, never mind monitor. For example the Langur Valley has to be entered by the Mugu District side. In that area I know 6 or 7 snow leopards have been killed in recent times. Now we at the Park are working to raise the awareness of the local people so they can help keep a look out for poachers."

Mr. Ganesh Pant, Warden, SPNP

of resources has been reduced through the renewed interest in pasture resource management. Take for example the case of Yarsagumba. With the large amount of money that can be gained from the harvesting of this species literally thousands of people come from neighbouring districts during the harvesting period of May/ June and do untold



Objective 3: Develop database system on biological and socio-economic features of SPNP and buffer zone

In order to manage effectively any protected area, it is fundamental to gather scientific information on biodiversity. Several surveys and data collections were carried out in SPNP including a wildlife census which pinpointed the range of species in the area, including a bird check list; and a survey of the snow leopard prey base and an assessment of rangelands and management of pastures, including rotational grazing and medicinal plant harvesting; livestock numbers and movements in pastures was also monitored. There were plans to monitor snow leopard movement through radio collaring. However, this could not be carried out due to reservations regarding the darting of the animals. Collecting information on socio-economy is also crucial for addressing issues concerning people and their livelihoods as it pertains to conservation. Studies on the socio-economic and biological features of SPNP were carried out within PPI which included the publication of a "Book on Medicinal Plants of Dolpa, Amchi's Knowledge and Practices, Trade and Conservation".

Pasture Resource Management

With the establishment of the buffer zone, managed through Buffer Zone User Committees, exploitation

Summer Grass, Winter Insect

Yarsagumba literally translates to "summer grass, winter insect" and is only found in the Himalaya alpine areas at around 4,000 metres. Its lifecycle begins in the spring when the Lepidoptera moth lays its eggs which hatch into larvae. As the caterpillars feed on the pastureland spores of the cordyceps mushroom land on some of them, growing upwards through their head. Until it dies, exhausted by the fungus, it remains alive, its thin yellow stalk vibrating slightly, attracting harvesters during the months of May/ June.



damage to both the long term sustainability of Yarsagumba and to the surrounding plants and environment. NMCP, by providing awareness raising, capacity building and forming groups such as Eco Clubs (who collect the garbage created by harvesters) and CBAPOs (who monitor the impact of harvesting and harvesters on the environment) is enabling the community to better manage pasture resources. However, there is much work to be done and support in terms of firm regulations needs to come from the government.

6.2.3 Sustainable Development

Objective 1: *Increase women's development and decision making of women and disadvantaged groups in conservation and development activities*

It has been identified that the best way to involve people in the conservation of biodiversity is to demonstrate how the biodiversity of their area impacts on their lives. It is unreasonable to expect communities to conserve and protect the land and species found there if they themselves are living at subsistence level. By linking sustainable livelihoods with conservation, particularly for women and disadvantaged groups, NMCP gave them a means to improve their livelihoods. This also gave them the ability to be in a better financial position to take on board conservation activities as well as including an educational element enabling them to become more aware as to how conservation of the biodiversity benefits the community in the long run. Better management of NTFP and protection of plant and animal species may attract researchers, traders and tourists to the area as well as, for example in the case of plant species, providing medicinal plants for traditional medicine.

Through the establishment of Sister Groups, training was provided not only on livelihood activities such as linking with Cottage and Craft Development Committee at Dunai for carpet weaving, but also on health and hygiene issues, credit and savings and non-formal education classes (NFE).

Objective 2: *Agro-forestry support for additional income generation and improved nutrition*

The productivity of the small parcels of agricultural land in Dolpa is declining due to the poor irrigation

"WWF gave us help to start our Sisters Group. Before that time people were thinking badly of the national park with its rules and regulations so our group had to work very hard to convince them otherwise. WWF gave us money to help us learn. During the conflict there were many problems, meetings had to be cancelled, and we could not even think or work well. Money wasn't used properly, trees were cut – the situation was out of control. Village development totally stopped. Now things are going well; we are more modern in our ways. Much of our work is stopping people cutting trees, supporting BZFUGs and Eco Clubs. Getting people to stop cutting trees is huge work, we go to their houses and fine them. In total we collected more than Rs10,000 in fines which we put into our group account. We also try to stop poachers and other groups help us with that. When my group goes to collect Yarsagumba the money is put into a savings and credit fund. The sisters made me president as I am more educated than others. Although we are women, we don't want to be behind men!"

Mrs. Laxmi Thapa, Chairperson of Tripura Sisters Group, teacher and International Women's Day 2006 Award Winner

systems, poor soil fertility, extreme climates and low rainfall. The very limited amount of outside technical support has been inadequate to address these challenges. Thus, the majority of households in the buffer zone were found to be food deficient, relying on limited, single crops of potatoes, barley, millet or buckwheat. In Lower Dolpa crops are similar with added wheat, paddy, and maize. Sample studies found that 52% of the population were food deficient for almost six months of each year. In Upper Dolpa that figure increases to more than 80%.

With limited access to income sources and these limited food crops, NMCP, through awareness raising and livelihood improvement activities, encouraged people to consider both their own nutritional needs and the conservation needs of their surroundings. With very limited arable land, promoting agriculture was not possible and promoting tourism on the required scale requires huge resources and was outwith the programmes' capacity. A small opportunity existed to promote vegetable farming and fruit plantations along trekking routes and to this end seedlings and seeds were distributed and a 'conservation farmer' appointed in each village to assist households.

