



COUNTRY PROGRAM LANDSCAPE STRATEGY FOR NEPAL COMMUNITY DEVELOPMENT AND KNOWLEDGE MANAGEMENT FOR THE SATOYAMA INITIATIVE (COMDEKS)



2011-2013



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Acronyms

ADB	Asian Development Bank
BCC	Behavior Change Communication
CBD	Convention on Biological Diversity
CBO	Community Based Organization
CBS	Central Bureau of Statistics
COMDEKS	Community Development and Knowledge Management for the Satoyama Initiative
COP	Conference of Party
DADO	District Agriculture Development Office
DDC	District Development Committee
DFO	District Forest Officer
ENA	Essential Nutrient Action
ERIP	East Rapti Irrigation Project
FCODE	Feature CODE
FFS	Farmer's Field School
GEF	Global Environment Facility
GIS	Geographical Information System
GO	Governmental Organization
ILO	International Labor Organization
IPM	Integrated Pest Management
LDO	Local Development Officer
MBT	Main Boundary Thrust
MD	Millennium Development
MDI	Manahari Development Institute
MUS	Multi-use Water System
NC	National Coordinator
NGO	Non- Governmental Organization
NSC	National Steering Committee
OP	Operational Plan
SALT	Sloping Agriculture Land Technology
SCBD	Secretariat of the Convention on Biological Diversity
SD	Standard Deviation
SEPL	Socio-ecological Production Landscape
SEPL	Socio-ecological Production Landscape
SGP	Small Grants Programme
SI	Satoyama Initiative
SI-PPP	Satoyama Initiative - Paurakhi Pakha Pakhera
SIS	Small Indigenous Species (fish)
UNDP	United Nations Development Programme
VDC	Village Development Committee

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Summary

Nepal is one of the most hazard-prone countries in the world. The major inflicting hazards are the recurrent floods and landslides that claim several lives and properties almost every year. Besides natural causes, these events are also human-induced – through raging unsustainable land use practices.

The slash and burn agriculture (*khoriyakheti*) practiced by indigenous Chepang and Tamang communities of North Western Makawanpur over generations has been one such practice which has seriously deteriorated the productive and carrying capacity in the uplands where they dwell. This has put their already difficult lives and livelihood at peril. These uplands must be ecologically restored. The most prudent strategy to do this is the application of Satoyama Initiative.

Satoyama is a Japanese term, which denotes mountains, woodland, and grassland (yama), and surrounding villages (sato). The SATOYAMA concept, developed in Japan, is intended to connote a landscape in which human activities occur in harmony with nature. The Satoyama Initiative (SI) is a global initiative to promote sustainable use and management of natural resources in socio-ecological production landscape with the aim of maintaining, rebuilding, and revitalizing them. The Satoyama Initiative was recognized at the Tenth Meeting of the Conference of Parties to the Convention on Biological Diversity held in Nagoya, Japan, in October 2010 as “a useful tool to better understand and support human-influenced natural environments for the benefit of biodiversity and human well-being” (CBD COP10).

Funded by the Japan Biodiversity Fund setup within the Secretariat of the Convention on Biological Diversity (SCBD), the Community Development and Knowledge Management for the Satoyama Initiative Project (COMDEKS) is a unique global project implemented by the UNDP, and delivered through the GEF-Small Grants Programme as the flagship of the International Partnership for the Satoyama Initiative. Currently piloted in ten countries, the COMDEKS project seeks to enhance the resilience of socio-ecological production landscapes. This is achieved by developing sound biodiversity management and sustainable livelihood activities with local communities, in an effort to maintain, rebuild, and revitalize socio-ecological production landscapes. The UNDP-implemented COMDEKS project has been planned to be implemented in 11 countries around the world, including Nepal. Nepal is one of first phase countries participating in this global pilot, together with Brazil, Cambodia, Ethiopia, Fiji, Ghana, Grenada, India, Malawi, Slovakia and Turkey.

COMDEKS will support local community activities to maintain and rebuild socio-ecological production landscapes (human-influenced natural environments) and to collect and disseminate knowledge and experiences on the results of such local community activities, towards the realization of “societies in harmony with nature” as defined in the vision of the Satoyama Initiative.

The main objective of COMDEKS is to help develop sound biodiversity management and sustainable livelihood activities with local communities in socio-ecological production landscape to maintain, rebuild, and revitalize landscape, in accordance with the following five perspectives of the Satoyama Initiative.

1. Resource use within the carrying capacity and resilience of the environment
2. Cyclical use of natural resources
3. Recognition of the value and importance of local traditions and cultures
4. Natural resource management by various participating and cooperating entities
5. Contributions to local socio-economies

To realize the above reality, the North Western part of Makawanpur district, central region of Nepal was selected to pilot the COMDEKS project.

Manahari Development Institute Nepal (MDI), a well-established national NGO in Nepal was selected on a competitive basis to carry out the baseline assessment of the target landscape. MDI complied with a baseline survey of the area with the financial and technical support from the COMDEKS Project. As a first step, a pre workshop was held in Daman, Makawanpur in June 20, 2012 involving 32 stakeholders representing, among others, District Development Committee (DDC), heads of district line agencies, local political leaders, journalists, and farmers from the landscape. This workshop selected the 10 Village Development Committees (VDCs) as the target landscape. These 10 VDCs¹ were selected due to the local habitants' overriding poverty, intimidating food insecurity levels, low level of education and awareness, pitiable access to basic services and grossly inadequate state support. This workshop also locally termed the SI in Nepal as SI-PPP (SI – *PaurakhiPakhaPakhera*)². Further, the same workshop defined the individual sub-landscape boundary as the boundary of each VDC.

After the pre-workshop, baseline surveys were carried out in the 10 selected VDCs. The entire baseline proceedings were endorsed by a post workshop held in Sauraha, Chitwan in July 23, 2012. The baseline outcome was used to develop the COMDEKS Strategy for Nepal.

This report represents COMDEKS Strategy for Nepal. The report was prepared with the support of MDI- Nepal on the basis of agreed COMDEKS methodologies to facilitate assessment and planning of community interventions at the landscape level. This COMDEKS strategy for Nepal describes the approach to maintaining, restoring, and revitalizing sustainable socio-ecological production landscape with activities at the community and landscape levels (micro-projects), including priority sites, and measures for project implementation.

¹ The 10 selected VDCs were Dandakharka, Bharta, Handikhola, Kankada, Kalikatar, Manahari, Khairang, Raksirang, Sarikhet and Namtar.

² This Nepali term means highest effort-demanding steep lands.



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This strategy will guide the development of a portfolio of projects, and represents the consensus of the Country Programme and relevant stakeholders on key issues such as priority landscape and sites for potential COMDEKS activities.

This strategy report has been organized into seven chapters. The first and second chapters provide detailed background information including the characteristics of the target landscape. The third chapter identifies the threats encountered at the landscape level and the opportunities that have potential to mitigate these threats. The fourth chapter outlines the COMDEKS Nepal strategy and sets the objectives, outcomes, and related indicators. The fifth chapter suggests how COMDEKS Strategy and community-based projects supported by COMDEKS Nepal will be monitored and evaluated. The sixth chapter outlines the potential micro projects to be supported by COMDEKS Nepal, and the selection and implementation process. Finally, chapter seven recommends ways to make knowledge management effective.



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Chapter 1. Background

Nepal, due to its geographic location, and diverse topography, is one of the most hazard-prone countries in the world. The major wreaking hazards are the recurrent floods and landslides that claim several lives and properties almost every year. The aggravation of these events is also human-induced – through rampant unsustainable land use practices.

Indigenous communities, the Chepangs and Tamangs, living in the hills and mountains of central Nepal face the extreme forms of hazard, affecting both lives and livelihood. Makawanpur is one of the seriously affected districts in this regard. Out of the district total land area of 242,600 ha, only 6.49 percent of the total land is claimed to be safe from landslide threats (UNDP 2004). The northwestern part of the district, where the majority of the Chepang and Tamang communities live, is faced with the worst form of poverty. The Chepang and Tamangs inhabit the remote contours practicing slash and burn agriculture. They are regarded as the most marginalized and resource poor groups in Nepal. Their tiny land holdings (less than one hectare) provide no more than 3 to 6 months of food security. High food insecurity, low female literacy, low access to basic social services, high population density on a fragile natural resource base, and recurrent natural disasters like famine and floods are the common poverty induced ailments in the area. Due to lack of knowledge and resources, negative coping has been adopted by gradually reducing the cultivation cycle from 3-5 years to a virtually annual cycle, consequently inviting serious soil erosion problems affecting not only the local area but also those communities in the downstream.

The major issue at hand, therefore, is how to minimize the environmental threats facing the landscape, emanating from past misdeeds and affecting the area now. Without such reversal, the growing food and income requirement of the households in these areas, who have been living in destitution with seemingly low hope for the future, will not be possible. Such a reversal process entails conserving soil and water, enhancing soil fertility and increasing crop production. Local communities need appropriate knowledge and resource support to adopt these technologies.

Nepal is one of the first phase pilot countries participating in the COMDEKS Project. This report represents COMDEKS Country Programme Landscape Strategy for Nepal. It was developed by UNDP SGP Nepal with the facilitation and financial support from the Community Development and Knowledge Management for the Satoyama Initiative Project (COMDEKS), on the basis of agreed COMDEKS methodologies and it is the outcome of a baseline study conducted in 10 Village Development Committees (VDCs) of North West Makawanpur. Manahari Development Institute (MDI) collaborated in the planning and facilitation of the workshop and provided technical assistance for capacity development through a specific grant. MDI had already made a humble beginning by supporting massive plantation works in the area. Yet more is needed to connect the landscape



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ecosystems and move towards improving resiliency against the environmental odds. This COMDEKS strategy for Nepal describes the approach to maintaining, restoring, and revitalizing sustainable socio-ecological production landscapes with activities at the community and landscape levels, including priority sites, and measures for project implementation. This strategy paper, upon due endorsement from the Nepal National Steering Committee (NSC), will guide the development of a portfolio of projects, and it represents the consensus of the SGP Country Programme in Nepal and relevant stakeholders on key issues such as priority landscape and sites for potential COMDEKS activities. This strategy will ultimately guide the implementation of COMDEKS activities in Nepal.

The strategy outlines the procedures for selection and implementation of specific micro-projects within the defined target landscape boundary. Each individual community-based micro-project selected will have a project-specific objective, which will contribute to the results to be achieved at the landscape level. Each project will also have its own set of outcome targets that will need to be consistent with, and contribute to the overall results of the COMDEKS program at the global level.

Chapter 2: Priority Areas

The target landscape for COMDEKS Nepal is defined in terms of Village Development Committee (VDC) geographic boundaries. Ten contiguous VDCs of North-Western Makawanpur have been chosen as piloting venues for SI-PPP³. The 10 VDCs, collectively called as target landscape, are Handikhola, Bharta, Raksirang, Kankada, Dandakharka, Khairang, Kalikatar, Namtar, Manahari and Sarikhet. The location of these VDCs is shown in a Makawanpur district map presented in Map-1. Average area of each selected VDC is 79 square kilometer with an average of 1,338 households per VDC and an average population of 7,781 (National population census 2001). These VDCs are the basic administration units at the grassroots level and accommodate a diverse mosaic of ecosystems.

³ SI-PPP, (Satoyama Initiative – *PaurakhiPakhaPakhera*) is a local term coined for the SI initiative in the hills and mountain region of Nepal. This Nepali nomenclature means the effort-demanding moderate and small steep lands. This local nomenclature was endorsed by both pre and post workshops held during the process of baseline study.



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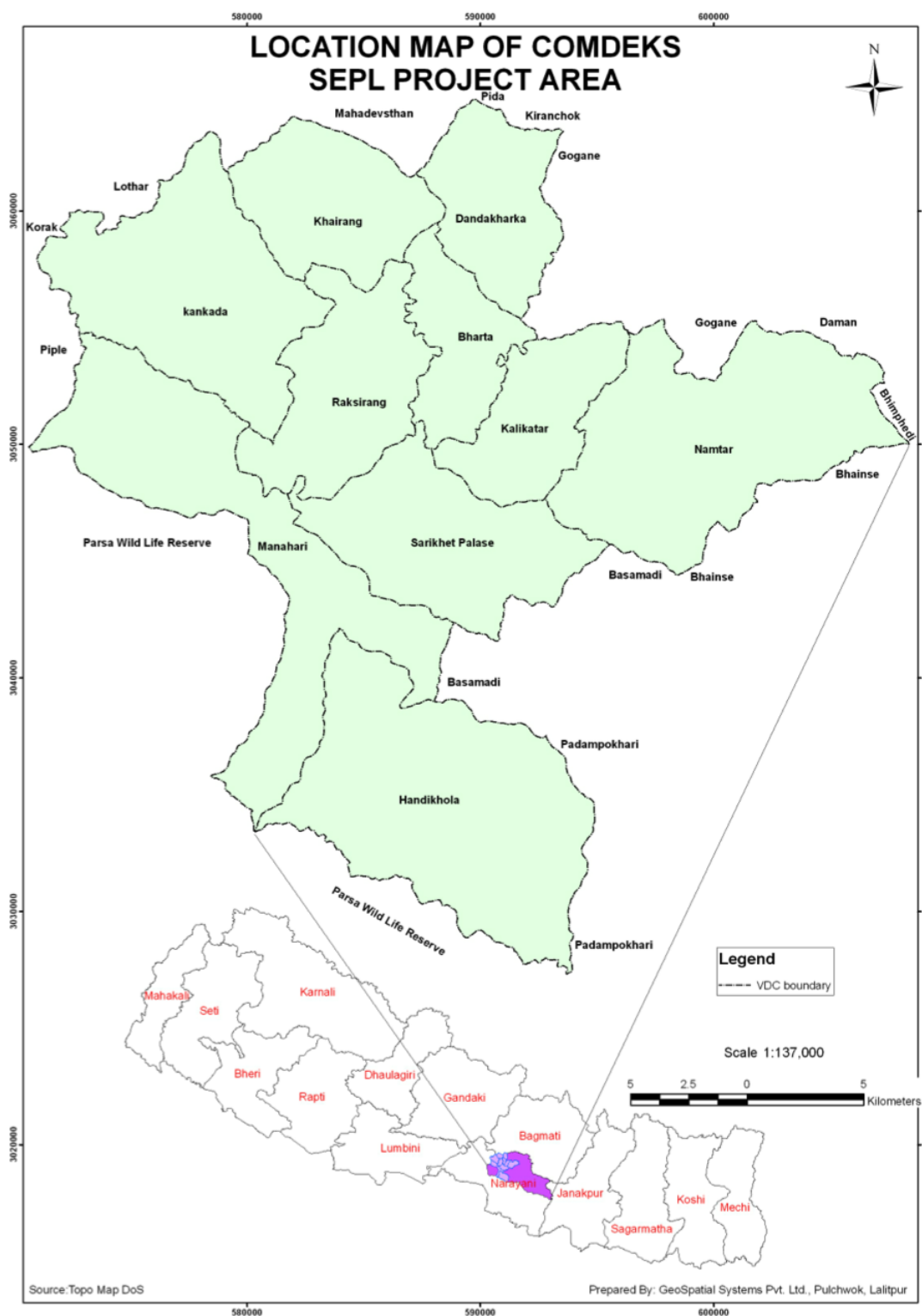


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Map 1: COMDEKS Project Area Landscape



2.1 Brief description of Landscape

The 10 VDCs of west Makawanpur are one of the most hazard prone areas in Makawanpur district, Central Nepal. The landscape is a watershed section of the Manahari River, which drains into the Rapti River. The geological and climatic conditions in these watershed areas have resulted in the extremes of landslides, flooding, and wild fires, among others, as is evident from the area being worst affected by the floods and landslides of 1993 and 2003 to the despondency of the local inhabitants. The Manahari River forms deep river valleys to the north. The landscape can be broadly divided into two physiographic regions - Mahabharat hills in the north and Churia hills in the south with some flat plains in Manahari and Handikhola VDCs.

