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SERIES NO 2

# Sustainable Livelihoods

## **BUILDING ON GOOD GOVERNANCE:**

A case study on interlinkages between conservation, livelihoods and good governance practices in Dolpa, Nepal



### **Study, Analysis and Presentation**

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## Preface



WWF has worked for conservation in Nepal since 1967. The initial focus on the conservation of endangered species, during the 1980s an integrated conservation and development approach was adopted to enhance community participation through development services. The primary aim was to mitigate threats to biodiversity arising from unsustainable practices. Though an improvement on past efforts, this approach was limited in addressing the complexities of livelihoods issues in the WWF Nepal project sites.

This new approach necessitated WWF Nepal working with multiple partners and stakeholders to address livelihoods issues of people living in the Terai Arc Landscape, Sacred Himalayan Landscape and the Northern Mountains Project. Integrated conservation and development (ICDP), sustainable livelihoods approach (SLA), and good governance approach (GGA) is key instruments that were applied in the Northern Mountains Conservation Project (NMCP). There is especially significant considering WWF Nepal partnered with CARE Nepal to implement the 'Strengthened Actions for Governance in the Utilization of Natural Resources' (SAGUN) from 2002 in the Shey-Phoksundo National Park and Buffer Zone Area in Dolpa and Mugu. The first phase of SAGUN was successfully completed in 2006 and SAGUN Phase II is being conceptualized for Dolpa and Mugu again.

As an implementer, NMCP focused more on governance outcomes strategically defined in the SAGUN program

document, ensuring practices in equal benefit-sharing, leadership development and the empowerment of women, dalits and the poor for sustainable natural resource management. The sustainable livelihoods approach was used as an assessment and capacity building tool in MNCP. It highlights the linkage between conservation and good governance and assesses the understanding in perceived benefits from governance, development and conservation.

*"Building on Good Governance: A Case Study on Interlinkages between Conservation, Livelihoods and Good Governance Practice"* provides a comprehensive assessment result of our work in the project. WWF Nepal would like to thank the assessment team that comprised livelihoods specialist of WWF Nepal and a local resource person of NMCP who conducted and facilitated the livelihoods outcome assessment and prepared this document. I would also like to thank all the field staff as well as our partners like the sister groups and local users who shared valuable time and information with us.

WWF Nepal is also grateful to CARE Nepal and USAID for supporting NMCP and through the project, governance in natural resource management. I am confident that these findings will be valuable to WWF Nepal and its implementing partners to assess the new and changed status among communities in Dolpa and Mugu.



**Anil Manandhar**  
Country Representative  
WWF Nepal

**WWF Nepal and Sustainable Livelihoods:** WWF Nepal aims to increase the meaningful and active participation of people in the Terai Arc Landscape, Sacred Himalayan Landscape and Northern Mountains Landscape by improving their livelihoods and building partnerships. To achieve conservation goals and livelihoods outcomes defined in the WWF Nepal Strategic Plan (2006-2011), SLA tools and techniques are being mainstreamed in various stages of the conservation project cycle management and quantitative goals have been set: 'The livelihoods of more than 100,000 households living in Global 200 Eco-regions will be enhanced through the sustainable management of natural resources and livelihood initiatives. WWF Nepal published a sustainable livelihoods mainstreaming strategy document in 2005, which guides our work to benefit both people and nature. WWF Nepal expected following livelihood impacts that bring changes in people's life.

- Increased household food security through improved and productive livestock
- Increased income level
- Increased coping capacity
- Increased local employment opportunities
- Social/Human capital enhanced
- Morbidity and sanitation status improved
- Livelihoods vulnerability reduced
- Social inclusion ensured
- Good governance ensured
- Increased access on information, communication and education

#### WWF Nepal Strategic Goal

By 2015 WWF Nepal shall conserve at least 3 priority landscapes within the Global 200 Eco-regions by:

- Reducing threats to species, habitat and ecological processes
- Improving the livelihoods of local people

Source: WWF Nepal Strategic Plan (2006)

#### WWF Nepal Guiding Principle:

- Ensuring equality
- Empowering women, the poor and disadvantaged
- Being adaptive and holistic
- Sustainability
- Building partnership

Source: WWF Nepal Strategic Plan (2006)

***“Sustainable conservation is not possible until people’s subsistence livelihoods needs are met and their dependents are socio-economically, culturally and politically secure”***

- A WWF Nepal's Lesson Learnt

Building on Good Governance: a case study on interlinkages in conservation, livelihoods and Good Governance practices

**Abstract:** Nepal has experienced ten year long armed conflict that limited people’s access and mobility to consume near by biodiversity resources, benefit governmental, non governmental and private sectors services. Even behind the severe conflict effects, there are some noticeable changes in human and social resources. Due to of conflict most of investment was made to build local social, institutional, and human resources with less emphasis on physical infrastructures. But in natural assets, the community in upper Dolpa able to retain and maintain control and reduce unnecessary illegal poaching activities. But now, poachers started to use this vacuum period opportunity that learnt form recent incidences at last September 2006. It is because of politically fragile and transition periods and instability of political commitments to conservation. Yet, there are some positive signs of increasing in key species that locals observed frequently during their movements. Most of them were endangered species both pray and predators (musk deer, wild rabbit, wild boar, Himalayan Thaar, blue sheep and Snow Leopard. This indicated an increase in wild species population. Community claimed with evidences those are: leftover part of depredated livestock, crop depredation, and encounter during fetching water, fodder, fuel wood and transects of those species. The majority of people dependent mainly on NTFP collection specially Yarsha Gumba (*Cordiceps sinensis*) collection that combined with subsistence level farming which hardly cover less than three months foods sufficiency. Similarly, due to of low productivity and fertility of owned lands, most of