Objective 3: *Institutionalization and capacity building of buffer zone user committees for conservation and development activities*



Salix trees planted in Vijer

The programme supported the SPNP and local people to take the initiative to expedite the buffer zone declaration which materialized in 1998. It took considerable time and effort to orient local people to form Buffer Zone User Committees (BZUC) and the Buffer Zone Management Council (BZMC). Training and observation tours of other parks were conducted to get practical ideas first hand from other Buffer Zone Committee's experience. Operational plans of the BZUCs were prepared, and endorsed by the government.

Before the buffer zone committees existed, Community Forests Groups (FUGs); Sister Groups for saving and credit; Eco Clubs; Traditional Health Care Committees (THCC); Snow leopard Conservation Committees (SLCC), and Rangeland Management Committees already formed were brought under the BZUC structure as per Buffer Zone Regulation of the Government of Nepal, and registered in the park to ensure legality, better linkages and coordination.

Promotion of good governance in natural resource management was to make effective and efficient use of available resource; increase people's participation and strengthen trust of community institutions that ensures long term institutional sustainability.

Objective 4: *Provide environmental awareness programme and community sanitation programmes in and around SPNP and its buffer zone area*

Traditional ways of life respected nature and the environment but with changing times, the impact of armed-conflict, more exposure to the outside world

and the desire for consumer goods which require cash, some traditions were found to be eroding in the Dolpa area. Through working with Amchis, establishing a Traditional Health Care Centre, and providing scholarships for Amchi students, NMCP has helped revive interest in this ancient art of healing.

In the same way, NMCP has increased the awareness of environmental and sanitation issues through linking with groups, such as BZFUGs, Sister Groups and Eco Clubs, providing them with capacity building and awareness training. Both Eco Clubs and Sister Groups have been involved in health and hygiene activities and Eco Clubs are active in cleaning up pasture areas and making sure their own households and villages are kept clean. Today most villages have community latrines and what started as pressure by Eco Clubs to keep individual households clean, is now a habit in most homes.

BZFUGs have been involved in plantations, nurseries, study tours, and the revision of FOPs, all of which have included teachings on the value of the environment and demonstrated conservation of biodiversity.

Objective 5: *Supporting local health care development through capacity building of Amchis and women*

Amchis, practitioners of traditional Tibetan healing, have a rich legacy of knowledge of medicinal plants and their use. The major thrust of NMCP's effort in conserving and institutionalizing this legacy is to promote wise use of medicinal plants, and, at the same time, enhance health care services to the people of Dolpa since modern health care services and facilities are almost non-existent in the area.

NMCP's landmark achievement in promoting health care facilities through institutionalization of Amchi traditions was the establishment of Traditional Health Care Centres (THCCs). Along with the establishment of these THCCs, NMCP equally emphasized on the capacity building of Amchis through various trainings. One result is that the training and capacity building of female Amchis has made a real difference in terms of women's reproductive health in the two THCC as well as the overall health of neighbouring communities. In addition, as a result of increasing the capacity of existing Amchis confidence among them has grown and the overall number of patients



seen has increased. Linking this with providing women with basic health education, such as hygiene, family health and women's health, an overall improvement in household health is also seen.

THCCs were provided with support to establish endowment funds in order to ensure their financial sustainability in running clinics in the future. Currently, THCCs are efficiently managing endowment fund equivalent to NRs 12,000,000 to run the clinics. Now, VDCs are regularly funding the remunerations of Amchis, Friends of Dobo and Action Dolpo are also supporting THCC services.

6.2.4 Conservation Education, Capacity Building and Communication

Until the Northern Mountain Conservation Programme (NMCP) began its activities, there was no conservation education in Dolpa. In fact there was very little education of any kind, including schooling. Children from disadvantaged groups and girls from all groups, lacked education. With adult literacy standing at less than the 2004 figure quoted here of 29%⁷, which does not take into account the differences between men and women or Upper and Lower Dolpa, the area around Shey Phoksumdo National Park fell 20% below the national average in literacy.

NMCP introduced non-formal education (NFE) classes to its programme area, targeting the

disadvantaged and women. It also introduced stipends for both girls in general education, and Amchi students to enable them to study this traditional healing. This, along with the establishment of groups such as Sisters Groups and Echo Clubs, made it easier to introduce the topic of conservation education into every day life. Community Based Anti-poaching Operation Units (CBAPOs), park staff, army personnel, BZFUG members and Amchis were all provided with conservation education and capacity building skills to enable them to utilize this knowledge.

Education tools were applied such as learning material in Tibetan language, the use of the well-know Meena cartoon, and the publication and distribution within Dolpa of a newsletter called "Phoksundo" every three months which highlighted conservation news from the programme area.

Objective 1: Support to eco clubs for conservation education

Eco Clubs have been formed with the cooperation and coordination of School Management Committees Members and, therefore, mainly consist of school students and young people from the community. Eco Clubs are learning, observing and helping to take care of the environment and ecosystem. In remote, rugged areas such as Dolpa where people cannot survive without relying heavily on their surrounding

⁷ Source: Nepal Human Development Report 2004 Empowerment and Poverty Reduction UNDP

natural environment, Eco Club members are not only acquiring knowledge and skills relating to nature conservation but also relating to cultural conservation.