Geographic area: The total land area of the landscape is 78,900 ha having only 6,500 ha cultivated area (8%). Nearly half the area is under forest. Some areas of Manahari lie in the buffer zone of Chitwan National Park whereas part of Manahari and Handikhola fall in buffer zone of Parsa Wildlife Reserve. In terms of terrain, 68.6 percent of the landscape area is above 18° slope where annual agriculture could be risky from a slope stabilization point of view.

Tenure systems: *Khoriyakheti* (slash and burn agriculture) is the dominant land use practice in parts of more than 20 hill districts of Nepal. It is typically practiced on the most inaccessible and steep lands and it is the traditional farming system of several indigenous peoples including Chepang, Magar, Sherpa, Rai, Limbu, Tamang, and Gurung. These groups have been practicing slash and burn agriculture for generations, adapting it to local conditions and changing circumstances. Studies indicate that this form of farming is both appropriate and sustainable on the type of lands where it is traditionally practiced, as long as the forest fallows are respected as an integral part of the farming cycle. Nepal has ratified two Conventions of the International Labor Organization (ILO) that concern the rights of indigenous shifting cultivators: No. 111 (Discrimination in Employment and Occupation), ratified in 1974 and No. 169 (Indigenous and Tribal Peoples), ratified in 2007. The aim is to see how the provisions of these conventions can be applied to protect the rights of shifting cultivators.

The main concern of slash-and-burn agriculture practitioners is inequitable land tenure arrangements and limited access to other natural resources. Their access to lands and forests traditionally used or occupied by them has diminished drastically over time, with exclusionary policies on land, forest, and nature conservation. While the community and leasehold forestry programs may have been broadly successful, they are found insensitive to, and often in conflict with, slash and burn agriculture practitioners' rights and needs.

Demography: The target landscape area is inhabited by over 13,378 households with 77,812 people (CBS, Population Census 2001). Indigenous Tamangs (52%) and Chepangs (17%) are major dwellers in the area. Of the total population, 49.3 percent are women.

Soil quality: The Mahabharat hills are composed of sandy stone, lime, quartzite and gneiss. Physical property of the soil varies in the river valleys and hills within the Mahabharat range. Productivity of the soil is higher in the low lands as compared to the hills. Soils in the hills are medium to light textured with preponderance of coarse grains and gravel having very high permeability. The soils are generally acidic in nature. The Siwalik hills are composed of coarse and loosely bedded stones, crystalline rocks, shale, and conglomerates. The sandy texture of the soil implicates that the water holding capacity is low.

Agriculture: The target landscape area has maize-dominated cropping system. Within standing maize crop, pulses such as cow pea and soybean are grown as intercrops, and horse gram is grown as relay crop. In very steep lands, slash and burn agriculture is practiced which is again dominated by maize crop. After the SGP intervention, considerable area under *Khoriya* (about 4,000 ha) has been transformed into agro-forestry patches where banana, amriso, pineapple, and fodder trees are planted. After the extension of road facilities, vegetable farming mainly cauliflower, cabbage, potato, tomato, and bean cultivation has been on the rise. Mainly local varieties of crops are grown with local inputs. However, external inputs use is gradually increasing particularly in maize crop.

Vegetation: The forest type found in Churia hills and lower Mahabharat range are Sal (*Shorea robusta*) and other hardwood species such as Asna (*Terminalia tomentosa*), Barro (*Terminalia belerica*), Karma (*Adina cordifolia*), Jamun (*Eugenia jambolana*), Botdhayaro (*Lagestomia parviflora*), and Chilaune (*Schima wallichii*). Chirpine (*Pinus roxburghii*) forest is found in the mid-hills and upper ridges of Churiya hills. At the upper region of Mahabharat hills, hardwood forest includes Painyu (*Prunus cerasoides*), Katus (*Castanopsis indica*), Gurans (*Rhododendron species*), Utis (*Alnus nepalensis*), Lankuri (*Fraxinus floribunda*), and Mayal (*Pyrus pashia*). Patches of Sisso (*Dalbergia sissoo*), Khair (*Acacia catechu*), and Simal (*Bombax ceiba*) forests are found along the banks of the Rapti and Manahari rivers. Based on the limited set of information available from the District Forest Office (DFO), the community forestry area holds 27% of the total forest area followed by bush fallow 8% and leasehold forestry 3% within the landscape.

Climate: The climate in the target landscape varies from near temperate at higher altitudes and sub-tropical to near tropical at lower elevations. Based on available data collected during the baseline study on rainfall (Daman, Rajaiya, and Beluwa stations) and temperature (Daman station) for a 15 year period from 1996 to 2010, the analysis showed that the rainfall is in a decreasing trend (1.6 to 3.7 mm per year) while minimum temperature is increasing at a rate of 0.2 percent per year. This shows that climate change effects have already begun to manifest in the target landscape (COMDEKS SGP Survey 2012).

Water resource: During the baseline study, all traceable water sources (springs) that could be used for human benefits in the steep areas were identified and their discharges were measured and documented. Landscape wide, there were altogether

299 accessible sources discharging approximately 7.8 million kilo liters of water in a year, averaging 1.28 million liters per capita based on 2001 census population. Landscape wide distribution of spring water sources is presented in Annex 9 and Map 2. This does not, however, take into account the discharges of Manahari and Rapti rivers and their tributaries. Obviously, these sources are seldom available for the target landscape.

Water system in East Rapti basin: Situated in the central development region of Nepal, the proposed area lies within the verge of East Rapti River Basin which is the major basin of central Nepal. It lies between the latitude 27°26' and 27°54' N and longitudes 84°10' and 85°12' E. Of the total basin area of 3,222 km², Makawanpur and Chitwan districts occupy about 42 and 58 percent of the basin area, respectively. Similarly, 55 percent of the Makawanpur district and 82 percent of the Chitwan district are in the drainage area of the basin (Adhikari 2000). The river course is 122 km long and flows westward to join the bigger snow-fed Narayani River. In the Chitwan valley, it flows about 70 km meandering through the alluvial deposits and gathering many tributaries from the north (Nippon Koei 1986). Most of the tributaries originating in the Churia hillside in the south are ephemeral compared to the tributaries originating in the Siwalik and Middle mountainside in the north. The major tributaries of Rapti River are Samari, Bakaiya, Karra, Manahari, Lothar in Makawanpur district and Dhungre, BudhiRapti, Pampa, Kair, Khageri, and Riukhola in the Chitwan district. The total length of the main rivers including all tributaries is 399 km (RTDB/IAAS/IWMI 2000). A schematic map of the East Rapti River Basin with its major tributaries is presented in the map annexed with this report.

The river basin serves as a prime source of livelihoods for scattered settlements in both the Makawanpur upstream and the Chitwan valley downstream. The basin area has high rural population (86%) with a predominantly subsistence livelihood. It is essential to establish environmentally acceptable limits for water resources exploitation considering not only the relationship between flow and the river ecosystem, but also the interaction of rural communities with the river flow and ecosystem. In the basin, the majority of Chepang, Tamang, Bote and Danuwar communities are highly dependent on the river resources for fishing, timber collection during floods, subsistence farming, washing, bathing, swimming, and other activities. The river has experienced recurrent high flood amplitude in the past, contributed by a large number of ephemeral tributaries originating in upstream mountains. Soil erosion and landslides are prominent in the upstream and floods in the downstream. Appropriate water control structures are necessary to safeguard communities, infrastructure, croplands, flora, and fauna against unexpected floods as well as for the development of water resources in the basin.

The most recent massive flood in the river was recorded in July of 1993, which witnessed high casualty of both lives and properties. The landslides, floods, and debris flows triggered by the heavy rain of July 1993 claimed 265 lives, affected 148,516 people, and damaged 1,500 houses in the basin. The field investigation and integrated GIS interpretation showed that the very high and high landslide hazard



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zones collectively cover 38.4 percent, debris flow hazard zone constitutes 6.6 percent and high flood hazard zone occupies 4.3 percent area of the watershed.

Water-Control Infrastructure

East Rapti Irrigation Project (ERIP), Irrigation Sector Program of government of Nepal had planned to construct a huge diversion weir in the river. Local people and environmentalists raised issues of negative impact of the diversion weir on flora, fauna, Royal Chitwan National Park and on local irrigation infrastructures downstream. As a result, in lieu of a weir, a continuous embankment was built along the bank of the Rapti River.

The construction of an 18-km long flood embankment extending from Lothar to Kumroj was completed in February 1996 with a loan assistance of NRs 272.72 million from the ADB. Besides rehabilitation and improvement work for irrigation, ERIP also erected 50 spurs around Sauraha and some in bridge sites at Lothar to protect the banks from river cutting. Spurs at both sites incurred a total cost of NRs 8.56 million (ERIP 1998). Before ERIP intervention, permanent (8%), semi-permanent (46%) and brushwood (46%) diversion structures were erected in 88 FMIS (Shukla et.al. 1993) in the east Chitwan valley. To date, ERIP has been the largest project in the area to support water control structures. In some irrigation canals, water regulators were established to control flood and silt load.

Topography and Soils

The east Rapti River originates in the southern part of Middle mountain (in the Lesser Himalaya) about 25 km southwest of Kathmandu. A sharp gradient in elevation between the origin of the river (1,500 masl) and the point where it moves out of the basin (140 masl) contributes to the diverse biophysical environment. The river abruptly descends from the Middle Mountain to the enclosed valley of Siwalik and Churia Hills, where the valley floors of Makawanpur and Chitwan districts occupy a large part of the basin. The Siwalik Hills form a front of Himalayan origin bound with the Middle mountain range by a distinctive fault zone referred to as the Main Boundary Thrust (MBT) and comprising thick sedimentary formations of the Tertiary Age. The Chitwan Valley is a tectonic depression of widely undulated Siwalik Groups and has been buried beneath thick alluvial deposits (Nippon Koei 1986).

Moderately steeply, and very steeply sloping hilly and mountainous terrain are laid over slopes of less than 10° to more than 30° . Diversified landforms and soil types as well as dissected hilly terrain slopes and mosaics of alluvial plains, have been formed by the action of the rivers and gravity. Due to great diversity in climate and topography, an array of soil types is found in the basin, ranging from sandy or cobbly and sandy and loamy skeletal in the sloping areas to the coarse and fine loamy soils in the plains. The depth to water table varies and seasonal ranges of depth to water table also vary from less than 2 m to more than 15 m. A large part of the Middle mountain drains well, whereas drainage in Siwalik is highly variable and is subject to river flooding near the Rapti River and in areas of natural depressions (LRMP 1986).

Where settlements occur, they reflect areas with stable soils and consistent year-round water supply. The soils on many slopes are too shallow to terrace, even though gradients may be gentle. Proper management and adequate inputs including irrigation water can make the valley soils highly productive (Khatri-Chhetri et al. 1987).

Other natural resources: Sand, gravel, and stones are other important resources of economic value. Several crusher industries have been established on the banks of Rapti and Manahari Rivers to use the resources. The final products are mostly exported to India. How can the value from these resources be made available to the dwellers of the target landscape is an issue. Moreover, in the quest for quick earning by the entrepreneurs, there is fear of over exploitation of these resources, which may affect the local eco-system.

2.2 Reasons for choosing the landscape

The indigent situation of the target landscape depicted above is a testimony by itself of why this landscape was chosen for COMDEKS-based support. The overriding poverty, intimidating food insecurity levels, low level of education and awareness, miserable access to basic services, and grossly inadequate state support, among others, make this landscape an automatically deserving candidate for a sanguine backing.

2.3 Link between OP 5 and COMDEKS

There is a considerable semblance between COMDEKS and the GEF SGP OP5 Nepal Country Programme Strategy (CPS) both in terms of area where these projects operate in Nepal and the thematic principles they uphold. The proposed landscape geographically lies in the priority of OP5 SGP Nepal and the landscape also conforms with the thematic principle of overt land degradation particularly due to slash and burn practices. Both projects share the common concern towards nature conservation, mitigation of climate change effects, advocating of community initiatives, etc. Therefore, the OP5 indicators being used to monitor and evaluate the CPS performance will be the basis for COMDEKS as well. The funding for the implementation of COMDEKS project will be done in a collaborative way between Nepal SGP and COMDEKS on a more or less equal financing basis.

2.4 Baseline Assessment

A major basis for a Nepal COMDEKS country programme landscape strategy is the comprehensive Baseline assessment, which provides SGP Nepal and stakeholders in the target landscape with information about the current state of the landscape that can be used as a basis for setting goals and identifying desired outcomes.

In due recognition of the need of such a baseline, MDI, which was selected on a competitive basis by UNDP GEF-SGP Nepal, carried out such a landscape-wide baseline in the target VDCs of North Western Makawanpur. During the baseline



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assessment, a set of Indicators for Resilience in Socio-Ecological Production Landscape was applied and tested in the COMDEKS project site to help measure and understand the resilience of target landscape. As a first step, a stakeholder pre-workshop was organized to clearly define the target landscape, and to refine and understand the given perception-based questions (SEPL indicators) duly translated in Nepali. The workshop endorsed each 10 VDCs as the individual sub-landscape boundaries.