*the Dalits people even have not alternative livelihoods options so in terms of foods sufficiency, their lives are severely vulnerable and have stress due to of that.*

*Our past investment in sustainable livelihoods enhancement sectors, mostly concentrated in alternative energy, human resource enhancement and governance that accounted significantly with joint effort of WWF NMCP field team and backstopping support from SAGUN-CARE Nepal and WWF centre staff with active and enhanced buffer zone management committees, sister groups at local. Though there were very few revenue amount that buffer zone generated and reinvested for community due to of conflict, yet the social network according to different level and identity, a substantial number of local initiatives and programs entered for community and livelihoods enhancement objective. People became sensitive for their rights and resources, own self recognition and strengths that explored by SAGUN programs and its adopted strategy to ensure governance in natural resource management in northern mountain landscape. Similarly, they were also aware about their deserved rights, importance of species and biodiversity and presence of NMCP even in insurgency period with them added value in conservation dilemma. Equality, equity, roles and responsibility, institutional governance practices in their own leadership, transparencies, rights seeking behaviour and enhanced human capacity are some significant outcomes that SAGUN-NMCP induced for better and self recognition with dignity would sustain building on local people' strengths.*

## 1. Introduction

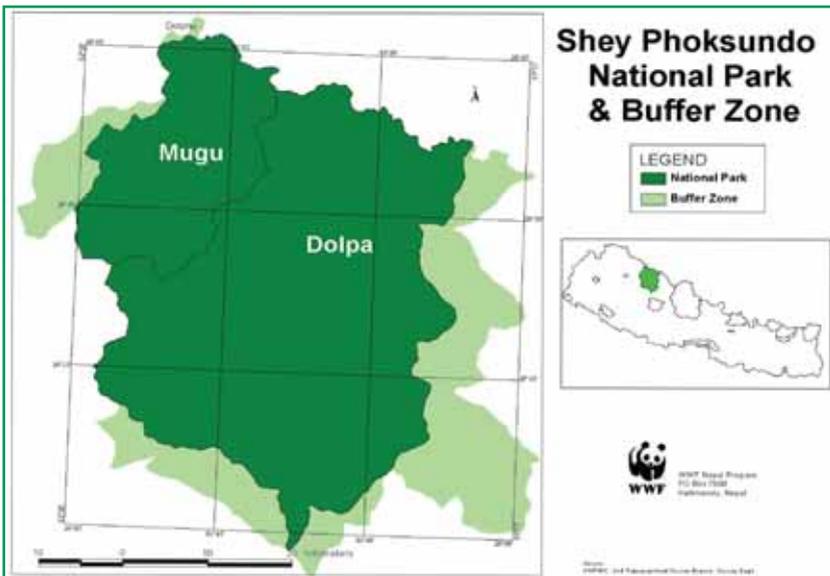
Northern Mountains Conservation Project (NMCP) is an Integrated Conservation and Development Project (ICDP) implemented by the Department of National Parks and Wildlife Conservation (DNPWC) in Shey-Phoksundo national park and buffer zone in Dolpa since 1997 with the technical and financial support of WWF Nepal. For the past nine years WWF Nepal has worked in partnership with Shey-Phoksundo National Park and local initiatives. From the inception stage of the NMCP, outcome level progress monitoring was confined within collecting information with numbers of implemented activities, accomplished activities and preparing summary cumulative reports that reflects only no of activity accomplishments with benefited households. However, there was a little bit understanding about

### Box No 1: Shey-Phoksumdho National Park (SPNP) and Buffer-zone Areas

SPNP spread over 3,555 sq. km in remote Dolpa and Mugu districts is the Nepal's largest National Park and the second largest protected area. SPNP was legally gazetted in 1984 covering a total of 11 Village Development Committees (VDCs). Later in 1998, an area of 1349 sq. km around the park was declared as the Buffer Zone (BZ). Out of these, 9 VDCs are located in Dolpa and two VDCs in Mugu district of Mid Western Development Region of Nepal. Most of the national park area lies at the north of the main Himalayan range and represents trans-himalayan flora, fauna and ecosystems. The northern region (inner Dolpa) is characterized by dry, steppe vegetation, and the southern flanks of the Himalayas are characterized by distinct forest ecosystems.

The SPNP Buffer Zone encompasses one of WWF's Global 200 Eco-regions; Western Himalayan Alpine Shrubs and Meadows. Diverse animals and plants thrive amid the region's unique trans-himalayan ecology and stark natural beauty along with the rich culture of the Dolpa people. It is equally unit for its diverse sociological and cultural sources including the practitioners of oldest Tibetan religion, Bon and a human settlement at the highest altitude in the world in Dho- Terap valley. Because of its unique natural and cultural settings, Government of Nepal has proposed Dolpa as a World Heritage Site (WHS). The area also has highest prospects for tourism development. The area was closed to tourists unit 1989 when its southern portion was opened and in 1992, the northern section was opened on a restricted basis. Currently, the entire area is open to tourists and the number of tourists until recently was increasing. However, communities are not receiving potential economic benefits derived from tourism development.

changes in community perceptions, their attitudinal and behavioural changes towards conservation and livelihoods over time, and how communities themselves defined changes in their livelihoods, natural resources and quality of lives and environmental services. These changes have been accounted for only from an outsider's perspective. This is the first time that WWF Nepal used a new approach, a livelihoods perspective, in understanding local communities' perceptions about the changes in the quality of their lives as well as in the quality of environmental services in that area. The findings of this effort indicate about NMCP's efforts on enhancing people's livelihoods in following areas: community livelihoods strategy, seasonal vulnerability, changes in resources, people's perceived benefits and importance of conservation and its linkages to livelihoods. To explore the perceptions, a *Comparative Impact Assessment* was conducted using a Sustainable Livelihoods Approach. This activity reflected livelihoods outcome level monitoring that defined in livelihoods component in NMCP's Log-frame plan, annual work plan for livelihoods theme, also defined at outcome level monitoring in newly developed WWF Strategic Plan (2006-2011) respectively. Major funding agencies for NMCP are Peoples and Plants International (PPI), United States Agency for International Development (USAID), WWF France, Kadoorie Charitable Foundation (KCF), WWF US, WWF Germany and WWF Finland.