For example, during the week long Shey Festival in 1999, the Eco Clubs of Dho and Phoksundo launched an awareness programme at Shey. Club members ensured the garbage generated by pilgrims was properly managed and demonstrated how to construct simple latrines. As part of this festival, thousands of pilgrims and tourists from all over Nepal, India and Tibet were witness to lamas wearing sashes, provided by the Eco Clubs, with "Let's Conserve our Earth" written on them. With lamas being highly respected and their teachings thought valuable, this conservation message was thus disseminated to a huge number of people



Objective 2: Stipends to girl students and Amchi students

In Upper Dolpa government schools existed mainly on paper only. In reality teachers, if even hired, did not attend classes. Since education is the basis for all development, disadvantaged girls were provided with stipends to help enable them to study in boarding schools in Dunai, Sandang, Dho and Tapirza. Providing girls with education is also proven to improve family health and is more likely to avoid early marriage and childbearing⁸.

Providing stipends to Amchi students has encouraged some members of the younger

generation to seriously consider the practice of Amchi medicine as a career. Amchi and traditional knowledge of medicinal and aromatic plants (MAPs) was introduced into the general student body at three schools in Upper Dolpa namely, Tapiriza Boarding School in Phoksundo Mount Crystal Boarding School at Dho and Sahid Dharmabhata Primary in Saldang.

Objective 3: Capacity building for park staff, eco clubs, BZFUGs and women's groups for integrated conservation and development activities

Without building the capacity of communities, groups and individuals conservation and development activities are very difficult to carry out and even more difficult to sustain after the programme ends. Thus, capacity building was given to enable a large number of beneficiaries. For example, orientation was given to the Park Protection Unit (Nepalese Army) by providing them with comprehensive details of the rules and regulations relating to the National Park and enabling them to better understand why the park is important.

As learning through first hand experience is the best way to internalize knowledge, training and study tours were provided to park staff, the Buffer Zone Management Committee, Sister Groups and local people to other national parks and buffer zones, such as Bardia. By taking members of different groups on study tours not only could they see and interact with similar groups but they could better understand the process and be more convinced through talking to like-minded people.

Objective 4: Provide capacity building activities for Amchi and local women's groups

Amchi is a widely practiced traditional health care system in the western Himalayan mountain areas which is on the verge of extinction due to the younger generation losing interest. By providing scholarships to Amchi students, as mentioned above, it is hoped the art of traditional healing will not be lost.

Building the overall capacity of Amchis, through the building of Traditional Health Care Centres (THCC) at Dho and Phoksundo, and helping Amchis build on, record and improve their knowledge of medicinal plants, has helped to not only revive this art in the

"Now Amchis have a good contact with each other because of networking. It has strengthened traditional systems. For example, through the training we received from WWF, we have been able to more clearly identify ways for sustainable harvesting of the plants we use in our medicines," **Amchi Namgyal Lama, Dho THCC**

eyes of the local community and further build their trust and confidence in the healers, but has enabled the establishment of links between Amchis of different areas.

In 1997 a workshop was organized where all the Amchis from Dolpa were addressed by two senior Amchis from the Mustang area. One of the results of this workshop was the establishment of a national umbrella organisations called the "Himalayan Amchi Association". Building on this success, the first National Conference of Amchis took place in 2001 and has since been held in 2003.

Women have become more active at all levels in the community as a result of capacity building received from NMCP. Gender training provided to both men and women alike, women in general are more outspoken. In some cases they are even taking the lead in decision making regarding NTFP, family health, their daughters' education, account keeping, tourism related livelihood opportunities, and even anti-poaching.

6.2.5 Policy and Advocacy

As learnings from the Northern Mountain Conservation Programme grew, it was realized that links between the ground reality should be fed back into policy making to ensure that best practices could

be replicated throughout the country and that what was being put into effect in the communities would be sustainable. Likewise, it was realized that in order to really be effective at grass roots level, there has to be an effective policy environment, again to enable long term sustainability and in order that communities felt there was a larger interest in what they achieved. Based on this realization, NMCP began to implement activities that would allow for coordination at policy level, enabling instruments such as the park management plan to be used.

In 2002, the SAGUN Programme was introduced to do just this, and more.

Objective 1: *Communication and coordination between local, district and national level stakeholders*

In the early years, NMCP worked at park, buffer zone and community level only. It was only once the realisation that coordination and communications needs to be maintained with district and national level stakeholders that this was included in the programme activities. This was also important to ensure synergy and avoid duplication of activities.

SAGUN has strengthened the capacities of relevant stakeholders raising the level of understanding and





communication between them. Thus, ensuring transparency, democratic and timely cooperation and coordination towards ensuring ownership, especially among women, the poor, Dalits and Janajati groups of all aspects, concepts and implementation of conservation strategies at all levels.

Objective 2: *Follow up on nomination of SPNP as a World Heritage Site*

During the working year 1998-99 the first steps were taken towards lobbying for designating SPNP a World Heritage Site (WHS). It is obvious that SPNP's uniqueness in terms of ecology, biodiversity and culture makes it a prime candidate for designation. The major thrust to lobby for designating SPNP as a WHS was to highlight its importance both at national

and international level. By doing so it would also bring prospects for increasing interest of national and international agencies in conservation of biodiversity in the area and at the same time development of tourism to benefit the local communities. However, due to a Maoist attack at Dunai, the technical team had to be rescued from the field, and could not complete their assignment related to the world heritage site nomination, and this was shelved. This is one activity earmarked for future activity.