The workshop also discussed each question with a purpose of simplifying them for the ground-level inquiry. This workshop was thus conducted as an on-the-ground capacity building exercise. Lessons learnt in carrying out baseline assessments and community consultations are planned to be captured to help develop case study materials to be shared with other SGP country programs as well as external partners.

Soon after the pre-workshop, the expert consultants and trained enumerators visited individual VDCs, organizing group meetings of randomly selected and proportionately balanced 200 respondents (42 females and 158 males) to fill the questionnaires, and collecting the landscape components related information. The outcome constituted the data package for the baseline preparation. This was complemented by the related secondary data, GIS maps (both as output and input), and field level measurements (such as discharge from spring sources).

The data were compiled using standard COMDEKS methodology to come up with the radar result figures for each sub-landscape.

Chapter 3. Landscape Threats and Opportunities

3.1 Threats

Although the geology of the Siwalik and Mahabharat is fragile and prone to landslide and flood, the local land use practices are also equally to blame. Slash and burn agriculture practiced by the indigenous Chepangs and Tamangs in increasingly shorter fallow periods on the steep slopes of the areas is associated with deforestation, loss of biodiversity, threat of forest fires, emissions of greenhouse gases, and serious soil erosion, leading to a significant decline in land productivity. Other inefficient practices such as plantation of maize in steep outward terrace has also led to significant loss of topsoil thus increasing surface run off. The consequent alluvial deposits in the river valleys have triggered the rise of riverbeds threatening the existence of the near-by settlements.

The three dimensional feature of the hills and mountains, although an opportunity in some respect (which is further discussed in the incoming section), can also pose a threat due to the complexity in management (particularly due to the possibility of landslides and soil erosion). Besides, the source water becomes increasingly scarce as the altitude grows, infrastructure building becomes more expensive on a per unit basis, settlement patterns are more scattered thus increasing the cost of service delivery.

As stated earlier, the indigenous slash and burn cultivators, mainly Chepangs and Tamangs, are regarded as the most marginalized and resource poor group in Nepal. High food insecurity, low female literacy, low access to basic social services, high population density on fragile natural resource base and recurrent natural disasters like famine, landslide, and floods are the common poverty induced ailments in the area. Due to lack of knowledge and resources, negative coping by gradually reducing the cultivation cycle from 3-5 years to a virtually annual cycle was adopted, consequently inviting serious soil erosion problems affecting not only themselves but also those living in the connected lowlands.

3.2 Poverty Hot Spots

Although the inhabitants of the entire landscape are very poor, illiterate, food insecure, and a major threat themselves to the landscape, there were found some dreadful poverty “hot-spots” during the baseline study. A “hot-spot” can be defined as the part of the landscape which is highly poverty-ridden and as a consequence, both landscape and local livelihood are threatened. Such “hot-spots” identified within each surveyed area are shown in Annex. The table in the annex also provides indicative sets of suggested activities for these hot spots.

3.3 Opportunities

The first opportunity is that technologies, applied and proven right within the landscape, exist, for example Slopping Agriculture Land Technology (SALT), and are



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compatible with SI. The GEF SGP supported project 'Renaissance of Slash and burn agriculture' implemented by MDI-Nepal in 4 VDCs (Manahari, Handikhola, Kankada, and Raksirang) has successfully introduced SALT such as the plantations of banana, broom grass, pineapple, and other nutrient recycling trees and established and trained agro-forestry farmer groups to master the technical aspects of SALT.

Likewise, institutions at the community level such as community groups have been established extensively, some of which have also federated into higher level institutions. In this respect, co-operatives are formed to promote marketing of products. These agro-forestry groups and co-operatives with marketing expertise can be valuable assets to initiate the landscape level micro-projects. These could be the easy starting points for forming even higher-level federations such as conservation unions to achieve eco-system resiliency goals.

The existence of sloping areas and terraces are in themselves opportunities as they augment the available physical area for farming. The quality of products such as fruits and vegetables grown in the higher elevations are also found to be much higher than those grown in the lowlands.

The Manahari River, Rapti River, and 299 spring sources identified within the target landscape can be considered yet another opportunity which can help augment the productivity of crops and agro-forestry systems, besides providing water for household uses. Water conserving technologies appropriate for hill and mountains such as sprinklers, drip systems, and multi-use systems (MUS) also exist as an added opportunity and can be used.

Another opportunity can be counted as the availability of plentiful human resources – both skilled and unskilled. Besides the technical manpower available with the district line agencies, MDI, NGOs, several habitants of the target landscape have also already been trained to work in the area of conservation and agriculture/forestry.

Chapter 4. Landscape strategy: Impact and outcomes indicators

4.1 Baseline findings and analysis

The baseline was assessed, with the help of 20 perception-based questions (also called SEPL indicators), among others, applied to representatively selected 200 households (including Women, Janajati, Dalit and Marginalized households) spread all over the landscape. The 20 questions were divided into 4 themes – i) Eco-system protection, ii) Agricultural biodiversity, iii) Local knowledge, learning and innovation, and iv) Social equity and infrastructure.

Standard tools developed by COMDEKS were used. The questions were translated into Nepali language. The translated questionnaire was thoroughly discussed in the Daman pre- workshop. After the Daman pre- workshop, the study team members discussed the questions more elaborately in order to develop local examples and cases that could help the participating respondents understand the questions more thoroughly and provide reasonable scores based on their respective perceptions. Participants were selected on a random basis from the list prepared for each ward. All participants were fully apprised in all twenty questions with several ground level examples presented by facilitators, study team members, and local enumerators.

In the theme of eco-system protection, average aggregate landscape level baseline results exhibited low development status revealing enough scope for further work. As per respondents' reporting, the reasons for such low status on the theme are that different types of lands are connected with eco-system patches but not many areas are protected. Coping and recovery from extreme effects of climate change and environmental degradation is a huge challenge. However, since the perceptions were found to be diverse, there will be a need to work further on institutional development at the community and higher levels.

In the theme of agricultural bio-diversity, most VDCs have perceived higher status of development because of successful intervention in few VDC, Manahari, Handikhola, Kankada, and Raksirang in particular where previous SGP interventions were carried out. The perceptions, however, varied considerably across landscape VDCs because not all VDCs had benefited from the earlier interventions. The reasons are noted, as they are still using local crops, varieties, and animal breeds widely; and local foods are still popular and used extensively. Agro-forestry activities on the *Khoriya* land such as plantation of banana, pineapple, broom grass, etc. have further improved the bio-diversity. However these have been limited to the VDCs where earlier interventions were made. As endorsed by the Satoyama Initiative concept, a satisfactory blend of traditional activities and new innovations was found again the intervened areas. Three typical examples of such blend can be seen in improved agro-forestry practices using SALT without replacing the old cropping system (for example, through hedge/row planting system), in scattered examples of improvement in irrigation using innovative water conserving micro-irrigation systems such as sprinklers, drips, and multi-use systems (MUS) while flooding system was practiced in the past., and in the successful initiation of CARP-SIS (small indigenous



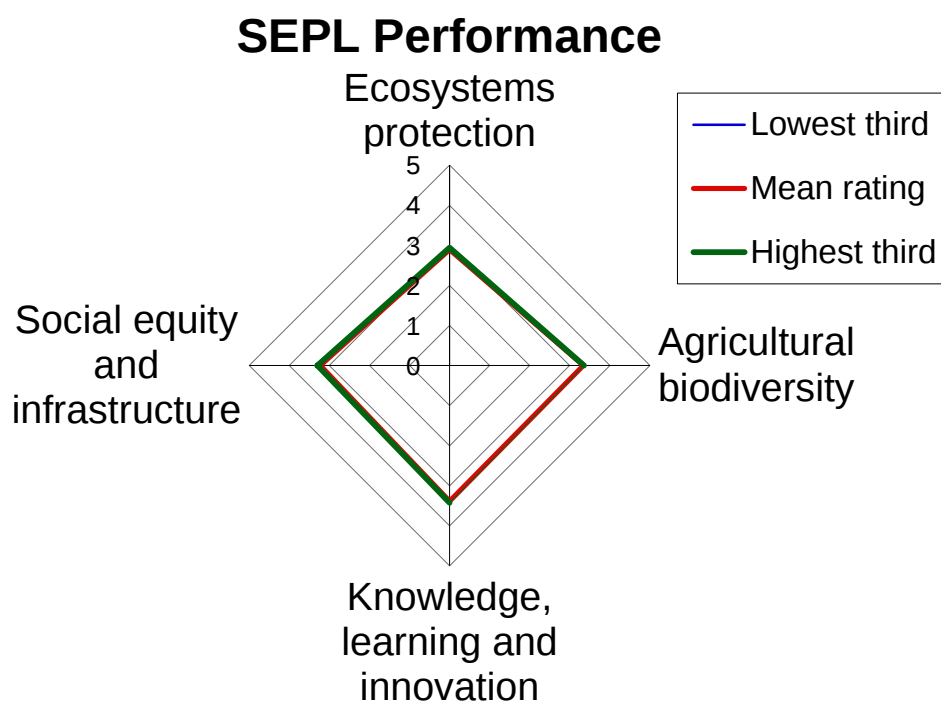
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species) polyculture to conserve the local fish species while at the same time increasing the fish productivity by at least 10 percent.

In the theme of local knowledge learning and innovation, almost all VDCs have perceived better current status. SI conceptually recognized the value of conserving and using the local varieties of crops. Acknowledging the SI concept, the respondents perceived that they are rich in transforming across generations the traditional local knowledge, custom, and values. One significant gap in the theme, however, was that local communities living in the target landscape are poor in knowledge documentation system. Variation across the responses reveals that some VDCs had a high level of divergent views on the development status on the theme. Therefore these VDCs need more effort for consensus building. Because of the pattern of questions, the status in local knowledge, learning and innovations received high scores.

In the theme of social equity and infrastructure, almost all VDCs were perceived to have a more or less average status. Reasons cited for the given score were that there are no good road connections (Map-3: road networks in SEPL area), electricity facilities, schools, or health care systems in place. In addition, women are revealingly lagging behind men in every sector, for example decision-making, and access to and control over resources. However, gradual improvements are taking place. The scores awarded on the theme questions are also vastly diverse. Therefore, there is scope to work under this theme with intensive social mobilization and local institutional development for decision-making around land use planning and management in the target landscape.

Figure 1: Landscape SEPL



	Ecosystems protection	Agricultural biodiversity	Knowledge, learning and innovation	Social equity and infrastructure
Lowest third	2.95	3.34	3.38	3.21
Mean rating	2.89	3.34	3.39	3.23
Highest third	2.94	3.36	3.42	3.30
Standard dev.	0.307945655	0.320442129	0.269543474	0.415982034

Source: MDI Baseline Survey, 2012

Average results on each of the themes are attached in the annex.

Overall, perfect development was not perceived in any theme. A relatively better status was reported in two themes – knowledge, learning, and innovation and agricultural biodiversity (Figure). Details of SEPL indicators are attached in the report.

4.2 Landscape Strategy/Approach

The baseline study outcomes indicated the following landscape strategies to be important:

Increasing connectivity: Connectivity is defined as integrating the fragmented patches of different ecosystems (cultivated land, forest, water, etc.) for conservation and production to improve the livelihood of the local communities on a sustained basis as well as to improve the habitat of wild animals through connecting the forest patches by plantation and conservation. More broadly, it also connotes the integration of different ecosystems to generate synergy across ecosystems towards better productivity, as opposed to fragmented system operation.

Promoting integrated water resource management for more efficient use, ensuring the supply of water throughout the year, managing water to mitigate potential disasters and land degradation.

Addressing marginality and inequality: Poverty is rampant within the target landscape. As explained earlier, poverty/marginality can be a threat to the environment. Equality in opportunity is equally important. Therefore, these two aspects must be dealt with as soon as possible.

Diversification of land uses: Agriculture diversification has direct influence on landscape resilience. During the baseline study, the majority of respondents expressed that their resilience was enhanced after adding amriso, banana, pineapple, and citrus in their traditional cropping portfolio such that even if one crop failed somehow, they could rely on others.

Respecting useful traditional knowledge and complementing it with new innovations: Traditional knowledge is an outcome of several generations' informal research and hence it should not be ignored. This knowledge might be mixed with new innovations to produce even better livelihood outcomes. Thus, a system of documenting and disseminating traditional knowledge should be put in place. During the baseline assessment, it was found that there was certain local knowledge transmitted (through oral traditions) and used, but these were not systematically documented. For tracking innovations, continuous research will be needed.

Synergy building: Discussions during the baseline assessment survey revealed that there are noted synergies between certain livelihood activities. For example, honey-bee keeping and mustard/chiuri cultivation side by side improves the yield of mustard/chiuri through better pollination and at the same time improves the honey yield due to the higher availability of pollen sources. Similarly, higher bat population near pulse fields enhances the pulse yield because the bats eat the harmful insects affecting pulse crops. More of such synergistic enterprises as part of the indigenous knowledge must be explored and used. On area level, the potential synergy between hills and plains could be in the form of producing off-season vegetables when these are not feasible in the plains and producing the same vegetables in the plains at a much lower cost in the regular season.

Gender and Social Inclusion: Women are globally regarded as the best conservers of resources. In Nepal, they play a crucial role in agriculture production, resource management and food security. Despite their longer hours of work in farm and household, they do not have a fair share in decision-making and control over resources. The COMDEKS project will be attentive of this reality and will work towards developing their skills appropriately so that they will have greater exposure and involvement in community affairs.

The project will favor women's participation because women play a major role in producing, harvesting, and marketing of several crops and livestock. In the project, women will be the special targets of promotional and awareness-raising campaigns. Special efforts will also be made to identify and link women's group to credit sources in order to overcome the financial constraints that many female-headed households are confronted with. Activities, among others, will include;

1. Organize and conduct training programs and planning workshops on gender issues at the district level particularly for female members of farmer's group.
2. Conduct field analysis of gender issues as they relate to the selected production pocket areas and in compiling the findings in the project reports.
3. Include women in trainings and workshops on business practices.
4. Provide guidance for periodic field assessments based on consultations with women and men farmers and field teams.

Market linkage: For the improvement of livelihood, link to market for the products generated through the project intervention is important. Market linkage will also include the institutional development such as the formation of the cooperatives, which also provide backward linkages to enhance production.

The landscape goals, objectives, and outcomes to be discussed hereafter will pay heed to the above strategic concerns.