## 2. Objective and Rational

The major objective behind this assessment and orientation program was for building capacity of defferent level user groups/committees to mainstream SLA approach with expectation that will maximize livelihoods benefits and understand the livelihoods complexities together with on-going governance approach in conservation practices. However, the assessment and capacity building workshop expected following specific outcomes

- Sensitization of common understanding of sustainable livelihoods approach in ongoing good governance practices in biodiversity conservation, protection and promotional activities in NMCP
- Enable participants to understand different components of sustainable livelihoods approach framework
- Enabling participants to reflect social inclusion issues in program planning, monitoring and evaluation processes.
- Integrate tools and vision of sustainable livelihoods in program at inputs (policy, strategy, activity and resources) and outputs (impact, change in attitude and living status) level.
- Develop resource persons to facilitate/ conduct orientation and carry out an effective livelihoods assessment at local level

### Box No 2: SAGUN: Overall objectives

The overall objective of SAGUN program is “to ensure that Nepal’s natural resources are managed in a democratic way that the 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.”

## 3. Methods: Tools, Techniques and Process

### 3.1. Tools and Techniques

Northern Mountains Conservation Project organized sustainable livelihoods mainstreaming orientation training and livelihoods outcomes assessment workshop simultaneously in December, in Dolpa. It was proposed that the training will be combined with livelihoods outcomes assessment that project achieved during the past project period (NMCP 1997-2006) in which SAGUN (2002-2005) was prominence intervention. All processes were

logically linked with major goals under capacity building of local committees increasing understanding and make able to mainstream SLA approaches in their on going conservation practices. Assessment results reflected the tasks defined under livelihoods outcomes monitoring and evaluation in annual and strategic plan document. Those applied tools and techniques during the outcome assessment and orientation process are given in box no 3

### 3.2 Process

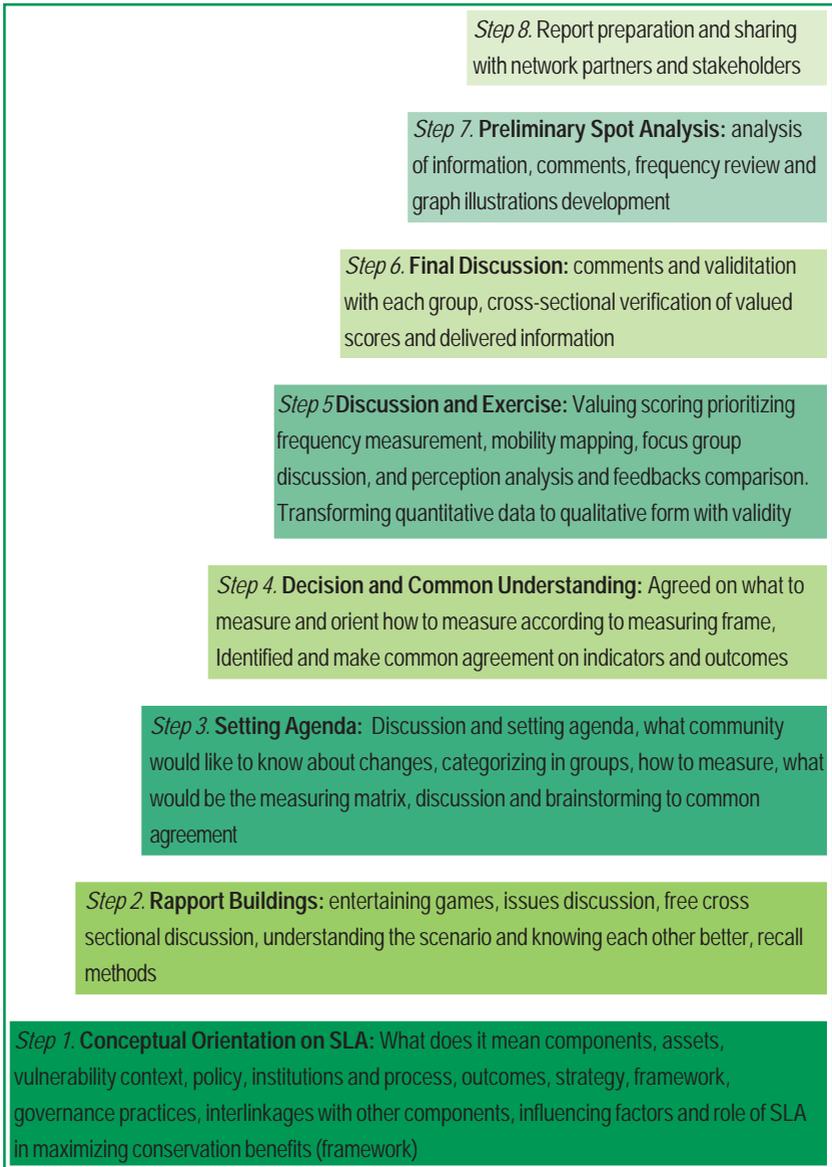
Participants were represented from different nine user groups among them Buffer Zone User Group (BZUG), Buffer Zone User Committee (BZUC), Local Community Based Organizations (CBOs), sister groups are significant. Participants were from seven Village Development Committee (VDC) out of eleven in the buffer zone area. Participants from upper Dolpo could not attend workshop due to snow fall. During that workshop, overall livelihoods outcome assessment has been done as part of the training and capacity building and outcome monitoring. This task supported both aspects; firstly, they were oriented about evaluation process with application of sustainable livelihoods tools and process. They were involved in scoring, assessment, evaluation, mapping and perceived benefits mapping, opinion assessment, observed changes that they experienced and believed over. To make the assessment and capacity building workshop output oriented, participants were divided, centred, and grouped according to workshop facilitation methodology and assessment process. It was ensured that each group members have opportunity for volunteering in group facilitation and exercises. Before mapping, scaling and doing outcome assessment exercise, the participants were provided an in-depth orientation on the concept and definition of livelihoods elements, the role of components in livelihoods framework and some learning games/energizer for rapport building and quick conceptualization.