Objective 3: *Endorsement and implementation of SPNP and buffer zone management plan*

The Management Plan of parks and buffer zones is a key instrument for implementing conservation

"Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration". UNESCO

UNESCO's World Heritage mission is to, in brief, encourage countries to sign the World Heritage Convention to ensure the protection of their natural and cultural heritage; encourage State Parties to the Convention to nominate sites within their national territory for inclusion on the World Heritage List; help them to safeguard World Heritage properties by providing technical assistance and professional training, and encourage participation of the local population in the preservation of their cultural and natural heritage:

Within Nepal there are already several World Heritage Sites:-

- Sagarmatha National Park (1979)
- Royal Chitwan National Park (1984)
- Lumbini, the Birthplace of the Lord Buddha (1997)
- Kathmandu Valley (1979, 2006) consisting of seven monument zones: Durbar Squares of Kathmandu, Patan and Bhaktapur; Pashupati and Changu Narayan temples, and Swayambu and Boudhanath stupas.

policies and programmes at ground level, however, when NMCP first began, SPNP and its buffer zone lacked a Management Plan. The plan was developed with financial and technical support from the NMCP through rigorous consultation with the local communities, stakeholders and partners. Biological and socio-economic studies were also conducted to provide information for preparation of the Plan. The Management Plan for SPNP and the buffer zone has since been endorsed by the Government of Nepal.



Amchi making medicine

Strengthened Actions for Governance in Utilization of Natural Resources Programme (SAGUN) - November 2002 - June 09

SAGUN has been an integral part of the NMCP since its inception in 2002. Its vision is to see good governance practices internalized by natural resource management groups at all levels, supporting a code of conduct of equity in access to and benefits from local forest and water resources, specifically benefiting women and other disadvantaged people, with increasing productivity of natural resources under local transparent and accountable management, directly supporting poverty alleviation, rural community development and national economic growth. In addition, partnerships in natural resource management will resolve conflicts locally and nationally.

At the time of writing, October 08, SAGUN is in its final nine months phase. The SAGUN team comprises of WWF Nepal, Care Nepal, FECOFUN, and Rims Nepal working in Dhading District only.

While the programme components of SAGUN are the same as those for the larger NMCP, SAGUN's overall objective is to ensure natural resources are managed democratically with good governance and equitable participation and distribution.

Overall Objective:

To ensure that Nepal's natural resources are managed in a democratic way; that performance of selected institutions is improved to meet the principles of good governance and participation; and, in particular, that the benefits derived from natural resources are dispersed in accountable and transparent ways to the local communities and that they and other earned revenues are equitably distributed.

Specific Objectives:

- Strengthen the organisational structures, governance and accountability, and technical capacities of natural resource management user groups, to ensure a) resource sustainability and biodiversity conservation, b) group sustainability's, and c) participation of women and other disadvantaged groups.
- Strengthen the financial management capacities of natural resource management (NRM) groups (such as BZFUGs), and their capacity to monitor benefit and revenue-sharing within their own groups, communities locally elected bodies, Village Development Committees (VDCs) and District Development Committees (DDCs) and at higher levels.
- Strengthen the capacities of the relevant NGOs and user federations/ coalitions in civil society, and of selected private service providers, to work with an assist line agencies, local NRM groups and local elected bodies to achieve Specific Objectives No. 1 and 2 above.
- Assure more timely communication between all stakeholders of NRM development in Nepal to a) share lessons learned and best practices, b) promote parallel planning, coordination and implementation, and c) participate in policy discourse.
- Document and disseminate best practices and lessons learned regarding local NRM group development and support, to a) enhance concurrent programme implementation b) inform future strategic planning, c) enhance governance skills d) plan and monitor benefit-sharing, and e) inform policy review and development.
- Raise the level of understanding among Nepal's NRM civil service at large (all levels) and ensure their ownership of current environmental governance and social development concepts, philosophies, field methods and implementation strategies.



7.1 Forest Conservation

- Over grazing and the old traditional methods of management have put pressure on pastures and grazing land, especially since the closing of transects between Nepal and Tibet has increased the pressure on existing pastures. In addition, with the decrease in herd sizes, many people have stopped taking them to remote pastures and are utilizing areas round the villages, resulting in soil erosion.
- FOPs are in place for only five years before needing renewal. Due to a shortage of government manpower and time, it is a challenge to have these BZFUG operation plans reviewed and renewed every five years.
- Plantations were initiated in Upper Dolpa but challenges arose due to the dryness of the land and the difficulties associated with transporting seedlings to Upper Dolpa. Due to the terrain there were no forests in Upper Dolpa, with all timber being transported from Lower Dolpa. Presently there are a few patches of trees including salix.
- The huge number of people entering the Yarsagumba pastures cause forest fires, over-

harvesting of fuel-wood, poaching of wildlife etc which is hard to monitor and impossible to control because of its scale.

7.2 Species Conservation

- As even simple research can be demanding in terms of human and time resources in remote Himalayan areas, the high level of academic research carried out in this programme has had significant implication in developing understanding of the ecology and conservation biology of Himalayan medicinal plants. The conflict situation, high altitude pastures and weather constraints make it difficult to regularly monitor research sites leading to focussing ecological research on selected plants such as *Nardostachys grandiflora* and *Neopicrorhiza scrophulariflora*.
- The People and Plant Initiative (PPI) conducted research on sustainable harvesting of threatened plants, domestication of commercially important plants and socio-economic studies on livelihood aspects, forging links between the conservation

of medicinal plants and the strengthening of health care within the park and buffer zone. The results of these researches have been incorporated into programme implementation in order to fully utilize the information and not just perpetuating the situation of research for research sake. For example, BZFUGs have adopted ethnobotanical approaches to manage NTFP in their operational plans.