During the baseline study, there was a discussion and inquiry into how, besides following the above specified strategies, the poverty situation in the landscape could be improved expediently. Resilience of the ecosystem and production system can be improved. Four main initiatives were traced for enhancing the resilience of the ecosystem and production: conservation and enhancement of bio-diversity (such as through plantation works), increase in agricultural productivity and production (such as by connecting the ecosystems), improvement in local livelihoods (such as through improving market links and other allied services), and improving local institutional capacity (such as through organization and effective knowledge management).

4.3 Landscape Goal and Objective, Outcomes

The goal of the COMDEKS Nepal is to enhance socio-ecological production landscape resilience in the target landscape through community led initiatives.

Outcomes and Indicators: The expected outcomes from the implementation of COMDEKS Country Programme Landscape Strategies for Nepal, and the corresponding indicators through which these outcomes will be measured, are as follows:

Outcome 1: Buffer capacity of key ecosystems enhanced in 10 VDCs of west Makawanpur.

Indicator 1.1: Number and type of ecosystems rehabilitated

Indicator 1.2: Number of poverty hotspots identified and developed

Outcome 2: Agricultural biodiversity and genetic resources in the target landscape maintained and protected through conservation and diversification in farming practices.

Indicator 2.1: Number of hectares where more sustainable land use practices are implemented by type.

Indicator 2.2: Number of community level seed banks established in the target landscape.

Indicator 2.3: Number of communities (and number of people disaggregated by gender) participating in conservation and diversification in farming practices with increased access to food.

Outcome 3: Local communities' livelihoods enhanced and diversified through community development activities.

Indicator 3.1: Number of alternative income sources created through livelihood diversification.

Indicator 3.2: Number of community members participated by gender disaggregated types.

Indicator 3.3: At least 3 poverty hotspots intensified & developed with environmental friendly livelihood activities.

Outcome 4: Community-based institutional governance structures in place for effective participatory decision making and local knowledge exchange at the landscape level.

Indicator 4.1: Number of community-based institutions created or strengthened who are engaged in integrated landscape management.

Indicator 4.2: Number of community mechanisms established to enable access and exchange of local knowledge.

Indicator 4.3: Numbers of COMDEKS lessons learned and best practices captured at the programme level.

Chapter 5. Potential community based projects and its selection criteria

Potential projects that will be supported by COMDEKS Nepal are suggested below based on Nepal COMDEKS Strategy. These are:

1. Establish community seed banks to promote local and resistant varieties that are tolerant to pest, diseases, droughts, and other extreme environmental threats
2. Conduct Farmer's Field School (FFS) to promote integrated pest management (IPM) practices
3. Establish water acquisition and use system for livelihood applying innovative water conserving technologies.
4. Establish & promote initiatives for diversification of agricultural and agro forestry systems including alley cropping⁴, silvo-pasture⁵, windbreaks and shelterbelts⁶, riparian forest buffers⁷, and forest farming⁸ technologies in the context of climate change adaptation.
5. Promote alternative energy technologies to save forests from excessive extraction for household energy needs (e.g. firewood for cooking and heating)
6. Actively seek co-funding to enhance health, educational, and other services which are essential to improve the local livelihood but which are not generally funded by COMDEKS
7. Conduct interaction/review meetings with different stakeholders for effective landscape planning and coordination

5.1 Micro-Project selection criteria

The micro-projects to be implemented at the landscape level will be based on following criteria:

⁴This practice combines trees planted in single or multiple rows with agricultural or horticultural crops cultivated in the wide alleys between the tree rows.

⁵This practice combines trees with forage (pasture or hay) and livestock (Goat, pigs, cattle) production.

⁶Windbreak practices (shelterbelts, timber belts, hedgerows, and living fences) are adopted and managed as part of a crop or livestock operation to enhance crop production, protect crops and livestock, and control soil erosion.

⁷Riparian forest buffers are strips of permanent vegetation, consisting of trees, shrubs, and grasses, planted or managed between agricultural land (usually cropland or pastureland) and water bodies (rivers, streams, lakes, wetlands) to reduce runoff and non-point source pollution.

⁸In forest farming practices, high-value specialty crops (asparagus, NTFPs, mushrooms, decorative ferns etc.) are cultivated under the protection of a forest over-story that has been modified and managed for sustained timber production and to provide the appropriate microclimate conditions.

Use of proven technology: Experiment/research involves considerable risk and poor people should not be subjected to such risks. Hence only those technologies and enterprises should be selected for individual or community implementation, which are proven, preferably within the landscape.

Project based on enhancing diversity: Diversity increases the resilience of the eco-system and hence the micro-projects chosen should be diversity enhancing.

Maximum use of local resources: Supply of external inputs could be erratic and costly including transportation. Hence, preference should be given to those micro-projects, which can use maximum local resources.

Connectivity improving: The micro-projects should be connectivity improving (for example connecting the fragmented forest patches through plantation and conservation) and also between different ecosystems, different landscape, and different community institutions.

Projects should also be based on **knowledge generation and promotion** including tailored social mobilization approach.

Institution building: The projects should build and promote local institutions and help these institutions in federating at higher levels such as conservation unions.

Annual crop projects at slopes above 18 degree should not be undertaken and only conservation projects such as plantations should be promoted in such areas.

Infrastructure projects: Environment friendly roads, irrigation projects, drinking water projects, and slope protection structures should be given priority.

Above all, the micro-projects should **enhance the local livelihoods using chemical free organic production systems.**

The projects will be policy based (for example, providing land and water source rights), multiple threats based (poverty and food insecurity reduction), conservation and income generation based (plantation, micro-enterprises), and ecosystem functions based (water source protection and use).

The details of the goal, objectives, outcome/output, activity with verifying indicators , and SEPL resilience indicators are attached. These deliverables have been derived from problem and objective trees prepared by local community and MDI Nepal.

Chapter 6. Monitoring and Evaluation System

The SGP Country Programme in Nepal will report quarterly to the COMDEKS Project Management Unit on the progress in the implementation of this Strategy based on the approved GEF-SGP project monitoring format. Progress reports will include a gender perspective in the description of results and impacts, and would be focused on reflecting achievements, lessons learned, opportunities, and best practices.

Country Programme Landscape Level Indicators: SEPL Indicators measured during the baseline assessment will be monitored on an annual basis. A final assessment of SEPL indicators will take place at a workshop financed by a grant. This will serve as a final evaluation of the Country Programme Landscape Strategy.

Project Level Indicators: Each project will identify the specific landscape strategy outcome to which it is contributing and will monitor the corresponding indicators. Progress towards the outcome will be updated using the grantees' progress reports. Additionally, the individual project will have an indicator system aligned with GEF/SGP OP5 indicators.

6.1 Individual Grant Monitoring and Evaluation

The following minimum standards shall be applied for individual grant monitoring and evaluation:

1. Ex-ante Visits: The project management team would undertake ex-ante visits on a regular basis to grant-requesting organizations upon grant approval by the SGP National Steering Committee (NSC) and prior to the signature of the MOA between the Implementing Partner and the grantee.

2. Field monitoring visits: Every project should be visited at least twice in its lifetime, upon receipt of the first progress report from beneficiary organizations and during the following year. NSC members with relevant expertise in project-related technical areas may join the NC during these visits as appropriate.

3. Progress reports: Beneficiary organizations should submit half-yearly progress reports to the NC along with a financial report. A forecast of resources needed in the upcoming period should be submitted by the grantee to the NC as a requirement for disbursement of next installment.

4. Final project evaluation report: Beneficiary organizations should submit a final report summarizing global benefits and other results achieved, outputs produced, and lessons learned. The final report should also include a final financial statement.

This strategy will be reviewed each year during the NSC Meeting. Changes will be made where necessary to ensure improvement in the implementation process.

6.2 Stakeholders' participation on outcomes and monitoring:



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The landscape stakeholders will carry out their own evaluation using the instrument similar to the radar diagram, which will be re-estimated every 6 months to measure the changes over time. These evaluation materials will be provided to the project management and these would constitute part of the project data system.

6.3 Reporting system:

GEF-SGP's monitoring and evaluation system will be used to provide project partners and both primary and secondary project stakeholders. They will be provided with information about the status and results of individual projects, the progress of country program, and the achievements of overall program objectives and outcomes.

GEF-SGP's monitoring and evaluation system is a participatory and forward-looking process that helps enable grantees' capacity to learn, collect, and analyze information; maintain accountability; promote sustainability; and provide opportunities to identify and communicate best practices and lessons learned from projects and program experiences.

At the country and global levels, monitoring and evaluation is institutionalized and taken as a part of the process for learning, sharing, and replicating the best practices and lessons learned.

The COMDEKS project reporting formats are presented in Annex.

Special attention will be provided in documenting and reporting the status of involvement in the project from the perspective of gender and social inclusion.

6.4 Institutional structure

The COMDEKS project is implemented by UNDP, and delivered through the GEF Small Grants Programme (SGP), allowing for a fast, flexible, and proven mechanism to reach communities and civil society at the local level. The project will provide small-scale finance to local communities in developing countries through the delivery mechanism of the GEF-SGP by utilizing the existing National Steering Committees as a local governance and project selection mechanism in the target countries of the Programme, including Nepal.

The institutional structure for the Nepal COMDEKS project implementation will be set at SGP level, local NGO level, and community level.

At the national level, SGP Nepal National Steering Committee will provide substantive contribution to, and oversight of the programme. SGP National Steering Committee will be the apex body under which, there will be a National Coordinator (NC) to oversee the project on a day-to-day basis. The project on the ground will be implemented by the local NGO/CBO to be selected for the purpose. At the landscape level, the project components will be managed by the communities. The local NGO



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will mobilize other related organizations for coordination and complementary fund generation.

6.5 National Steering Committee

SGP has formed a voluntary National Steering Committee (NSC), which is the central institutional edifice of SGP and provides substantive contribution to, and oversight of the programme. The NSC typically comprises representatives from local NGOs, government, UNDP, and occasionally co-funding donors, indigenous peoples' organizations, academia, and the private sector.

The NSC is entrusted with developing a country programme strategy, examining whether proposals submitted for grants are feasible and meet SGP criteria, and deciding the nature of technical support needed for implementation by the grantees. The NSC is responsible for final approval of grants, helps undertake site visits and review, advises on design of grant proposals, ensures monitoring and evaluation, and represents SGP in national fore.

A locally recruited National Coordinator carries out day-to-day management of the programme and also serves as the secretary to the NSC. The National Coordinator, working with the NSC, shall reach out to the NGO community and CBOs to inform them about the availability of grants, and receive and screen proposals.

NSC members are also expected to disseminate information on the SGP through their own networks and in general enhance visibility of the programme. Operationally, the decisions of the NSC are made by consensus. The decisions are considered final provided they are consistent with SGP Operational Guidelines and the Global Strategic Framework. However, neither the NSC as a body, nor its individual members, holds any legal or fiduciary responsibility for the SGP or its activities (See ToR attached).

6.6 Reporting and Review

At the project level, the project will be responsible for developing and maintaining a database on social, economic, and environmental issues for the project areas against simple resilience indicators set by the project. The database would be a monitoring tool as well as a means to measure project impact on improving socio-ecological production landscape. The project will prepare annual and quarterly work plan for successful implementation of project activities.

The project will also prepare four-monthly and annual progress reports that should demonstrate the trend of progress. The progress report must have information on investment made and activities undertaken, processes undertaken, progress against indicators set in the baseline, impacts seen, and information on successful and learning cases. The project will provide beneficiaries' data on a disaggregated basis (e.g. women, youth, dalits, etc.).



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At the landscape level, the progress will be consolidated and reviewed against resilience indicators set forth by the Satoyama Initiative. The knowledge will be documented and successful case studies and challenges shared with both the national and global network.

Chapter 7. Knowledge Management Plan

In knowledge management, 3 steps are involved – i) capturing information (collecting raw data/information); ii) processing (converting raw data into information) and analysis (distilling knowledge and lessons learned); iii) sharing or dissemination.

Capturing: All data/information about the project activities and processes will be fully and formally documented to ensure their availability when required. This will be supplemented by regular surveys and case studies on focused themes. The data/information generated will be securely stored including using electronic means.

Processing and Analysis: The data will be processed manually or electronically and converted into useful information. The information thus obtained will be analyzed by experts (hired if necessary) to come up with status, knowledge, and learning.

Sharing/Dissemination: Reporting formats, reporting time schedules, and reporting responsibilities will be developed at all levels. There will be horizontal as well as vertical sharing. At the landscape level, horizontal sharing will take place in group meetings. At the landscape wide level, sharing/dissemination workshops every 6 months will be organized in which local leaders, innovative farmers, district subject matter experts, and the key project personnel will participate. Documentation of the shared information will be made mandatory and will be made available to all related vertical levels, including UNDP (through COMDEKS Project Management Unit) and GEF-SGP, which will be responsible for sharing at the international level. SGP will use and update its GEF-SGP Database documenting and highlighting best practice for replication and up-scaling.

The same institutional structure defined for project implementation will be used for knowledge management.

Frequent seminars/workshops, use of audio-visual media, and publications will be other sources of dissemination. Sponsored journalists' visits to project sites will also be organized at least two times in a year.

In this way, as one of the activities under the *Satoyama* Initiative, COMDEKS Nepal will promote sharing knowledge with global stakeholders. This exchange of information and knowledge will be an invaluable input towards informing policy formulation and process at the national and sub-national levels. Successful practices of landscape management identified in Nepal will be promoted for the purposes of up-scaling and further international cooperation.

The learning and information sharing aspect constitutes one of the major components of the COMDEKS Project. Every grantee organization is expected to contribute to the generation and documentation of best practices and lessons learned. As such, each community project is required to allocate a portion of its budget to produce specific knowledge products that will be developed to summarize lessons learned from the proposed activities.



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Types of knowledge products that will be developed directly by the grantee and by the SGP Country office with support from COMDEKS Project Coordinator, will include:

- Project brochures and posters
- Booklets on best practices and case study
- Video documentary on overall progress of the landscape
- Biodiversity register and local documentation of indigenous knowledge
- Preparation of training manual on farming on sloping lands

References

Smakhtin, V. U.; Shilpakar, R. L. 2005. *Planning for environmental water allocations: An example of hydrology-based assessment in the East Rapti River, Nepal*. Research Report 89. Colombo, Sri Lanka: International Water Management Institute

Shilpakar, R. L. 2003 Geo-information Procedures for Water Accounting: A Case of the East Rapti River Basin, Nepal. The Master's thesis submitted to International Institute for Geo- information Science and Earth Observation, Enschede, The Netherlands.