#### Box No 3: Tools and Techniques

- Focus Group Discussion
- Perceived Benefit Analysis
- Ranking, Scoring and Prioritizing
- Weighing, scoring and Valuing of asset change
- Seasonal Mobility, Workload mapping
- Vulnerability Mapping



FIGURE 1: Participatory Livelihoods Outcomes Assessment Process



To validate the group discussion and find out its linkages with conservation and governance efforts, some other tools like key informant interview, specific group discussion, perceived benefits mapping, frequency measurement of wild species movement and encounters, post conflict impact were intensively exercised. The rationale behind doing key informant interview was keeping in mind that residents could easily recall the situation of ten years ago and triangulate the delivered information and scored value. This exercise provided us very comprehensive and intensive information and sharing of the situation. Perceived benefit analysis format was also administered to find out how people defined livelihoods, conservation and governance link and induced benefits. The findings also shed light on strategy status, vulnerability, movement of species, seasonal vulnerability occurrence.

All participants agreed on criteria and measuring indicators based on NMCP Project document and sustainable livelihoods theme. For an illustration, what does a *pakki* house mean for them, what physical key tangible components that required for their subsistence at local perspective; how they defined human sources are the sample of scoping exercise before identifying and making common agreement on measuring indicators. Similarly, presence of green bushes, thatches, observation of wild species (musk deer, snow leopard, himalayan thaar, blue sheep etc) and its faeces, habitats, fetching wood, grass and grazing; complain against frequently crops, livestock depredation etc were kept under the natural resources. (see boxes from 6 to 10 respectively). The assessment and value judgement was entirely left on their own observation, practices, commonly agreed group discussion, conclusion and perceived benefits. The results are entirely based on qualitative responses that narrowed down and reflected through commonly agreed criteria into quantitative forms. This agreed criteria and perceived measuring indicators become very useful and widened their understanding capacity for valuing and scoring.

## 4. Scope and Limitations

This is first time in NMCP that WWF Nepal used Sustainable Livelihoods Framework as livelihoods outcome assessment tool with own local human resources. However, the following limitations could be considered:

- *Limited time (orientation, group work, discussion and validity within four days)*



- *Diversity of Participants: (uniformity during assessment while scoring, valuation, weighing and mapping)*
- *Process-oriented (Tools/techniques discussed & used over the training period)*
- *Comparative analysis with time horizon (Before/After) method*
- *Completely based on qualitative data (verbal responses) that quantified based on participants weighing score*
- *Limited representation (out of 11, only 7 VDC represented)*

## 5. Finding Analysis and Presentation

It is obviously mentioned in earlier sections about process, objective of capacity building orientation, livelihoods outcomes assessment, perceived and observed benefits and their linkages. The Findings of livelihoods outcomes were framed in terms of local people life sustaining strategy whether they are conservation friendly, pressure on natural resources and whether they are sustainable and affordable. Trend and changes over the periods on their living strategy also have been analysed. Similarly, the existing resources that they used meeting their subsistence needs, issues that they faced and make their live more vulnerable and potential mitigation measures, good governance practices and its link to livelihoods. Illustration of governance practices in conservation efforts contribute in mobilization of local human resources, understanding in perceived benefits, ownership, representation and community managing roles of women, deprived and poor in different stage of program development, implementation, management and benefit sharing. Their illustrated list of observed wild species during their movement is also other significant evidences.

Implementation of governance tools, social inclusion process and practices, leadership and empowerment of local users and its reflection through representation in key roles to different institutional bodies, confidence in advocacy and leading capacity are other some positive affect syndromes of strengthening governance actions in conservation. At last, the analysis of perceived benefits and its link to governance livelihoods and conservation, link between perceived governance, development and conservation benefits with means of verifications and illustrations are listed in table no 1.

### 5.1 Livelihoods Strategy

People's survival strategies given in box no. 4 are the list that people currently adopted. These are diverse in nature that people adopted based on their available resources. It is doubtless that almost all strategies area subsistence rather capital formation, re-investments and others. Very few people and households are involved in enterprise, business and services related opportunities which are more income and opportunity generating to capitalize and utilize local human resources. According to analysis and discussion almost all are involved in Yarsha Gumba collection. It is their major income generating opportunity that means to recover household foods security over the rest of the year. Almost one third of people living in project areas are primarily dependent on Yarsha Gumba collection (*Keera Tipne-collection of cordiceps sinensis*) as main livelihoods strategy. Similarly, second prioritised strategy is agro-farming and livestock raring that are complementary sources and strategy for their survival. But livestock raring and transportation through livestock in upper dolpo are major dominant strategy in compare to lower dolpo where seasonal migration less frequently occurred. During the winter season the agro and pastoral lands are snow-capped that's why almost all residents including school students migrated into lower part as a regular coping strategy where they invest their resources for some retail domestic enterprise like knitting, weaving and selling of livestock for subsistence. According to figure 2, except yarsha gumba and other Non Timber Forest Product (NTFP) collection there other activities, like