- PPI also addressed basic needs, especially in Upper Dolpa where health services were non-existent, through the establishment of Traditional Health Care Centres (THCCs). The THCCs have also been successful in demonstrating MAPs cultivation and sustainable harvesting of MAPs, encouraging the spread of Amchi medicine among youths and generally being a focal point in the community which then encouraged awareness of, and participation in, other programme activities such as biodiversity and species conservation. A major lesson learned was that linking conservation activities with sustainable development is the best approach. Another lesson learned is that traditional knowledge and practices can work and benefit the community as well as contributing to conservation. Demonstrating this is the fact that in 2004 the Phoksundo THCC, and in 2006, the Dho THCC were awarded the coveted Abraham Conservation Award for their achievements.
- Wildlife populations in Upper Dolpa are reportedly growing and consequently incidents of crops damaged by blue sheep (upper Dolpa), wild-boars and bears (lower Dolpa) are increasing. Livestock depredation of sheep, goats, yak/zopkyo, cattle and horses by wolves and snow leopards is also increasing. The Livestock Insurance Scheme has been a good approach to increase level of tolerance of farmers for depredation of livestock. It has been instrumental in bringing about an end to the retaliatory killing of snow leopards by herders. However, this scheme only applies to kills by snow leopards does not address the need for mitigation and compensation measures to address the needs and demands of the poor brought about due to human/ wildlife conflicts, other than snow leopards, such as crop depredation, kills by wild dog and other wild animals.
- The changing of policy on Yarsagumba from banned to regulated has not solved the problems

The Abraham Conservation Award was established in 1995 through the generosity of Ms Nancy Abraham, a WWF US Board member, who was struck by the dedication and passion for conservation displayed by a national park staff.

For the past 13 years the Abraham Conservation Award has recognized and honoured people and organisations that have made significant contributions to ensuring Nepal's rich biodiversity. It has also served as a means to raise awareness and motivation especially among frontline conservationists.

List of awardees of Abraham Conservation Award from Dolpa:

2000	Mr Thinley Lundup Lama and Mt Crystal School, Dho Tarap
2002	DESERT, Dolpa based NGO
2004	THCC Phoksundo, Phoksundo VDC
2005	Babiro Dalit Didi Bahini Samuha, Dalit Women's Group of Tripurakot VDC
2006	THCC Dho, Tarap VDC
2007	Mr Akhanda Upadhya*, Eco Club Member, Duai VDC
2008	Mr Tashi Gyalzen Lama, Social/Conservation worker, Saldang VDC

*Now studying forestry at the University of Pokhara

associated with it. Rather, the government strategy of collecting revenue from harvesters has not reduced but promoted illegal export. The government has shown interest only in collection of revenue, thus, any efforts in management (including sustainable harvest and marketing) that it has initiated have not been effective. The thousands of people who swarm over the pastures and surrounding areas have raised real concerns over the sustainability of Yarsagumba, the safeguarding of the fragile ecosystem of the alpine meadows, and the financial future of the people of Dolpa. The harvesters also bring with them large quantities of non-biodegradable waste, and create sanitation concerns and concerns about their safety - each year several harvesters die due to being unprepared for the cold and high altitude or simply due to the harsh living conditions they subject themselves to for weeks on end.

7.3 Sustainable Development

- Linking conservation with sustainable development issues is one of the major lessons learned from NMCP. For example, social services

carried out in the THCC such as family and reproductive health, immunization and personal hygiene and sanitation have been included, along with a broader range of activities relevant to local issues, strengthening local support and participation. Community support to THCCs and participation in other activities has been high, especially among the members of BZFUGs, Sister Groups and Eco Clubs. Women's participation steadily increased, and it was found environmental awareness was not limited to Eco Clubs but was spread throughout whole communities. The THCCs became almost informal community meeting points, especially for women, demonstrating that incorporating meeting basic needs, in this case health, with other activities such as environmental awareness and conservation of health and income giving MAPs is very beneficial for both the community and the implementation of programme activities. This should be replicated in other programme sites.

- It has been seen that when mountain communities are empowered to manage their resource base and provided with enterprise options that are linked to biodiversity and can generate income and employment to reduce poverty while providing incentives to conserve natural resources, conservation more readily takes place. Not only does this provide benefits for women, poor, Dalits and marginalized Janajatis, but it also matches conservation goals with social justice. One way to do this in the future would be through eco tourism.
- Mobilization of group funds in an equitable manner is an effective way to support community development, and poverty alleviation to help improve the livelihoods of women, the poor, *Dalits*, and marginalized Janajatis. However, resource poor BZFUGs, particularly in the hill districts, are compelled to rely more on external resources to implement livelihood programmes. Hence, it is essential to thoroughly explore resources and services rendered by other line agencies.

7.4 Good Governance in Natural Resources Management

- Social empowerment is necessary but not sufficient alone to institutionalise good governance practices within FUGs and other



- groups. It is important to link economic empowerment with social empowerment activities including the equitable representation of women, poor, Dalits and other marginalized groups. It is important that they received leadership development to assist them in their roles. It is also important they and other members realise what is expected of them and realise each others limitations through such mobilizing tools as training, workshops and exposure visit to help to empower them and influence in decision making.
- The mobilization of Local Resource Persons is effective in reaching out to people at the grassroots level, particularly as it is cost effective, ensures wider coverage, and increases access to information and communication by BZFUGs on important community forestry rules, regulations, policies, provisions, roles, responsibilities, rights etc.
- Building the capacity of groups such as FUGs alone will not have a long term affect on the sustainability and improvement of the biodiversity. As well as local and district capacity, national level awareness and strengthening must take place in order that protection policies and laws are put in place. The SAGUN Programme addresses these issues as well as ensuring good governance, accountability, organisation and technical capacities at grass roots level. Activities such as public hearing and public auditing (PHPA) and participatory well being ranking (PWBR) contribute to addressing negative consequences of conflict, armed and others.
- Stakeholders consultation meetings are a good forum to coordinate line agencies and for developing strong coordination and linkage,

avoiding duplication, effective programme implementation, programme sustainability etc.