Adhikari, K. R. 2000. Trend of land-use and land-cover change in the East Rapti River Basin, Nepal. Report submitted to Research and Training Development Branch, Department of Irrigation, Nepal and the International Water Management Institute, Sri Lanka. Duplicated.

Adhikari, K. R.; T. B. Khatri-Chhetri; D. P. Ghimire; J. P. Dutta; R. Paudel; A. Shukla; G. Upreti; and B. Devkota. 2000. Performance assessment of irrigation systems in East Rapti River Basin of Nepal. Report submitted to International Water Management Institute, Sri Lanka. Duplicated.

Shukla, A.; G. Shivakoti; K. N. Pandit; R. Paudel; K. R. Adhikari; T. B. Thapa; N. Joshi; A. Shukla; D. N. Yadav; and A. K. Shrestha. 1993. *Irrigation resource inventory of East Chitwan, Nepal*.

Khatri-Chhetri, T. B.; N. K. Mishra; S. N. Tiwari; G. P. Shivakoti; and A. Shukla. 1987. Lessons from inventory preparation of irrigation systems of Budhi Rapti River, Chitwan, Nepal. In *Irrigation management in Nepal: Research papers from a national seminar*. Bharatpur.

Nippon Koei Company Limited. 1986. A report of feasibility study on East Rapti Irrigation Project. Prepared for the Department of Irrigation, Hydrology and Meteorology, HMG/Nepal. Duplicated.

ANNEXES

Annex 1: Project Generic Log-frame showing details of Project Outcomes, Indicators and Activities

Objective (What you want to achieve)	Indicators (Targets)	Means of Verification-MOVs (Where and how to get information)	Indicators of resilience to be followed as per COMDEKS
Project Goal: Enhance socio-ecological production landscapes resilience to environmental threats for improving sustainable livelihood of locals in west Makawanpur	G.1:Threats to communities from climate change effects mitigated with resilience enhancing measures	Baseline and end line survey reports using radar diagrams	
	G.2: Extent of occurrence of people facing famine and natural hazards reduced by 10%	Baseline/endline reports	
Outcome 1: Buffer capacity of key ecosystems enhanced.			Sustainable socio-ecological production activities across the existing mosaic of selected production landscapes capable to adapt climate change and environmental threats.
Indicator 1.1: Number and type of ecosystems rehabilitated	10% of the fragmented forest patches (451 ha) out of 4513 ha. (of community and leasehold forestry area) within the landscape improved with innovative forest farming and riparian forest buffers (as indicator 2.1-4 & 5 models explained below)	Progress reports, community meeting minutes, case studies	
	5% of the bush fallow (of the total 1133 ha.) lands rehabilitated with improved agroforestry systems		
Indicator 1.2: Number of poverty hotspots identified and developed	50% of poverty hotspots out of 10 identified intensified & developed with environmental friendly livelihood activities		

Objective (What you want to achieve)	Indicators (Targets)	Means of Verification-MOVs (Where and how to get information)	Indicators of resilience to be followed as per COMDEKS
Outcome 2: Agricultural biodiversity and genetic resources in the target landscape maintained and protected through conservation and diversification in farming practices.			Increased capacity of landscapes to cope with and recover from extreme environmental and climate related stresses and shocks
Indicator 2.1: Number of hectares where more sustainable land use practices are implemented by type.	A number of SALT methods especially the alley cropping[1] systems, silvopasture[2], windbreak and shelterbelts[3], riparian forest buffers[4], forest farming systems[5] applied to improve 500 hectares of marginal and degraded lands by improved agroforestry systems	Progress reports	
	15% of the project participants out of 13378 households apply innovative energy saving technologies (solar home systems, improved cooking stoves, biogas & others) to safeguard depletion of natural resources	Progress reports, cooperatives financial statements	
Indicator 2.2: Number of community level seed banks established in the target landscape.	1 seed/gene banks established and made functional in conservation of local crops & varieties	Progress reports	
Indicator 2.3: Number of communities (and number of people disaggregated by gender) participating in conservation and diversification in farming practices with increased access to food.	50% of the participating community members adopted diversification in farming practices using proven form of technology blended with local knowledge systems	Progress reports, community records	

Objective (What you want to achieve)	Indicators (Targets)	Means of Verification- MOV's (Where and how to get information)	Indicators of resilience to be followed as per COMDEKS
Outcome 3: Local communities' livelihoods enhanced and diversified through community development activities.			
Indicator 3: Number of alternative income sources created through livelihood diversification.	10 irrigation and 10 multi-use water systems (MUS) integrated with drinking water supply plus irrigation and 5 CARP-SIS polyculture system in fishery developed to support livelihood opportunities using co-funding from others (VDC, DDC & others)	Progress reports, minutes of other supporting agencies	
Indicator 3.2: Number of community members participated into project activities by gender disaggregated	25% women members from participating households involved in the project activities and 30% of them hold executive positions at decision making level.	Community records, FGD	
Outcome 4: Community-based institutional governance structures in place for effective participatory decision making and local knowledge exchange at the landscape level.			
Indicator 4.1: Number of community-based institutions created or strengthened who are engaged in integrated landscape management.	100 conservation groups formed/ and or strengthened existing group and federated to conservation committee	Progress reports	
Indicator 4.2: Number of community mechanisms established to enable access and exchange of local knowledge	80% of the participating communities within and between communities connected through institutional networks for the exchange of local knowledge	Community biodiversity registers, group meetings, review workshops	

Indicator 4.3: Numbers of COMDEKS lessons learned and best practices captured at the programme level.	1 booklet on best practices, 1 video documentary, 1 biodiversity register and 1 training manual on farming on sloping lands prepared	Nos. of reports produced	
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Objective (What you want to achieve)	Indicators (Targets)	Means of Verification- MOVs (Where and how to get information)	Indicators of resilience to be followed as per COMDEKS
Activities	Inputs/Resources	Cost & Sources	
1. Organize capacity building training for farmers and staffs (agroforestry, resource management and other livelihood aspects)	Budgets, resource persons (experts)	COMDEKS, SGP	
2. Establish community seed banks to promote local and resistant varieties that are tolerant to pest, diseases, droughts and other extreme environmental threats	Training for establishing seed banks, space,	COMDEKS, SGP	
3. Conduct Farmer's Field School (FFS) to promote integrated pest management (IPM) practices	Resource persons cost, training, allowances for participants	COMDEKS, SGP	
4. Establish water acquisition and use system for livelihood applying innovative water conserving technologies.	Cost of non-local materials	Co-funding, SGP	
5. Establish & promote initiatives for diversification of agricultural and agro forestry systems including alley cropping ^[1] , silvo-pasture ^[2] , windbreaks and shelterbelts ^[3] , riparian forest buffers ^[4] , and forest farming ^[5] technologies in the context of climate change adaptation.	Cost of inputs, saplings, training etc.	COMDEKS, SGP	
6. Promote alternative energy technologies to save forests from excessive extraction for household energy needs (e.g. firewood for cooking and heating)	Seed money to energy saving technologies	COMDEKS, SGP, Local Cooperatives	
7. Actively seek co-funding to enhance health, educational and other services which are essential to improve the local livelihood but which are not generally funded by COMDEKS	Co-funding grants	VDC, DDC and other I/NGOs	



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8. Conduct interaction/review meetings with different stakeholders for effective landscape planning and coordination	Space for meeting, resource persons	COMDEKS, SGP	
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[1] This practice combines trees planted in single or multiple rows with agricultural or horticultural crops cultivated in the wide alleys between the tree rows.

[2] This practice combines trees with forage (pasture or hay) and livestock (Goat, pigs, cattle) production.

[3] Windbreak practices (shelterbelts, timber belts, hedgerows, and living fences) are planted and managed as part of a crop or livestock operation to enhance crop production, protect crops and livestock, and control soil erosion.

[4] Riparian forest buffers are strips of permanent vegetation, consisting of trees, shrubs, and grasses, planted or managed between agricultural land (usually cropland or pastureland) and water bodies (rivers, streams, lakes, wetlands) to reduce runoff and non-point source pollution.

[5] Shade-tolerant specialty crops like asparagus, other NTFPs, mushrooms, and decorative ferns grown in the understory are sold for medicinal/botanical, decorative/handicraft, or food products. Overstory trees are managed to produce timber and veneer logs.

Annex 2: SEPL Indicators

WHAT TO ASSESS	SCORES			AVERAGE SCORES
ECOSYSTEMS PROTECTION AND THE MAINTENANCE OF BIODIVERSITY		Trend in the last 50 years	TOTAL SCORE FOR SECTION	TOTAL / 4 =
1. Heterogeneity and multi-functionality of the landscape Do land management practices maintain a heterogeneous landscape mosaic composed of different land-use types and ecosystem patches, e.g. forest, home gardens, cultivated fields and orchards?	5) Heterogeneous landscape consists of diverse land-use types and well connected ecosystem patches. 4) Landscape mosaic consists of several land-use types and some ecosystem patches. 3) Landscape consists of several land-use types and fragmented ecosystem patches. 2) Landscape consists of two or three land-use types and few ecosystem patches. 1) No heterogeneity, i.e. one type of land-use predominates in the landscape.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
2. Areas protected for their ecological and cultural importance How many landscape components that maintain ecosystem functions and services are protected? Protection may be formal or informal and include traditional forms of protection such as sacred groves.	5) Protected and low-use areas cover key resources and are well connected with ecological corridors. 4) Protected and low-use areas cover key resources in the landscape. 3) Protected and low-use areas small. 2) Protected and low-use areas very small. 1) Landscape intensively used, leading to resource depletion and accelerating loss of biodiversity.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
3. Ecological links between landscape components for sustainable production. Are ecological links between different landscape components maintained and harnessed for sustainable production? e.g. ecosystem paths kept for pollinators, pest control, nutrient cycling, groundwater recharge, soil erosion control, etc?	5) Beneficial links between different landscape components are maintained and harnessed. 4) Some beneficial links between landscape components are maintained. 3) Production systems partly depend on external inputs. 2) Production systems largely depend on external inputs. 1) Production systems heavily depend on external resources (e.g. high pesticide use).	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		

4. Rate of recovery from extreme environmental and climate-change related stresses and shocks

Does the landscape have the capacity to cope with and recover from extreme environmental and climate-related stresses and shocks e.g. pests and diseases, extreme weather events, floods and droughts?

5) No significant damage to landscape functioning.

4) High rate of recovery.

3) Medium rate of recovery.

2) Low rate of recovery.

1) Irreversible damage to landscape functioning.

↑ steep upward trend

↗ slow/some increase

→ No change

↘ slow/some decrease

↓ steep downward

AGRICULTURAL BIODIVERSITY

Trend in the last 50 years

**TOTAL
SCORE FOR
SECTION**

**TOTAL /
2 =**

5. Maintenance, documentation and conservation of agricultural biodiversity in a community

Are local crops, varieties and animal breeds used in a community?

Is agricultural biodiversity documented and conserved in community classification systems and community seed banks?

5) Local crops, varieties and breeds (#) widely used, documented and conserved.

4) Local crops, varieties and breeds are used by some community members; documentation and conservation practices are weak.

3) Local crops, varieties and breed are used by few community members; documentation and conservation practices do not exist.

2) Local crops, varieties and breeds are rare and used only by very few community members; documentation and conservation practices do not exist.

1) Local crops, varieties and breeds no longer found.

↑ steep upward trend

↗ slow/some increase

→ No change

↘ slow/some decrease

↓ steep downward

6. Diversity of local food system

Do communities use a diversity of traditional and locally-produced foods, e.g. cereals, vegetables, fruits, nuts, wild plants, mushrooms, berries, fish and animals?

5) Locally-sourced foods abundant and widely used.

4) Locally-sourced foods available and used by some community members.

3) Locally-sourced foods available and occasionally used.

2) Variable availability and use of locally-sourced foods.

1) Scarcity of locally sourced foods.

↑ steep upward trend

↗ slow/some increase

→ No change

↘ slow/some decrease

↓ steep downward

KNOWLEDGE, LEARNING AND INNOVATION	Trend in the last 50 years		TOTAL SCORE FOR SECTION	TOTAL / 8 =
7. Innovation in agricultural biodiversity management for improved resilience and sustainability Do community members improve, develop and adopt new agricultural biodiversity management practices to adapt to changing conditions, e.g. climate change, population pressure, resource scarcity? Examples of innovative practices are the adoption of water conservation measures (drip irrigation), diversification of farming systems and switch to drought- or saline-tolerant crops/varieties.	5) Community members are receptive to change and adjust their practices through local innovation. 4) Community members are receptive to change; local innovation takes place but can be strengthened. 3) Community members are receptive to change but the rate of innovation is low. 2) Community members are moderately receptive to change, no innovation. 1) Community members are not receptive to change, no innovation.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
8. Access and exchange of agricultural biodiversity Are individuals within and between communities connected through institutions and networks for the exchange of agricultural biodiversity, e.g. seed exchange networks, local markets and animal and seed fairs?	5) Multiple systems of exchange regularly operating within and between communities across different cultures and landscape. 4) Exchange within and across communities takes place but can be strengthened. 3) Exchange takes place occasionally. 2) Exchange takes place rarely. 1) Systems of exchange do not exist.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
9. Transmission of traditional knowledge from elders, parents and peers to the young people in a community Is the knowledge of key concepts and practices about land, water, biological resources and cosmology transmitted between different age groups?	5) Key concepts and practices known to all community members, including youth. 4) Key concepts and practices known to community members, but not to those considered youth. 3) Key concepts and practices known only to adults and elders. 2) Key concepts and practices known only to elders. 1) Traditional knowledge lost.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
10. Cultural traditions related to biodiversity Are cultural traditions related to biodiversity maintenance and use continued by young people, e.g. festivals, rituals, songs, etc.?	5) Cultural traditions practiced by all community members including youth. 4) Cultural traditions practiced by community members, but not by those considered youth. 3) Cultural traditions practiced only by adults and elders.	↑ steep upward trend ↗ slow/some increase → No change		