**Box No 4: Livelihoods Strategy-NMCP**

- Agro-Farming
- Business, retail shops
- Livestock Raring
- Community works, Leadership
- Waged Labor
- Domestic Works
- NTFP Collections-Herbals/Maps
- Keera Tipne (yarsha gumba collection)
- Fuel wood Collection/Selling
- Timber Selling
- Teaching/involved in local CBOs/NGO services
- Foreign Employment/Migration
- Seasonal Migration
- Saving/Credit, group Mobilization
- Poaching/smuggling
- Army/Police/govt Service
- Polittics Whole Timer (involved in conflict)
- Poultry farming
- Vegetable Production and Supply
- Cultural/Rituals activities
- Tree Plantation, Fire control
- Small enterprise woollen knitting, weaving mattress etc
- Porter, tourist guide and tourism business

**Box No 5: Livelihoods Assets-NMCP**

- Forest community, National and Buffer zone
- Water falls, river, springs, lake and ponds
- Arable and fertile Lands
- NTFP, Herbals, Aromatic Plants, Yarshagumba
- Schools, Campus, non formal classes and training institutions
- Skilled, trained human technician, resources
- Monastery, Gumba, Temple
- VDC, community house, clubs and local initiatives
- Pastoral Lands, Livestock, cattle, Horse
- Horticultures (domestic and wild) Fruits
- Alternative energy devices (Solar, peltric set, micro hydro, Improved stove, back-boiler, irrigations and drinking water systems
- Hotel, retail shops, stores, tourist information centre
- Health post, schools offices Amchi canters, communications
- Snow leopard, musk deer and other wild species flora and fauna

livestock raring, retail shops, migration to outside for remittances, agro-farming are mostly adopted strategy. During the group discussion what we found that high pressure of Yarsha gumba (**Keera**) collection that pulled lots of people from other peripheral districts and practice uncontrolled harvesting now have negative results. This reflects that people's access and priority on uncontrolled harvesting, collection and feeling of competition to collect more and more for household livelihoods security have potential negative impacts

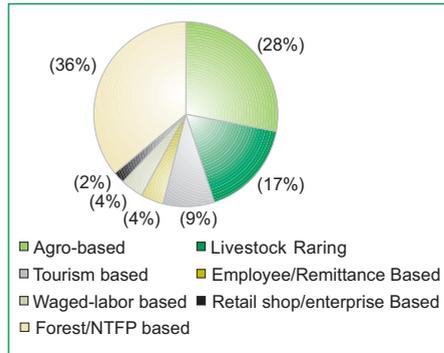
on regeneration of such plants, carrying capacity as well as disturbing local harmony. Though buffer zone user committees and sisters groups continuously advocated for users right, transparency and equity to access and protection of unsustainable harvesting. But this effort severely affected by armed conflicts that negatively affected of park administration resulted state and local revenue reduction.

## 5.2 Livelihoods Assets in NMCP

NMCP areas are highly rich in natural resources especially in endangered wild species (musk deer, snow leopard, himalayan thaar, blue sheep and Keera

compare to others. In recent years, most of the family not only from local but peripheral districts used to come for Yarsha-gumba (Keera Tipne) collection which is their major and secured survival strategy. Due to of fragile and less fertile nature of lands, the agro-farming is not sufficient to meet domestic food

FIGURE 2: NMCP-Livelihoods Strategy (2006)



### Box No 7: Indicators (Physical Assets)

- Pakkighar (Bardali, Stoned roof and furnish)
- No of Toilets (Pakki), users HH
- Alternative Energy users (Micro hydro, solar, peltric ICS, back-boiler)
- Improved road, trail and small bridges

### Box No 6: Indicators (Natural Assets)

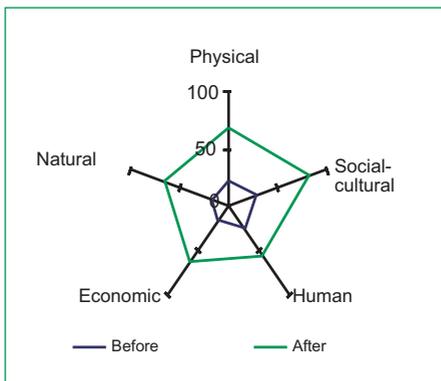
- Participation in nursery, forest conservation activity, no of nursery, forest coverage, plantation
- Forest density, coverage increased (National, and other)
- Observation/movement of species Musk deer, thaar, wild rabbit, blue ship local leopard, bear, wild boar
- Snow leopard and musk deer



needs. Similarly, seasonal migration is another reason. Basic Assets that available in NMCP are given in Box no 5.

The participants discussed and assessed their available resources with pre-defined and commonly accepted asset change measuring indicators with scaling code numbers (see box no 6, 7, 8, 9 and 10 respectively). These indicators also reflected in the conservation and livelihoods strategic plan target matrix. Although all these are not complete representation but major key indicators that gave us a general mental map on livelihoods changes happened during past project periods. According to analysed pentagon given in figure 3 indicated that the comparative changes in resources are balanced in shape though most of the investment during the past have been made to social and human capital and alternative energy devices yet the community become able to maintain minimum of good governance norms, leadership capacity and bases of resources except some exceptional incidences. The changes in assets according to discussion is balanced but not sufficient which later indicated while vulnerability mapping exercise conducted. These changes in assets do not indicate people who have frequently access and consumption over. This indicates there is limited intervention on conservation based economic opportunity which is most importance to secure and balance resources in high mountain areas. Disguise employment and employment opportunity are major constraints to sustain people livelihoods in compare to other asset that generated during last periods. The contribution of good governance practices to conservation could obviously observed in given asset pentagon (Figure 3) specially increase in socio-cultural and human asset where the most of the investment