7.5 Impact of Conflict on Programme Implementation

Dolpa was one of the most severely affected districts during the insurgency. During the programme years Maoist activities in Dolpa were extensive, at times making it difficult to gain trust and mobilize people. Confidence to gain self-empowerment was lacking in communities during the armed conflict and concern for the safety of project staff effected monitoring and supervision of field activities during some programme periods. In 2000 there was a major Maoist attack on the district headquarters of Dunai and the Project Manager was held by the Maoists for a week. Mobility of government staff at village level was not possible during this time and thus meetings and activities involving the government, such as preparation of FOPs, were hampered. Meetings in general were restricted to areas close to the district headquarters and Upper Dolpa as these were the areas least affected by the conflict. Overall, activities which did not involve mass meetings were unaffected.

- NCMP followed a 'needs based' and a 'do no harm' policy. With transparent financial and operating procedures, trust with the community was built, enabling both the beneficiary

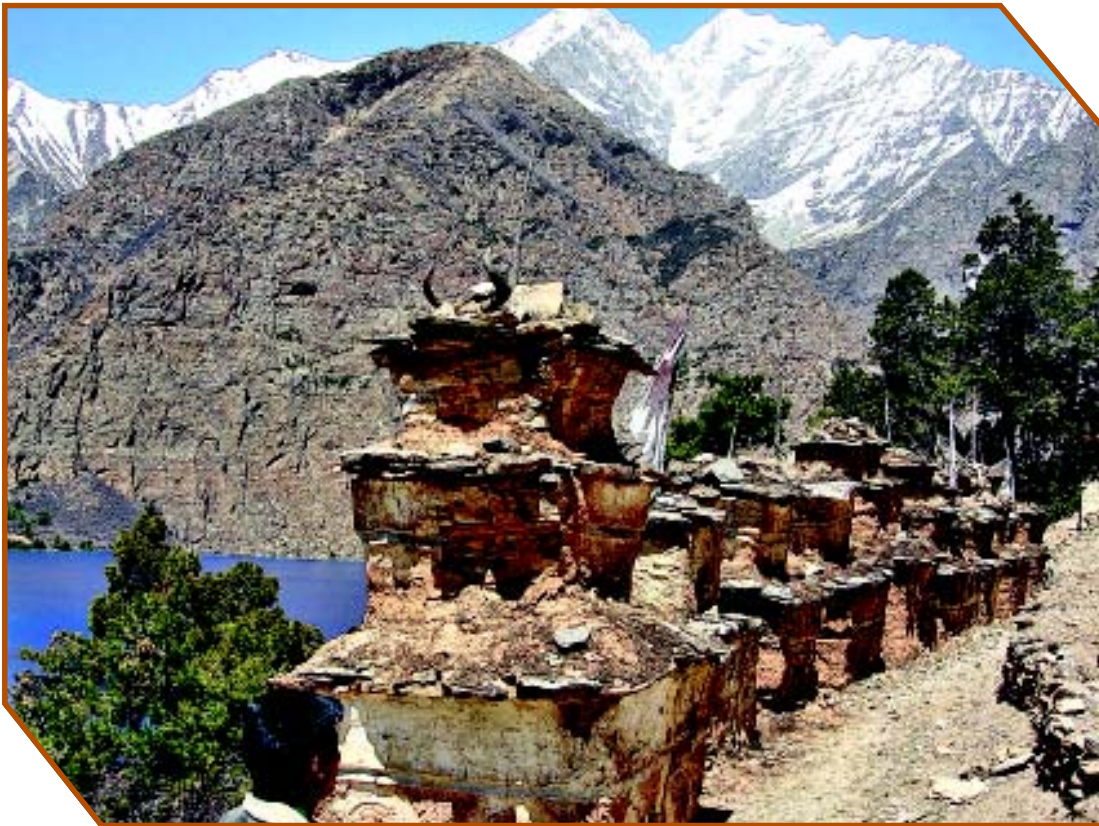
"The relationship between WWF and the locals is very good. I have always found the people to be very friendly and helpful and they refer to WWF as "W". However, working in Dolpa is very hard and a lot of time is spent on travel. During the insurgency there were the added problems of Maoist restrictions. At that time very few people came to the area and except few rural health workers it was not easy for the government officials to travel in the field. Because "W" is transparent in all activities, however, we were allowed to continue our meetings, such as public hearings, and even the Maoists who came to listen and monitor thanked us for our transparency and good work."

Gautum Poudyal, NMCP Project Officer

communities and the project staff to concentrate on the objectives of the programme. This was achieved through working with community based organisations and maintaining political neutrality. This was especially critical during the armed-conflict period and ensured the continuation of the programme. The fact that the project manager was questioned by the Maoists, released and activities allowed to continue is only due to the transparency of the programme, its relatively low profile, the fact it was very much involved the community in decision making, and the good image portrait by the field staff. This methodology should be replicated in future programmes and care taken in the planning of programmes to allow for revision and adaption of activities at field level should unforeseen events occur.