	2) Cultural traditions practiced only by elders.	↘ slow/some decrease		
	1) Not practiced.	↓ steep downward		
11. Number of generations interacting with the landscape How many generations interact with the landscape for subsistence and income?	5) Three or more generations interact with the landscape.	↑ steep upward trend		
	4) Two or three generations interact with the landscape.	↗ slow/some increase		
	3) Two generations interact with the landscape.	→ No change		
	2) One of two generations interact with the landscape.	↘ slow/some decrease		
	1) One generation interacts with the landscape.	↓ steep downward		
12. Practices of documentation and exchange of local knowledge Are community-based institutions and systems for documentation, exchange and acquisition of externally-sourced knowledge in place? E.g. existence of traditional knowledge registers, resource classification systems, and community biodiversity registers, farmer field schools.	5) Institutions and systems for knowledge documentation and exchange are present and well-functioning.	↑ steep upward trend		
	4) Institutions and systems for knowledge documentation and exchange present but can be strengthened.	↗ slow/some increase		
	3) Some knowledge documentation and exchange taking place but need to be strengthened.	→ No change		
	2) Only a small fraction of knowledge documented.	↘ slow/some decrease		
	1) Documentation of knowledge does not take place.	↓ steep downward		
13. Use of local terminology or indigenous languages Do community members use local terminology related to land and (the use of) biodiversity, and, if applicable, do they speak the local dialect or language?	5) Local terminology (and local dialect or language) widely used in the community.	↑ steep upward trend		
	4) Local terminology used by the majority of community members.	↗ slow/some increase		
	3) Local terminology used by a part of the community.	→ No change		
	2) Local terminology used by a small part of the community.	↘ slow/some decrease		
	1) Local terminology not used.	↓ steep downward		
14. Women's knowledge about biodiversity and its use Are women's knowledge, experiences and skills recognized as central to practices that strengthen resilience?	5) Women's knowledge, experiences and skills recognized, respected and used.	↑ steep upward trend		
	4) Women's knowledge, experiences and skills mostly recognized and respected and used.	↗ slow/some increase		
	3) Women's knowledge, experiences and skills partially recognized, respected and used.	→ No change		
	2) Women's knowledge, experiences and skills receive little recognition.	↘ slow/some decrease		
	1) Women's knowledge, experiences and skills not recognized.	↓ steep downward		

SOCIAL EQUITY AND INFRASTRUCTURE	Trend in the last 50 years		TOTAL SCORE FOR SECTION	TOTAL / 6 =
15. Local resource governance Are land, water and other resources effectively managed by community-based institutions? I.e. existence of traditional institutions (customary laws) and non-traditional local initiatives (governmental and non governmental) for the sustainable use of resources .	5) Institutions in place and resources effectively managed. 4) Institutions in place and some resources effectively managed. 3) Institutions in place but need to be strengthened. 2) Institutions not effective. 1) Institutions not present.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
16. Autonomy in relation to land and resource management Does the community have autonomous access to indigenous lands, territories, natural resources, and sacred and ceremonial sites (clarity of tenure rights)? Is that autonomy recognized by outside groups and institutions, e.g. governments and development agencies?	5) Community has access to its traditional lands and resources and autonomy in their management. 4) Community has access to its traditional lands and resources and partial autonomy in their management, but its autonomy needs to be strengthened and recognized by outside groups. 3) Community has limited access to its traditional lands and resources and limited decision power over their management. 2) Community has limited access to its traditional lands and resources and no decision power over their management. 1) Community has neither access to nor decision power over traditional lands and resources.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
17. Gender Are women involved in decision-making and communication with outsiders? Do women have access to resources, education, information and opportunities for innovation?	5) Women are involved in decision-making and communication with outsiders, and have the same access to resources and opportunities as men. 4) Women are involved in decision-making and communication with outsiders, and have access to resources and opportunities, but less so than men. 3) Women are partially or occasionally involved in decision-making and have limited access to resources and opportunities. 2) Women are rarely involved in decision-making and have limited access to resources and opportunities. 1) Women are not involved in decision-making and have no access to resources and opportunities.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		

18. Social infrastructure Is social infrastructure including roads, schools, telecommunications, energy, and electricity in place?	5) Social infrastructure exists and meets all community needs. 4) Basic social infrastructure exists. 3) Not all necessary infrastructure exists or functions satisfactory. 2) Some major social infrastructure is missing and opportunities for its improvement are limited. 1) No infrastructure in place.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
19. Health care Do community members have access to health care? Are traditional healing methods and modern medicine present?	5) Health care accessible for all community members and functions to the satisfaction of the community. 4) Basic health care accessible. 3) Health care facilities exist but do not function satisfactorily or are not easily accessible. 2) Health care facilities not satisfactory and not easily accessible. 1) Health care not accessible.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		
20. Health risk Is there a health risk from epidemics, water contamination, air pollution or other threats, e.g. malnutrition?	5) Low risk. 4) Average risk. 3) Moderate risk. 2) High risk. 1) Very high risk.	↑ steep upward trend ↗ slow/some increase → No change ↘ slow/some decrease ↓ steep downward		

Annex 3: SEPL Geographic Area

S.N	Name of VDC	Total HHs	Area (In Sq.km)			Area (In Ha)		
			Total land in the VDC	Total cultivated land	Total land covered by forest (Sq. km)	Total land in the VDC	Total cultivated land	Total land covered by forest (Ha)
1	Handikhola	3155	106.72	4.4	64.8	10672	440	6476.9
2	Manahari	2620	256.57	11.7	76.4	25657	1170	7637
3	Raksirang	983	50.58	5	28.8	5058	500	2883.3
4	Kankada	1183	73.52	4.5	46.2	7352	450	4619.1
5	Bharta	621	24.57	6.54	18.4	2457	654	1840.1
6	Sarikhet	1416	58.23	5.62	32.8	5823	562	3284
7	Kalikatar	726	34.32	4.83	21.8	3432	483	2177.3
8	Khairang	530	47.84	6.55	22	4784	655	2199.6
9	Dandakharka	654	35.95	3.65	20.4	3595	365	2036.8
10	Namtar	1490	100.57	12.03	59.5	10057	1203	5946
Total		13378	788.87	64.82	391.0011	78887	6482	39100.11
Percent				8.22	49.56		8.22	49.56

Source: DDC Makawanpur Profile 2012

Annex 4: Landscape Area by Slope

(Above 18 degree slope)

Landuse Type	Area in hectare by Slope				
	< 18 degree	18-30 degree	30-60 degree	> 60 degree	Total
Barren land	15.50	27.20	258.52	0.71	301.93
Built up	4.13	0.00	0.00	0.00	4.13
Bush	128.11	203.76	720.79	0.03	1052.69
Cliff, Cutting	34.82	138.87	495.19	0.00	668.88
Cultivation	7279.01	6159.37	5088.79	1.12	18528.28
Forest	9200.41	10081.48	18696.40	4.42	37982.71
Grass	40.89	26.14	118.44	0.00	185.48
Orchard	0.47	0.50	0.00	0.00	0.96
River	249.99	24.40	6.53	0.00	280.92
Sand	2370.06	163.73	39.10	0.00	2572.89
Scattered tree	52.91	21.25	0.57	0.00	74.74
Shifting cultivation	16.51	25.11	72.62	0.00	114.23
Total	19392.80	16871.82	25496.95	6.28	61767.84
Percent	31.40	27.31	41.28	0.01	100
Areas above 18 degree					68.60

Annex 5: Demography & Population

S.N	Name of VDCs	Total HHs	Population			Ethnicity (HHs)											
			Male	Female	Total	Brahman	Chhetri	Newar	Tamang	Chepang	Gurung	Magar	Sarki	Damai	Kami	Others	Total
1	Handikhola	3155	8870	8900	17770	502	441	7	1547	261	10	62	38	35	118	134	3155
2	Manahari	2620	6986	6849	13835	307	383	127	1009	209	21	105	3	46	143	267	2620
3	Raksirang	983	3220	3123	6343	0	35	1	553	348	0	2	0	1	36	7	983
4	Kankada	1183	3948	3811	7759	0	0	0	517	618	0	2	0	0	43	3	1183
5	Bharta	621	1876	1843	3719	0	0	0	332	267	0	0	0	8	14	0	621
6	Sarikhet	1416	4335	4202	8537	8	40	0	917	202	2	78	0	35	48	86	1416
7	Kalikatar	726	2279	2111	4390	5	53	0	401	191	0	9	0	7	25	35	726
8	Khairang	530	1584	1452	3036	2	70	24	212	143	0	0	0	0	3	76	530
9	Dandakharka	654	1956	1814	3770	0	6	0	486	38	53	27		0	15	29	654
10	Namtar	1490	4385	4238	8623	237	57	2	1053	56	6	3	0	21	42	13	1490
	Total	13378	39439	38343	77782	1061	1085	161	7027	2333	92	288	41	153	487	650	13378
	Percent %		50.7	49.3	100	7.93	8.11	1.2	52.5	17.4	0.7	2.2	0.3	1.1	3.6	4.86	100

Source: DDC Makawanpur Profile 2012

Annex 6: Forest System by Management

S.N.	Name of VDCs	Area of Forest (ha)	Community Forest (ha)	Leasehold Forest (ha)	Bush Fallows (ha)
1	Bharta	1635	105	24	18
3	Kalikatar	1935	-	-	118
4	Kankada	4088	1008	59	221
5	Khairang	1939		52	438
6	Raksirang	2561	934	266	148
7	Sarikhet	2919	2029	36	190
	Total	15077	4076	437	1133

Source: DFO Makawanpur (Based on presentation of Mr. Khada Nanda Sharma, District Forest Officer, Makawanpur; 23 July 2012, Sauraha, Chitwan)

Annex 7: Trends in Annual Temperature & Rainfall

(1996-2010)

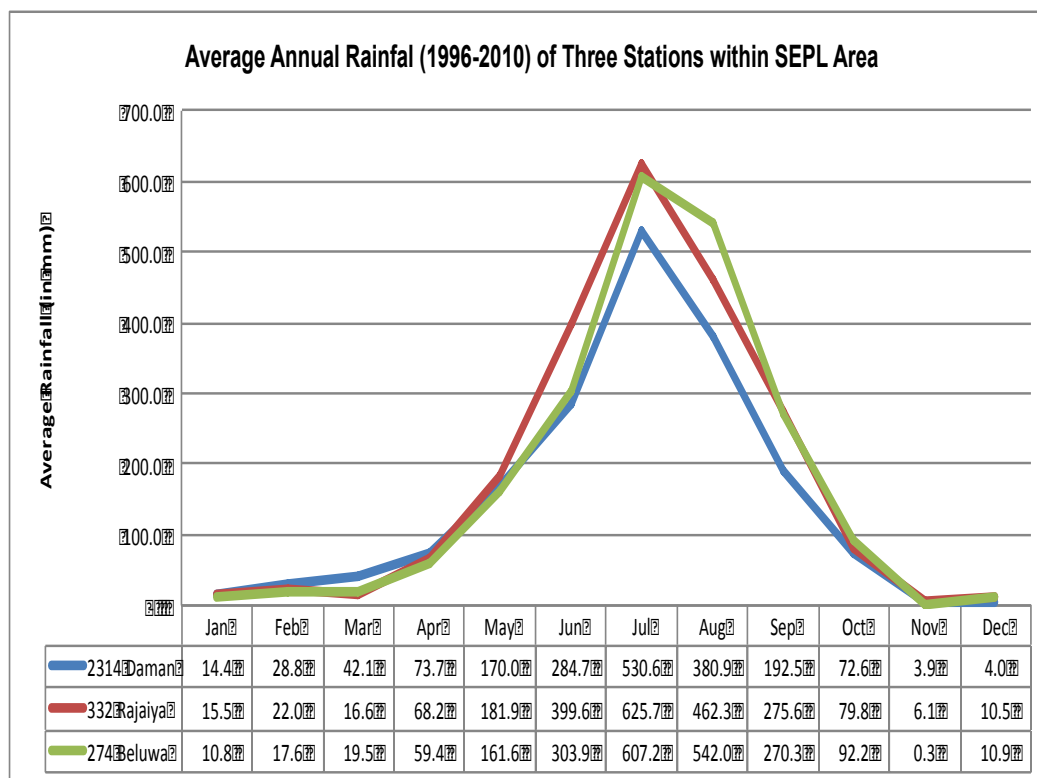
Summary

Daman trend in Maximum temperature	0.00
Trend in Minimum temperature	0.20
Trend in Rainfall- Daman	-2.50
Trend in Rainfall-Rajaiya	-3.70
Trend in Rainfall-Beluwa	-1.60

7.1: Trend in Annual Change in Temperature

S.N	Year	Temperature																						Average Annual Change in Temperat e ((°C)				
		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov				Dec		
		Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmin (°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmin (°C)	Tmax x(°C)	Tmi n(°C)	Tmax x(°C)	Tmin (°C)	
1	1996	12.2	0.7	14.1	2.0	17.6	7.5	20.5	8.8	22.5	11.6	22.7	11.8	22.5	13.3	22.5	13.9	22.0	12.4	20.3	10.3	19.4	6.7	16.2	-1	19.4	8.2	
2	1997	13.0	-2.7	10.6	-1.9	19.6	5.4	18.0	6.5	25.1	11.3	22.8	11.8	22.0	12.3	23.9	12.6	24.0	11.9	23.7	10.1	19.4	5.2	14.3	4.9	19.7	7.3	
3	1998	12.8	3.1	14.4	4.6	17.6	8.1	21.7	10.7	24.3	13.8	22.6	13.0	22.3	13.9	22.8	12.7	27.1		27.6						21.3	10.0	
4	1999	16.9	4.1	20.9	7.0	22.2	7.6	25.6	9.3	25.2	8.1	23.9	10.5	22.1	12.6	21.6	10.8	21.8	9.8	20.8	6.8	18.1	2.3	15.0	-1	21.2	7.3	
5	2000	12.0	-0.7	10.8	-0.1	15.7	4.8	20.4	10.3	21.3	12.9	21.5	14.6	22.0	15.0	22.4	14.7	21.0	12.9	21.6	10.1	17.9	9.4	14.3	3.6	18.4	9.0	
6	2001	13.7	-0.1	15.9	2.5	17.9	5.5	20.7	9.2	20.5	10.7	22.5	13.9	23.2	15.3	21.3	13.0	21.5	14.0	21.8	11.0	18.1	6.0	14.9	2.3	19.3	8.6	
7	2002	12.7	1.6	14.5	3.2	17.2	6.8	18.5	9.3	19.9	12.1	21.8	14.2	20.7	15.0	22.9	14.6	21.1	12.9	20.4	8.8	19.4	6.1	14.7	2.2	18.7	8.9	
8	2003	13.4	1.3	13.4	1.3	16.8	6.1	19.5	9.1	21.0	10.8	21.3	13.8	21.2	15.0	22.6	15.2	21.9	15.5	21.7	13.4	18.7		14.0		18.8	10.2	
9	2004	14.1		14.7		19.9	11.2	20.4		21.6		21.1	0.0	21.7	0.0	23.2	0.0	22.0								19.9	2.8	
10	2005					17.8	5.3	21.1	8.2	22.2	13.8	22.6	14.0	22.1	15.9	22.7	14.8	24.6	14.5	20.3	10.4	18.5	4.4	17.5	3	20.9	10.4	
11	2006	16.0	2.9	18.0	5.1	18.3	6.2	20.0	9.2	21.3	12.1	21.6	13.7	23.3	15.1	24.3	14.4	23.9	13.8	22.0	10.4	18.7	5.6	16.2	2.7	20.3	9.3	
12	2007	15.3	1.6	15.8	3.3	17.6	5.6	21.1	10.2	21.9	12.2		0.0	22.3	15.9	22.2	14.4	21.3	14.1							19.7	8.6	
13	2008											15.5		16.5	25.8	16.3	21.9	16.2	22.6	12.5	19.9	9.8	15.7	7.6	21.2	13.5		
14	2009	14.4	5.4	17.5	5.0	17.8	7.0	22.1	10.7	22.2	12.4	23.8	14.9	24.3	17.2	23.5	16.4	24.8	16.7	22.5	13.1	18.9	7.0	14.5	3.1	20.5	10.7	
15	2010	20.5	6.0	16.1	3.5	22.5	13.1	21.5	8.6							22.3	15.6	21.8	14.8	21.2	11.4	18.5	6.7	16.0	1.8	20.0	9.1	
	Average	14.4	1.9	15.1	3.0	18.5	7.2	20.8	9.2	22.2	11.8	22.4	11.6	22.3	13.8	22.9	13.3	22.7	13.8	22.0	10.7	18.8	6.3	15.3	2.6	0.2	0.7	
	Average annual change in temperature in 15 years (1996-2010)																										0.0	0.2