FIGURE 3: Livelihoods Assets-NMCP



#### Box No 8: Indicators (Human Assets)

- Local trained technicians (forest, business, life saving skills, health and others)
- Local women leaders/Leadership development, Literate Adult Women
- educated women/employee, educated/literate dalits/ethnic
- No of school going children/ adolescences

### Box No 9: Indicators (Socio-cultural Assets)

- Self motivated People  
Participation Status
- Social institutions, groups, users  
formal/informal
- Dalits/ethnic/poor women  
participation in local institutions/  
groups
- Good governance, public  
auditing, public hearing activities

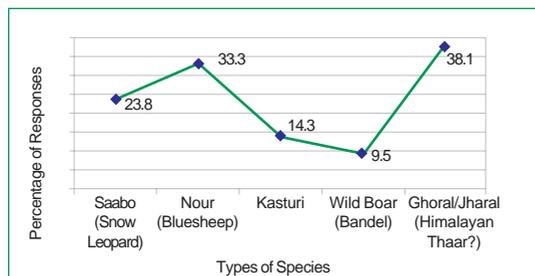
### Box No 10: Indicators (Financial Assets)

- Users Fund increased  
(established) saving/credit Local  
women
- Forest based enterprises/business
- Business, remittances, retail  
business, entrepreneur, micro  
enterprises establishes
- Agro-based enterprise (Buffalo,  
dairy, goat, sheep, pigs, fish etc.

has been made. This increase people capacity to lead local cbos and users groups; representation in key position, formation and institutionalization of different level users groups, build advocacy capacity, develop trained local resource persons and their skill enhancement, increase knowledge and improve management capacity and understand the conflict, governance and development.

During the discussion with focus group participants, new perception and event measurement were exercised. Basically, it was agreed that what are the major pray and predator species which according to them are important and indicative for conservation to them. Those snow leopard, blue sheep, musk deer, wild boar, Himalayan thaar has been taken into account. According to them, verbal measurement and scoring based on their recalls encounters, depredation records, observation and some evidences based on no of frequency measured (see figure 4). Due to lack of records and

**FIGURE 4: Frequency Distribution of Wild Species Observation**



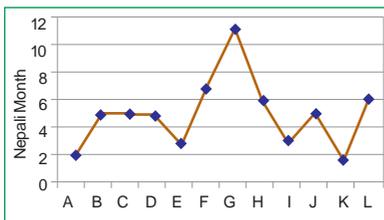
practices on such measurement, it was found difficult to compare measuring frequency whether it is increasing or decreasing. But yet, the results given in figure 4 is a current status that scored by respective area participants. According to them most of the time they observed Himalayan Thaar, blue-sheep and less frequently snow leopard. But wild bear and musk deer are rare to them. This figures itself are evidences for presences of such species in the project site. There is a need to capitalize and enhance more user groups skills through governance practices at different stage of park components and civil society organization those actively involved in conservation and development, as well as encourage them for their representing in natural resources and civil society groups.

### 5.3 Livelihoods Issues (Shocks, stresses)

It was learnt and observed during the discussion that people grievance against crop and livestock depredation now moderately increased. Year round food deficiency is one of the major shocks to local. Low productive means and resources, less fertile and having less than subsistence arable lands would not cope people's minimum household foods requirements. Most of the family in project area are living below than minimum subsistence requirements. The participants mentioned that most of the time they have leisure. Most of the HH have not fertile lands, livestock, improved skills and access to opportunity. A few better off family who have sufficient human resources and skills and able to collect enough Yarshagumba that means meet food difficiency. Therefore, being better of in that society not due to of productivity or cash earning but seasonal accumulation of yarshagumba. Some families who have marginal chunk of arable lands faced crop depredation by wild boar, rabbit and Himalayan Thaar.

This analysed outcome indicates the NMCP program should review its working and implementing strategy, rather whatever project did earlier. The

FIGURE 5: N MCP- Community identified vulnerabilities (Most)



**Box No 11: List of Identified Livelihoods Issues:**

- Low productivity and soil fertility
- Draughtiness, snow capped most of the season in Upper Dolpa
- Lack of Micro and small irrigation
- Un-employments and underemployment, disguise employment
- Lack of appropriate education facility, infrastructure
- Lack of health facility, infrastructure, skilled human resources
- Lack of Safe and improved drinking water facility and services
- Lack of appropriate fuel wood saving alternative energy
- Lack of bridge, trail and safe link road in upper Dolpa
- Highly physical workload to women and children
- Livestock disease, lack of animal health facility
- Lack of skilled and intermediate human resources
- Social disparity, marginalization
- Agriculture and off season vegetable, agro market and processing
- Lack of fuel-wood and grass (seasonal) for domestic use
- Lack of toilet, health and hygiene practice, facility
- Crop and livestock depredation
- Illegal poaching, smuggling of wildlife and valuable herbal medicine
- Uncontrolled and unsustainable harvesting of herbal NTFP
- Forest/public land encroachment
- Uncontrolled forest fire
- Lack of ownership feeling, collective efforts for conservation
- Lack of democratic and social leadership
- Seasonal and force Migration (from upper dolpo to lower and lower dolpo to terai and other parts of Nepal.
- Youth resource Migration to India, terai and abroad (gulf countries)