Milking Yak at Raman Saldang



Linking sustainable development with conservation gives the long term protection of a particular area and culture a real chance to succeed. However, pastoral activities and subsistence farming, the traditional mainstay of livelihoods in Dolpa, are declining day by day; tourism in this area has not yet been developed; NTFP and MAPs, which do offer sustainable livelihood opportunities are at present not well managed and the interventions by NMCP are, by the limited local possibilities, not adequate to address long term needs. NMCP has, however, learned many lessons and these lessons should be developed and packaged, especially for disadvantaged groups, to better protect the biodiversity of this area as well as better protect the sustainable development and long term livelihoods of the people who live there.

8.1 Landscape Level Approach for Snow Leopard Conservation

The snow leopard is the flagship species of the Northern Mountains, which encompasses Shey

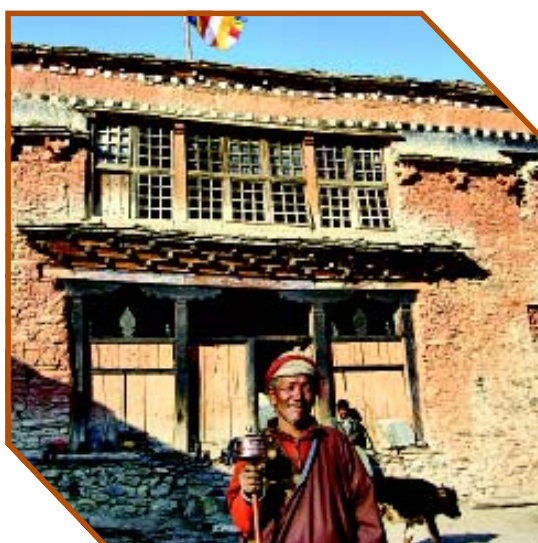
Phoksumdo National Park (SPNP), Rara National Park (RNP) and Dhorthapatan Hunting Reserve (DHR). Based on learnings and experience, snow leopard conservation needs to be expanded and scaled up through adopting a landscape level conservation approach. A new conservation programme needs to be designed to incorporate landscape level conservation approaches and to address emerging conservation issues effectively. In doing so, snow leopard habitat should be modelled using GIS and critical areas in terms of threats to snow leopard and its prey should be identified. NMCP's learnings and experiences on the implementation of snow leopard conservation activities ranging from conflict mitigation to anti-poaching to community-based monitoring should be replicated in critical areas.

8.2 Safeguarding Indigenous Knowledge

PPI made great strides in safeguarding indigenous knowledge through its application on local health care systems and the two THCCs are very well thought of

in the community. In areas where Amchi medicines has been traditionally practices, this can be replicated. For example in Mugu, Jumla, Humla, Mustang and Gorkha applying ethnobotany through the Amchi traditions is a real possibility. This community based model for medicinal plant conservation and management, which links health care and conservation can also be looked at as a way to deliver health services in other remote areas of the country which do not practice Amchi medicine. Linking through either local medicine practices ie through health posts, or through local practices, such as ayurveda, shamanism or folk knowledge prevalent in the targeted area is a real possibility. It has been demonstrated that involving local professionals, ie Amchis, in the programme has proved successful and the formation of local community based organisations (CBOs) such as Sister Groups, THCC Management Committees etc has proved effective for programme delivery.

To date there is also no formal recognition of Amchi health care by the Ministry of Health, and this is an area where future lobbying could take place. Currently it is not possible to have a school dedicated to the study of Amchi medicine which does not include the normal Nepali school curriculum. This makes it difficult for younger students as they have to study both regular subjects as well as Amchi, making it hard for them to succeed in either. This is also an area that can be explored.



8.3 Linking Conservation with Religion

It has been demonstrated in many countries that linking conservation with religion is one way to ensure local communities pay special attention to lessons regarding preservation of their surrounding biodiversity. This has been seen in the NMCP where lamas have actively been involved in spreading the conservation message. The fact the majority of people in Dolpa are Buddhist and follow a philosophy of doing no harm to any living thing, certainly proved beneficial regarding species conservation. Although not a main objective of the NMCP this is an area which should be looked at more closely and can be applied to all WWF programmes in the future.

8.4 Integrating Population, Health and Environment in Conservation Practices

There are now female Amchis based at the THCCs which have greatly helped women with reproductive health issues and pregnancies. However, there is still a rate⁹ of mother and child mortality which is above the average for the country. No studies have been done on this and this is one area in which future programmes could have a huge impact.

WWF is currently implementing the Population, Health and Environment (PHE) Programme in the Terai with funding support from USAID. Replication of best practices, successes and lessons learned in implementation of PHE can help improve women's health and at the same time deliver results in conservation by integrating population and health in conservation initiatives in Dolpa.

"More women and babies are dying today because of changes in traditions. Diet is different now that processed foods are coming from China and clothing has also changed from the traditional warm sheepskin to man-made fabrics. People are therefore getting more cold and not getting the goodness they should from their diet. Added to this is the normal gynaecological shyness uneducated women feel and the distances they have to cross to find medical help. In most cases it is just not possible to cross high, snow bound passes to get to even this THCC, never mind the hospital at Dunai,"

Amchi Namgyal Lama, Phoksundo THCC.

⁹ No figures are available but based on talks with the THCC Amchis there is around a 50% death rate of both mother and baby.



8.5 NTFP

There is very large prospect of livelihoods enhancement through promotion of non-timber forest products (NTFPs) and medicinal plants based enterprises. However, in order to ensure sustainable extraction of such resources they must be regulated and managed. At the same time, the marketing of NTFP needs to be strengthened. One way could be through conducting an inventory of NTFP in the area to give farmers a chance to take up this option. Marketing possibilities also need to be assessed. Furthermore, WWF can facilitate developing appropriate policy and its implementation at ground level through formulation and strengthening local level arrangements.