7.2: Average annual rainfall of three main stations



Source: Department of Meteorology, Kathmandu, Nepal 201

7.3: Trends in Rainfall Pattern - Daman Station (1996-2010)

Latitude(deg/min): 27°36'
Longitude(deg/min): 85°05'
Elevation(m): 2314

S.N	Year	Months												Average change in rainfall
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1996	68.5	60.6	0.4	5.0	104.3	290.1	467.1	476.6	230.2	101.0	0.0	0.0	150.3
2	1997	10.0	0.0	15.1	211.3	98.0	307.8	302.3	237.3	25.2	36.2	5.2	4.3	104.4
3	1998	0.0	24.2	68.2	31.7	98.8	117.1	802.3	413.1	104.0	4.4	16.8	0.0	140.1
4	1999	2.5	0.0	0.0	17.0	95.4	709.2	772.0	495.5	158.0	327.0	0.0	0.0	214.7
5	2000	8.0	9.4	37.2	70.8	297.8	358.8	269.7	890.0	241.4	3.5	0.0	0.0	182.2
6	2001	9.5	4.5	12.3	72.6	209.2	238.5	425.2	288.3	344.2	100.2	12.2	0.0	143.1
7	2002	21.0	47.5	26.5	101.7	250.9	160.3	1407.6	242.5	157.7	11.5	0.0	0.0	202.3
8	2003	34.7	101.5	56.7	106.5	NA	NA	549.7	249.6	214.8	28.5	0.0	10.3	135.2
9	2004	33.4	NA	NA	NA	324.1	252.6	824.5	230.7	215.3	NA	NA	NA	313.4
10	2005	NA	NA	NA	128.6	34.0	215.6	388.1	457.9	52.4	105.0	0.0	0.0	153.5
11	2006	0.0	0.0	48.7	105.1	228.4	423.9	166.5	250.9	345.0	6.0	15.0	32.2	135.1
12	2007	0.0	70.6	NA	63.2	133.3	NA	NA	659.7	NA	NA	NA	NA	185.4
13	2008	NA	NA	NA	NA	NA	NA	208.6	247.6	115.7	21.0	0.0	0.0	98.8
14	2009	0.0	0.0	30.5	36.0	165.4	58.0	314.2	181.0	195.5	89.2	1.2	5.0	89.7
15	2010	0.0	27.2	168.0	8.0	NA	NA	NA	392.1	295.1	110.3	0.0	0.0	111.2
	Av. Rainfall	14.4	28.8	42.1	73.7	170.0	284.7	530.6	380.9	192.5	72.6	3.9	4.0	(2.48)

7.4: Trends in Rainfall Pattern – Rajaiya Station (1996-2010)

Latitude(deg/min): 27° 26'														
Longitude(deg/min): 84° 59'														
Elevation(m): 332														
S.N	Year	Month												Average change in rainfall
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1996	39.4	25.6	0.0	20.6	28.6	276.7	440.6	334.5	306.2	119.6	0.0	0.0	132.7
2	1997	10.0	6.2	10.0	71.8	171.6	410.5	506.2	464.9	152.4	33.6	3.0	105.4	162.1
3	1998	4.0	13.2	24.0	136.5	168.8	239.2	1106.9	598.5	175.7	97.2	11.0	0.0	214.6
4	1999	0.0	0.0	0.0	40.0	356.2	671.0	801.2	488.5	277.4	226.5	0.0	0.0	238.4
5	2000	4.0	14.0	12.0	41.6	231.1	439.3	519.5	495.4	233.6	13.0	0.0	2.0	167.1
6	2001	0.0	33.0	2.0	37.0	297.1	428.9	551.2	345.8	376.1	41.2	0.0	0.0	176.0
7	2002	36.4	27.0	0.0	148.6	330.0	372.3	1410.8	287.0	225.9	49.2	24.2	0.0	242.6
8	2003	32.0	55.2	49.2	52.9	93.6	381.4	741.8	461.7	292.8	41.0	16.0	4.2	185.2
9	2004	15.4	2.2	35.0	112.6	249.2	476.4	433.8	408.5	175.2	63.5	12.0	0.0	165.3
10	2005	42.6	6.4	20.4	73.6	64.1	254.6	604.0	644.9	205.6	171.6	0.0	0.0	174.0
11	2006	DNA	DNA	DNA	62.4	96.7	511.6	355.8	376.5	663.8	29.8	1.6	21.3	235.5
12	2007	0.0	80.2	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	40.1
13	2008	14.2	12.4	42.2	34.0	151.9	472.8	345.5	420.9	DNA	89.3	12.1	3.4	145.3
14	2009	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
15	2010	4.1	11.2	4.1	54.4	125.3	259.9	316.8	683.3	222.9	61.5	0.0	0.0	145.3
	Average	15.5	22.0	16.6	68.2	181.9	399.6	625.7	462.3	275.6	79.8	6.1	10.5	-3.6

7.5: Trends in Rainfall Pattern – Beluwa Station (1996-2010)

Latitude(deg/min): 27° 33'
Longitude(deg/min): 84° 49'
Elevation(m): 274

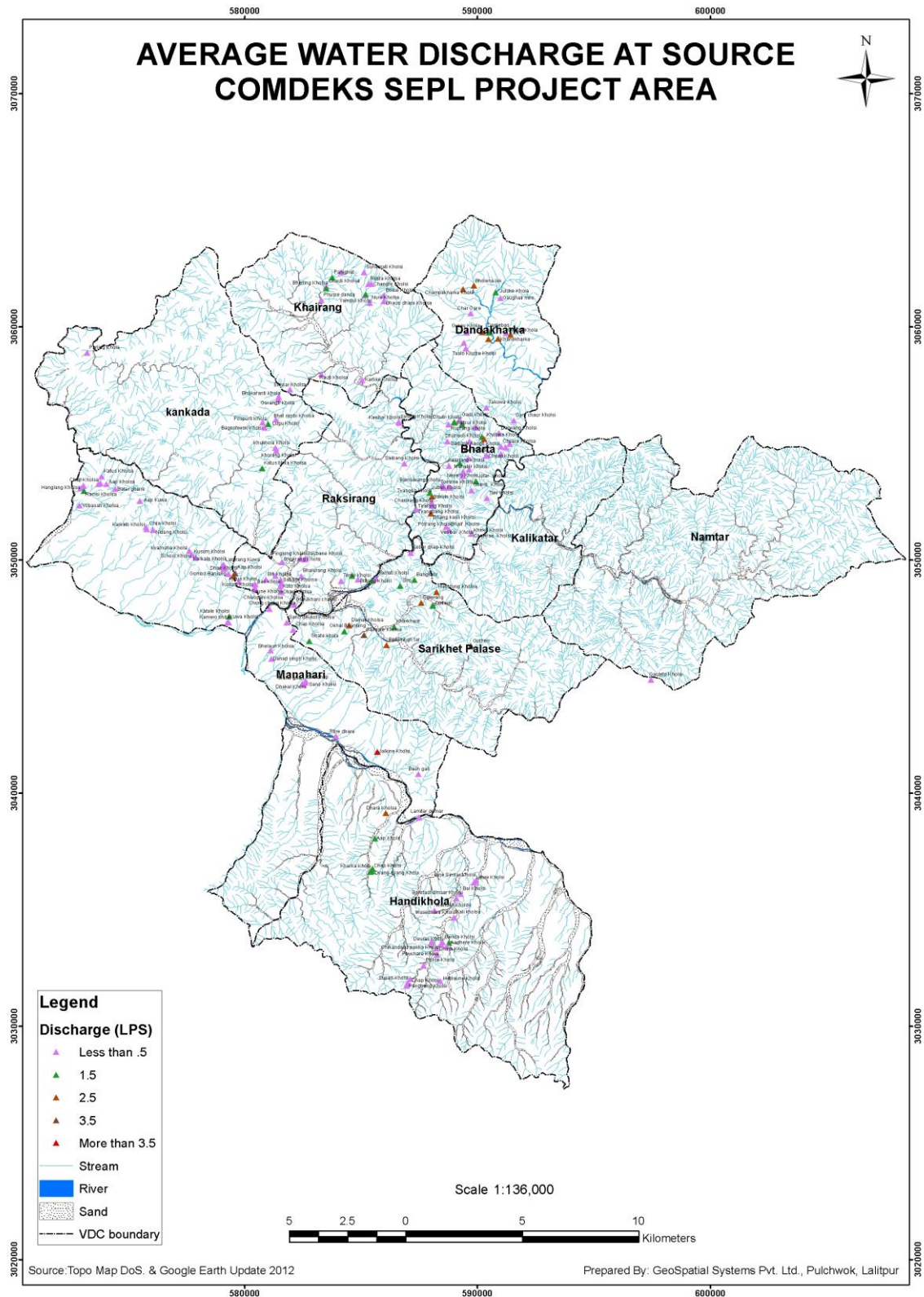
S.N	Year	Month												Average change in rainfall
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	1996	52.5	26.9	0.0	6.4	13.9	254.3	369.4	490.8	258.4	126.0	0.0	0.0	133.2
2	1997	4.1	0.5	2.4	86.2	173.1	179.9	546.7	526.6	268.4	42.0	0.0	142.4	164.4
3	1998	4.0	14.6	76.4	92.9	162.6	135.7	592.7	674.6	104.3	108.8	2.0	0.0	164.1
4	1999	1.3	0.0	0.0	29.0	266.5	477.5	642.6	434.0	366.4	207.7	0.0	0.0	202.1
5	2000	0.0	10.5	8.1	56.5	219.0	323.7	627.7	754.4	174.5	22.5	1.8	2.0	183.4
6	2001	0.0	12.6	4.2	27.5	308.2	547.8	853.5	734.1	330.4	6.0	0.0	0.0	235.4
7	2002	26.2	31.1	10.6	90.4	229.9	315.4	1230.0	243.0	115.3	152.4	0.0	0.0	203.7
8	2003	22.0	51.0	39.7	134.5	148.9	448.6	821.4	467.6	329.6	95.2	0.0	0.7	213.3
9	2004	10.1	4.6	13.5	103.3	243.0	531.4	557.4	509.8	280.6	77.0	0.0	0.0	194.2
10	2005	20.2	0.0	17.0	24.9	91.5	274.9	549.5	599.7	214.0	180.2	0.0	0.0	164.3
11	2006	0.0	0.0	3.6	43.6	112.4	296.9	349.8	323.2	544.7	68.3	0.0	18.0	146.7
12	2007	0.0	110.8	85.7	68.2	123.8	220.4	640.5	622.3	571.1	101.7	0.0	0.0	212.0
13	2008	8.5	0.0	26.8	71.1	83.7	199.8	373.3	406.5	129.9	13.8	0.0	0.0	109.5
14	2009	DNA	0.0	0.0	0.2	154.9	89.5	630.9	738.9	97.0	84.7	0.0	0.0	163.3
15	2010	2.3	2.0	4.3	56.6	92.3	262.2	322.4	604.4	269.4	96.5	0.0	0.0	142.7
	Average	10.8	17.6	19.5	59.4	161.6	303.9	607.2	542.0	270.3	92.2	0.3	10.9	-1.6