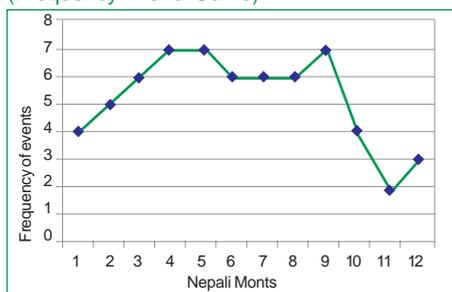
major focus now should be to mainstream appropriate vulnerability reduction measures specially, natural resource based economic opportunity that means to increasing food sufficiency and increase their coping capacity to meet unexpected shocks specially women and children health. Development of mid-level technicians would be another option that provide employment opportunity to local youths in or around the district. The identified major shocks and stresses of these areas are food deficiency, workload to women, children, crop and livestock depredation, access to services and availability of efficient services. According to the figure 6, the shocks and stresses are mostly fallen in June, July, December and January months. Among the all, food sufficiency and workload to women and children major issues that increase work drudgery and loose economic and community managing roles. Though, bitter experience of armed conflict that limited people mobility even within their village area reduced their participation and presentation in local opportunity. The governance and program induced other support implemented trainings, capacity building and leadership to address this gap. Migration of youths is another gap that community lost.

Unlikely, workload to women and children during the Yarcha Gumba collection and harvesting is also another issue. They used to involved for Yarcha Gumba collection but have not retain their earning which captured by their husband and elders household members. Prevalence of diarrhea and water born disease such infestation is also high during the July to August

FIGURE 6: NMCP Seasonal Vulnerability Mapping Results

	Community Identified Seasonal Vulnerability	Months (Nepali : 1=Baisakh)												
		1	2	3	4	5	6	7	8	9	10	11	12	
A	Crop Depredation (blue sheep, musk deer, bear Thaar)													
B	Snow Leopard (human depredation)													
C	illegal poaching/smuggling													
D	Forest Feeling/cutting (Fadaani)													
E	Forest/shrub fire (Aaglaagi)													
F	Diarrhea, ARI, Decentry													
G	Severe Food Deficiency													
H	Seasonal Migration													
I	Severe Fuel wood Deficiency													
J	Severe Grass Deficiency													
K	Unemployed (Bekari/Fursad) leisure													
L	Workload to women and children													

**FIGURE 7: Vulnerability Occurrence (Frequency Trend Curve)**



that required a large amount of money to cope with those unexpected shocks. These two different features of livelihoods issues have multiplier effects and contribute to loss owned assets specially Yarsha Gumba earnings and compel them to change their existing living strategy which possibly will not be pro-conservation and sustainable. As a result they practice more unsustainable and uncontrolled harvesting of growing plants which are not matured and eligible to harvest.

#### **5.4 Illustrating and linking governance, sustainable development in conservation**

Mainstreaming and practices of basic good governance tools and the establishment of norms and assumption were observed through user committee, sister groups and buffer zone users influence and conviction during the assessment and capacity building activities.

The practice of good governance tools were used in different stages of conservation and development activities. This has increased the confidence, participation, lobbying and negotiation skills of the group. Discussions with sister groups showed application of advocacy and mutual dialogue to discuss institutional and management issues. Most members agreed with maintaining the minimum norms of transparency and representation from women, dalits and the poor, while highlighting the equal responsibility, opportunity and benefit sharing among all.

A major factor that can be marked as a key impact of good governance practice inputs during the last SAGUN project period is the changing pattern of their roles from domestic and confined to community management. Organizing public audits, accounting and sharing benefits equally also

illustrate the changes. The confidence of the sister group has increased while decreasing their dependency on the men and community elite. Their voice is now properly represented in matters ranging from snow-leopard coordinator committees, BZUC, BZUG, Sister Groups, CBOs IGA groups, anti-poaching groups, THCC-traditional healers coordination committee. During the assessment exercise, most of the participants demonstrated their capacity of preparing action plans, visions for the coming year, working with partners and basic requirement of formulation of an operational plan. All these invisible and intangible changes eventually enhance and build people's capacity to manage, lead, benefit and advocate for better long-term community managed conservation practices that also maximizes their livelihoods benefits.

### **5.5 Perceived Benefit Analysis: (Focus Groups Discussion Results)**

During the past project periods the people perceived NMCP and its conservation efforts as a part of their life. Different interventions and development and conservation activities were implemented with active and meaningful participation of local users groups and initiatives. The discussion and analysis given in tabular forms indicates that among the groups eg Buffer zone and others the sister groups are very clear and effective conceived about the project objective and goal. However, others groups in upper Dolpo also have clear-cut understanding of their role, social development and conservation issues that undermined by past severe insurgency that limited their mobility and interactions with NMCP and national parks authority. A summary list of different eleven major activities with its conceived objective, perceived conservation benefits of those particular activities and their perceptions on livelihoods benefits and the evidences that proved for that achievement are given in table 1 respectively.

TABLE 1: Perceived Benefits Analysis Results

SN	Major Intervention	Objective	Perceived Conservation Benefits	Perceived Livelihoods Benefits	Means of Verification Evidences
1	Alternative Energy (Solar, ICS, Back-boiler, Micro-hydro)	To conserve forest, pine tree, improve in-house environmental health, save fuel wood fetching time	<ol style="list-style-type: none"> <li>Saving of Pine trees</li> <li>Less fuel wood consumption</li> <li>Reduced unnecessary mobility in forest and protected areas for fetching fuel wood</li> </ol>	<ol style="list-style-type: none"> <li>workload on fuel wood fetching reduced,</li> <li>in-house environment improved, changes in health and hygiene improved,</li> <li>study-time of children expanded,(stay long)</li> <li>access to information devices increased</li> <li>reverse impact Male stayed overnight and Waste time in gambling and card playing</li> </ol>	<ol style="list-style-type: none"> <li>Saving of kerosene</li> <li>Few pine-wood pile in courtyard.</li> <li>Increase in use of communication information and HH appliances</li> </ol>
2.	Nursery/ Tree Plantation	Conservation of endanger species habitat, fuel wood timber for future needs	Environmental balance, timber, and dense, habitat improved and habitat of prey species improved.	<ol style="list-style-type: none"> <li>availability of fuel-wood, timber</li> <li>contribution to control of soil erosion</li> <li>raw materials for income generation activities</li> </ol>	<ol style="list-style-type: none"> <li>prey and predator species (Thaar, wild rabbit, musk deer and Snow leopard increased</li> </ol>
3.	Off season and cash vegetable production, green house production	Income generation, delivered local and domestic needs	alternative opportunity that reduce mobility and unnecessary pressure to forest	alternative employment and HH economic opportunity generated. Self motivation to project conservation program, saving of expense, nutritious foods available	<ol style="list-style-type: none"> <li>livestock and crop depredation increased</li> <li>observation, encountered with those species</li> </ol>
4.	Anti-poaching operation	Conservation of endanger species (flora	Contribution to endangered species conservation	Youth mobilization, local involvement in conservation,	Poachers arrested in Raha, Trap/paso collected in Raha and