8.6 Alternative Energy

The use of hydro power and solar lighting has proved a most positive impact on the daily lives of the local communities in relation to the conservation of forests. However, some work remains to be done in terms of solar lighting. Locals have been taught how to make distilled water necessary to keep the battery operational but the batteries themselves have a shelf life of five year. After this time there is the question

of where to dispose of them and where to obtain new batteries. The idea of a collection centre for used and new batteries has been put forward. While this certainly will meet the needs of the people in Dolpa there is perhaps room to research what other development organisations and private organisations are doing to address this problem. Currently a substantial number of villages, some in very remote areas throughout the country have been provided with solar lighting. Whether GLAs and development agencies have investigated the long term impact of batteries on the environment needs to be assessed and some sustainable, cost-effective solution found.

8.7 Tourism

Upper Dolpo is still restricted for general tourists and those tourists who do come, have to pay high permit fees to the Ministry of Home. This fee is not counted as park revenue and is not shared with the buffer zone communities. Therefore, people of Dolpa needs to be organized and capacitated for lobbying for necessary policy change to obtain a share of such revenues for their development. Institutions such as porter associations could be formed and mobilized. Currently porters and food are brought in by any trekking groups. Problems of finding local porters

at the appropriate time could be addressed by forming such an association. There is a large scope for eco tourism but the circle needs to be broken - the infrastructure needs to be in place before more tourists will come and locals need to see that there is scope for livelihood improvement through a sufficient number of tourist arrivals before they become interested. The development of conservation tourism ie leopard trails, winter tourism, fairs, helicopter flights etc could be taken up with the Tourism Board, travel agents and relevant government departments.

8.8 Climate Change

Linkages between climate change and livelihoods is becoming an important worldwide issue. Climate change awareness classes have been provided but it is hard to suggest ways in which local communities can adapt to or slow down change. In Dolpa the most pressing question is whether Yarsagumba will be affected by climate change. In future, scientific studies are necessary to assess impact of climate change in micro-ecosystems such as alpine meadows. Studies can be done to see ways in which people can adapt their livelihood patterns, such as grazing times, harvesting times and species planting in light of climatic changes.

8.9 Strengthen Trans-boundary Cooperation at the Local Level

The people of Upper Dolpa largely depended on Tibet for trade, a supply of goods for daily sustenance, and for grazing. Likewise, cross border illegal trade in wildlife parts and medicinal plants also exists. Therefore, there is a strong need of strengthening trans-boundary cooperation between the local level government agencies and the communities of Tibet and Dolpa District to discuss conditions pertaining to conservation and local livelihoods.

8.10 Linkages

More linkages should be formed with other organisations such as RONSAT, IUCN, ICIMOD, TU and ministerial level committees to review and strengthen the status of ethnobotany in Nepal.

8.11 Policy and Best Practices

Much work still remains to be done in terms of helping the government strengthen its policies to protect the forests and species of the country. Directly advocating and demonstrating best practices to the Parliamentary Committee through study tours and interaction meetings may be possible.



Holy site Samling Monastery, Vjjer



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Northern Mountains Conservation Project

Consolidated project expenditure statements Period: 1996-2008

Amount in NRs

Fiscal Year	Budgeted Expenditure	Remarks
1996/97	1,683,768	
1997/98	2,051,477	
1998/99	3,888,191	
1999/00	7,999,470	
2000/01	11,656,260	
2001/02	16,074,704	
2002/03	17,589,025	
2003/04	16,413,198	
2004/05	13,937,434	
2005/06	7,127,246	
2006/07	27,132,605	
2007/08	21,863,255	
Total	147,416,632	



NMCP and WWF's Guiding Principles

- Be global, independent, multicultural and non party political

NMCP works at all levels, from grassroots to national, irrespective of caste, religion, nationality, gender or ethnic group. It is not aligned to any political group or party.

- Use the best available scientific information to address issues and critically evaluate all its endeavours.

The NMCP works with specialists, scientists, consultants and local experts through all stages of its inception and implementation.

- Seek dialogue and avoid unnecessary confrontation

The NMCP listens to people at all levels, seeking their advice, expertise and feedback. Through our NGO partners such as FECOFUN and RIMS we involve users, women and marginalized groups as the norm. We use a "do no harm" policy to avoid confrontation and imbalance.

- Build concrete conservation solutions through a combination of field based programmes, policy initiatives, capacity building and education work.

The main aim of NMCP is to facilitate local communities to take control and management of their natural resources through capacity building, awareness raising, education and other initiatives.

- Involve local communities and indigenous peoples in the planning and execution of its field programmes, respecting their cultural and well as economic needs.

NMCP works closely with local communities, Lamas, Amchis, women, Dalits, the poor and other marginalized Janajati groups, involving them in every aspect of the programme. Through our work to improve their lives and livelihoods through both traditional (NTFP and MAPs) and innovative (solar power, hydro power) methods we are staying true to the culture of the area as well as recognising their economic needs.

- Strive to build partnerships with other organisations, governments, business and local communities to enhance WWF's effectiveness.

The NMCP is implemented in conjunction with the Department of National Parks and Wildlife Conservation and through partners who have lines of communication from grassroots directly through advocacy procedure, to national government level. Working with respected members of the community, for example, Buddhist Lama's, we can implement our activities with more active participation from the community at large.

- Run its operations in a cost effective manner and apply donors' funds according to the highest standards of accountability.

Bibliography

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