SN	Major Intervention	Objective	Perceived Conservation Benefits	Perceived Livelihoods Benefits	Means of Verification Evidences
5	and controlling activities (NTFP, timber, species, plants (CBAPO) Processing machine and improved ghatta	and fauna). Mobilize local youth force against illegal poaching activities  To use local skills, resource and product for income generation, women workload drudgery reduced	limit poachers activities local participation and ownership in conservation  Increase use of waste forest/NTFP raw materials	capacity and self confidence developed, employment opportunity  Local employment, income generation, workload to women reduced, Income opportunity, use of leisure time for income generation	Tripura  Pahada Herbal Processing Plants, Improved Ghatta in Tripura, Raha, and Foksumdo
6	Saving and Credit Groups (Sister Groups)	To increase habit of saving and easy access to micro-credit	Opportunity for information sharing on conservation, livelihoods, and other domestic related issues	Opportunity of saving, investment and low interest loan available	53 groups (sister) mobilizing saving credit activities
7	Infrastructures (bridges, toilets, drinking water facility, fencing, community	Increase safe access and mitigate risk, change behaviour, mobility pattern To motivate people in conservation and	Increase access on forest/NTFP resources, environmental clean motivation to conservation, ownership and conservation of	Contribution to forest and species conservation by increasing access, increase ownership and self motivation, health improve and behaviour and attitude changed risk of water-born disease reduced	No of HH with safe toilet facility, improved trail, bridges and community houses No of installed drinking water schemes, established kitchen garden and no of water

house, trail trek)	provide safe drinking water	catchments, forest area	work load and drudgery for women, children reduced. water available for kitchen gardening	burn disease cases
8	Informal Education/Literacy Class and Governance Literacy	Advocacy and Leadership Capacity in Conservation issues	Increase knowledge in conservation and development, social issues equity, equality and governance in NRM. confidence build up	Representation of dalits, minority and disadvantaged groups, women in users groups in formal and informal sectors, mobilization of sisters groups and activities, social inclusion in user groups' operational plan
9	Amchi/Health local skill/knowledge based	Herbals and valuable plants conservation, sustainable harvesting and planting practices	enhance local people capacity and knowledge on health issues management institutional and individual income generation, social safety in community, health risk reduced	No of patient visited in Amchis, No of Amchis registered and trained amount of cash income of Amchi Hospital
10	Capacity building training, leadership and awareness raising, extension visit	Self motivated participation in conservation and development, management and leadership capacity	Confidence build up for taking leadership and managing role, Local resource Person available, local human resource capacity enhanced, social inclusion ensured	No of local resource person, No of people represented in users groups, committees, Presentation in leadership and community managing role.
11	Group formation, institutionalization and capacity building	Collective and democratic decision, institutionalize efforts, group cohesion and common ownership on natural and development resources	Confidence building, social harmony and rapid decision and collective efforts for community works, social safety nets, motivation to conservation, leadership building at local level Empowerment, behaviour change through imitation	Advocacy and representation, saving and credit mobilization, social mobilization, small schemes installed, entrepreneurship development no of groups according to gender, and nature of works

## 6. Recommendations

Evidence from the field supports practical understanding in changes in good governance, development and conservation practices contribute to improve people's livelihoods, especially in human and social assets. The question that still remains is whether this is right or enough for sustainable conservation? Do people create sustainable livelihoods when presented with the development of coping capacities? Are the existing strategies conservation friendly and appropriate? We have yet to answer these queries. Yet there is need for change and prioritization that must be mainstreamed in the project. A detailed post-conflict response program is also required that will stimulate local youths and sister group initiatives that will reduce drudgery and contribute to activities like youths in anti-poaching. In conclusion, the following recommendations are suggested:

- Applied research on NTFPs, herbal plants and species
- Develop local entrepreneurship with capacity building and start-up capital
- Build skills and capacity to promote/establish BZUC/BZUG/SG/BZ-CFUG to maintain controlled harvesting mechanism (Endorse policy to enable local user's group's controlled sustainable harvesting mechanism and revenue from yarshagumba to Government and BZMC
- Review/facilitate sister groups mobilization mechanism in lower dolpo
- Build partnership capacity of local initiative to address the food security issues and economic opportunity
- Support sister groups to be a leading cooperative
- Support to NTFP processing, marketing and supply through cooperatives (community-controlled NTFP collection and marketing and supply center)
- Develop local resource person for enterprise development
- Develop strategy/policy to exclude outside dwellers and labor in NTFP collection
- Focus mainly on NTFP-enterprise, study tourism and horticulture-based IGAs
- Empower local authority and BZMC council as its grassroots wings
- Promote and support eco-tourism, study tourism and nature tourism with specific defined activities





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