Annex 8: Landscape-wide Spring Water Sources

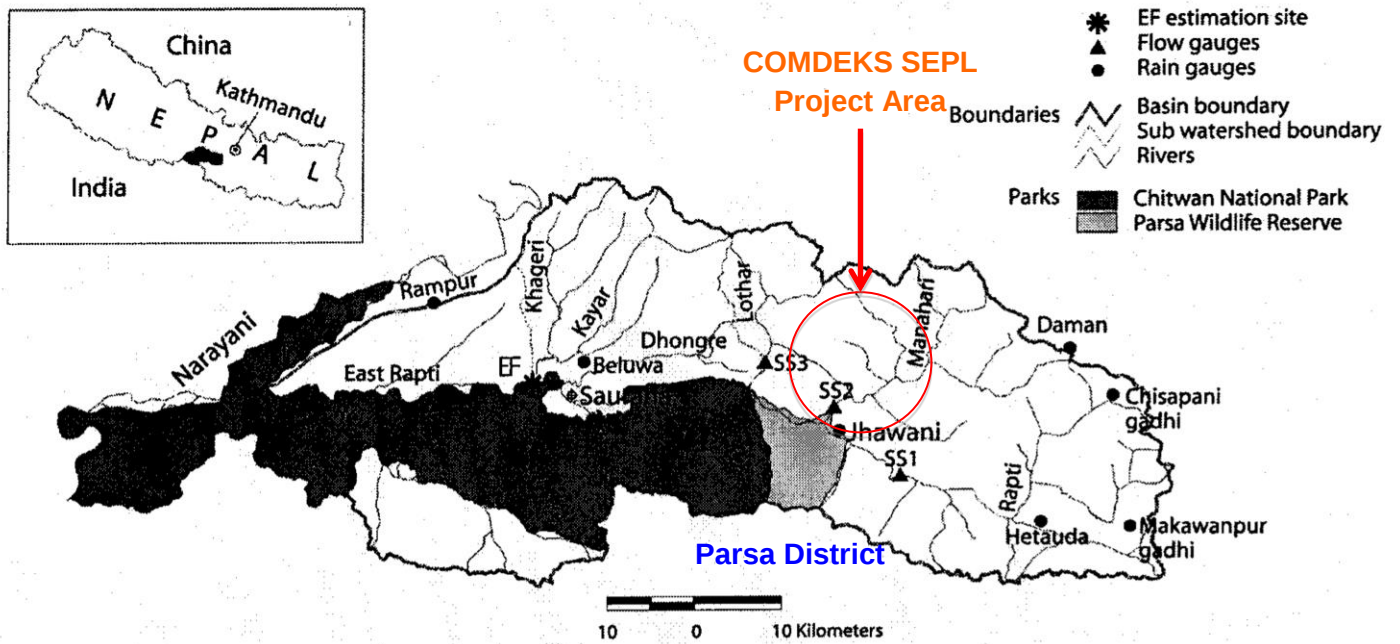
VDC	Nos. of Spring Sources Identified and Counted	Average Discharge (Lit/sec)	Total Available Water (litre/yr.)	Pop	Water Availability (litre/capita/year)
Bharta	46	20.26	638919360	3719	171799
Dandakharka	12	19.05	600760800	3770	159353
Handikhola	37	20.5	646488000	17770	36381
Kalikatar	16	8.08	254810880	4390	58043
Kankada	31	13.82	435827520	7759	56171
Khairang	31	18.89	595715040	3036	196217
Manahari	45	28.74	906344640	13835	65511
Raksirang	62	79.79	2516257440	6343	396698
Sarikhet	19	37.69	1188591840	8537	139228
Total	299	246.82	7783715520	69159	1279401

Source: MDI Field Survey 2012

Annex 9: Water Discharge at Source within SEPL Project Area in GIS



Annex 10: A schematic Map of East Rapti River Basin showing Major Tributaries



Source: Mr.K.R.Adhikari

Annex 11: Poverty Hotspots

VDCs	Hotspot Pockets	Intervention potentials	Remarks
Handikhola	▪ Siddhakali (Ward 4)	Vegetables and fruits	
	▪ Masine, Hattibyaune (Ward 7)	Sub—topical fruits, broomgrass, bamboo	
Mannahari	▪ Rupachuri (Ward 2)	Vegetables and fruits	
	▪ Devkot (Ward 9)	Sub—topical fruits, broomgrass, bamboo	
Kankada	▪ Damrang (Ward 7)	Citrus fruits, banana, broomgrass	
	▪ Darang (Ward 8)	Transport infrastructure	
	▪ Dhirang, Lukchuk (Ward 4)		
Khairang	▪ Pasibang (Ward 4)	Citrus fruits, banana, broomgrass	Remote with lack of market link
	▪ Rajarang, Daldanda (Ward 2)		
Bharta	▪ Sarsigaon (Ward 5)	Sub-tropical fruits	Highly food insecure region
	▪ Dummare, Nimkha (Ward 4)	Spice crops (ginger, turmeric)	
	▪ Ankhitar (Ward 9)		
Raksirang	▪ Tangrang (Ward 9)	Citrus fruits	Highly food insecure region
	▪ Gigu, Kauthalitar (Ward 2)	Spice crops	
	▪ Keangdhuni, Tamathiche (Ward 7)		
Kalikatar	▪ Deutis, Dhusrang, Chapakhani (Ward 9)	Citrus fruits	High level of poverty and food insecurity
Sarikheth	▪ Khahare (Ward 2)	Vegetables and sub-tropical fruits	
	▪ Kundule (Ward 7)		
	▪ Ramche, Hindung (Ward 8)		
Dandakharka	▪ Ghyangdung (Ward 9)	Vegetables and citrus fruits	
	▪ Alchhe (Ward 7)		
	▪ Baikuntha (Ward 5)		

Source: DDC Makawanpur

Annex 12: Average Baseline Score

12.1: Ecosystem Protection

VDCs	Mean	SD	Mean of first 3	Mean of last 3
Dandakharka	2.39	0.83	1.63	3.25
Bharta	2.98	0.72	2.22	3.66
Handikhola	3.1	0.63	2.47	3.72
Kalikatar	2.84	0.65	2.22	3.47
Kankada	3.41	0.44	3.41	3.63
Khairang	2.69	0.6	2.16	3.28
Manahari	3.18	0.74	2.47	3.88
Rakshirang	2.98	0.84	2.16	3.75
Sarikhhet	2.89	0.8	2.09	3.53
Namtar	2.45	0.59	2.31	2.59

12.2: Agricultural Biodiversity

VDCs	Mean	SD	Mean of first 3	Mean of last 3
Dandakharka	2.95	0.6	2.44	3.44
Bharta	3.6	0.5	3.19	4.06
Handikhola	3.3	0.78	2.56	3.94
Kalikatar	3.45	0.6	2.94	3.94
Kankada	3.45	0.43	3.13	3.75
khairang	2.65	0.78	1.88	3.38
Manahari	3.55	0.51	3	4
Rakshirang	3.78	0.73	3.06	4.44
Sarikhhet	3.43	0.91	2.56	4.38
Namtar	3.25	0.72	3.44	3.25

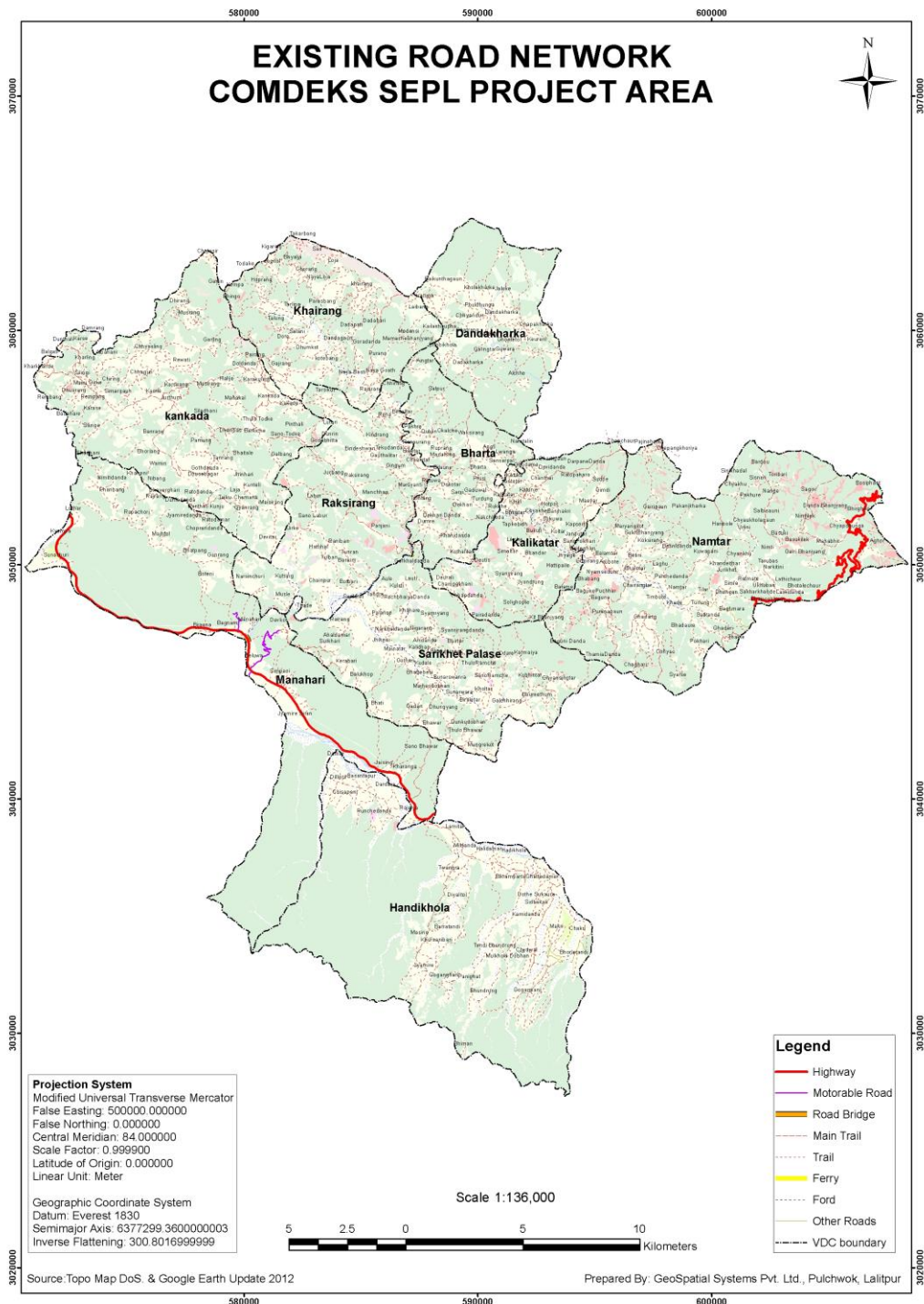
12.3: Knowledge Learning and Innovation

VDCs	Mean	SD	Mean of first 3	Mean of last 3
Dandakharka	2.84	0.42	2.44	3.23
Bharta	3.66	0.67	3.03	4.27
Handikhola	3.32	0.21	3.11	3.53
Kalikatar	3.54	0.57	3.03	3.98
Manahari	3.59	0.62	3	4.14
Rakshirang	3.74	0.4	3.36	4.13
Sarikhet	3.36	0.59	2.84	4.33
Kankada	4.05	0.33	3.7	3.38
khairang	3.02	0.38	2.67	3.88
Namtar	3.44	0.75	3.28	3.8

12.4: Social Equity and Infrastructure

VDCs	Mean	SD	Mean of first 3	Mean of last 3
Dandakharka	2.52	0.47	2.06	2.98
Bharta	3.39	0.32	3.13	3.67
Handikhola	3.1	0.4	2.67	3.46
Kalikatar	3.23	0.46	2.79	3.67
Kankada	3.46	0.55	2.98	3.94
khairang	2.68	0.62	2.15	3.25
Manahari	3.26	0.57	2.69	3.85
Rakshirang	3.14	0.3	2.83	3.44
Sarikhet	3.25	0.48	2.85	3.65
Namtar	3.36	0.62	3.02	3.5

Annex 13: Existing Road Networks in SEPL Area



Annex 14: COMDEKS/SGP Reporting Formats

(Progress Reports, Financial Reports & Gender and Ethnicity Reports)

14.1: Monthly Progress Reporting Format

Monthly Progress Reporting Format Suggested Template

Date :

From [Name of National Coordinator]

To : [Name of UNDP Contract]

Project Number :

Project Name :

Grantee Name :

Grantee Contract Person :

Project Value :

Project Start Date :

Report Number :

Project Progress Report :

A. Summary of Project Status.

B. Activities planned and completed this reporting period and results achieved.

--

C. Activities planned but not completed in this reporting period and reasons for delay.

--

D. Activities planned to be completed in the next reporting period.

--

E. Experience, lessons learnt and issues in this reporting period.

--

F. Optional : Grantee may attach additional supporting documentation or photos.

--

Summary of Achievements

Project VDCs :

S.N	Components	Unit	Target	Achievement			Remarks
				Previous	This Period	Total	
1	Sustainable Institutions Established at the Village Level						
2	Agroforestry with Different SALT Methods in Khoriya Lands Established						
3	Organic Farming Methodologies Introduced						
4	Energy Saving Technologies Adopted						
5	Livelihood of the Locals Improved						
6	Capacity of Local Cadres Enhanced						
7	Co-funding						

14.2: Financial Reporting Format

FINANCIAL REPORT					
UNDP GEF Small Grants Programme					
Name of Project :					
Project No:		Period:			
STEP I					
S.N.	Budget Line Item	Period Amount (Rs.)	Total Budget Released (Rs.)	Total Expenditure (Rs.)	Available Budget (Rs.)
1	Opening Balance				
2	Fund Received				
A					
	Available Funds				
	Expenditure by Subline				
	Description:				
B	Manpower/ Labour Expenditure	-	-	-	-
3	Consultants' Fee				
4	Project Staffs				
C	Training/Seminar/Workshops Expenditure	-	-	-	-
5	Pre-workshop district inception meeting				
6	VDC inception meeting (FGD)				
7	Daily service allowance for consultants				
8	Daily service allowance for Staffs				
9	Fuel for bike				
10	Vehicle Hiring				
11	Main Workshop Facilitation				
D	Contracts Expenditure	-	-	-	-
12	Rapid Field Assessment by Consultants				
13	Detail field study by experts				
14	Printing/ Preparation of GIS Topo Maps				
15	Preparation of Landscape Baseline Report				
E	Operation Expenditure	-	-	-	-
16	Office Rent				
17	Communication				
18	Water electricity Charge				
19	Printing, Photocopy, Binding				
20	Stationeries				
F	Total expenditure	-	-	-	-
G	Closing Balance	-			
STEP II					
21	Bank Balance				
22	Petty Cash				
23	Advance				
24	Others				
H	Total Debit Balance	-			
25	Accounts Payable	-			
26	Bank Interest				
27	Others				
I	Total Credit Balance	-			
J	Closing Balance	-			

Prepared & signed by:

Administrative/Finance Assistant
Name:
Date:

Approved & signed by:

Team Leader
Name:
Date:

Seal

14.3: Gender & Ethnicity Reporting Format

Project	Target_VDC	District	Indicator	Beneficiary Type	Reporting_Period	No_of Infrastructure	Tarai Dalit_Men	Tarai Dalit_Women	Hill Dalit_Men	Hill Dalit_Women	TaraiJ anajati_Men	Tarai Janajati_Women	Hill Janajati_Men	Hill Janajati_Women	Hill BC_Men	Hill BC_Women	Tarai BC_Men	TaraiBC_Women	Other Madhesi_Men	Other Madhesi_Women	Muslims_Men	Muslims_Women	Total	Youth_Men	Youth_Women	Disabled_Men	Disabled_Women
					Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

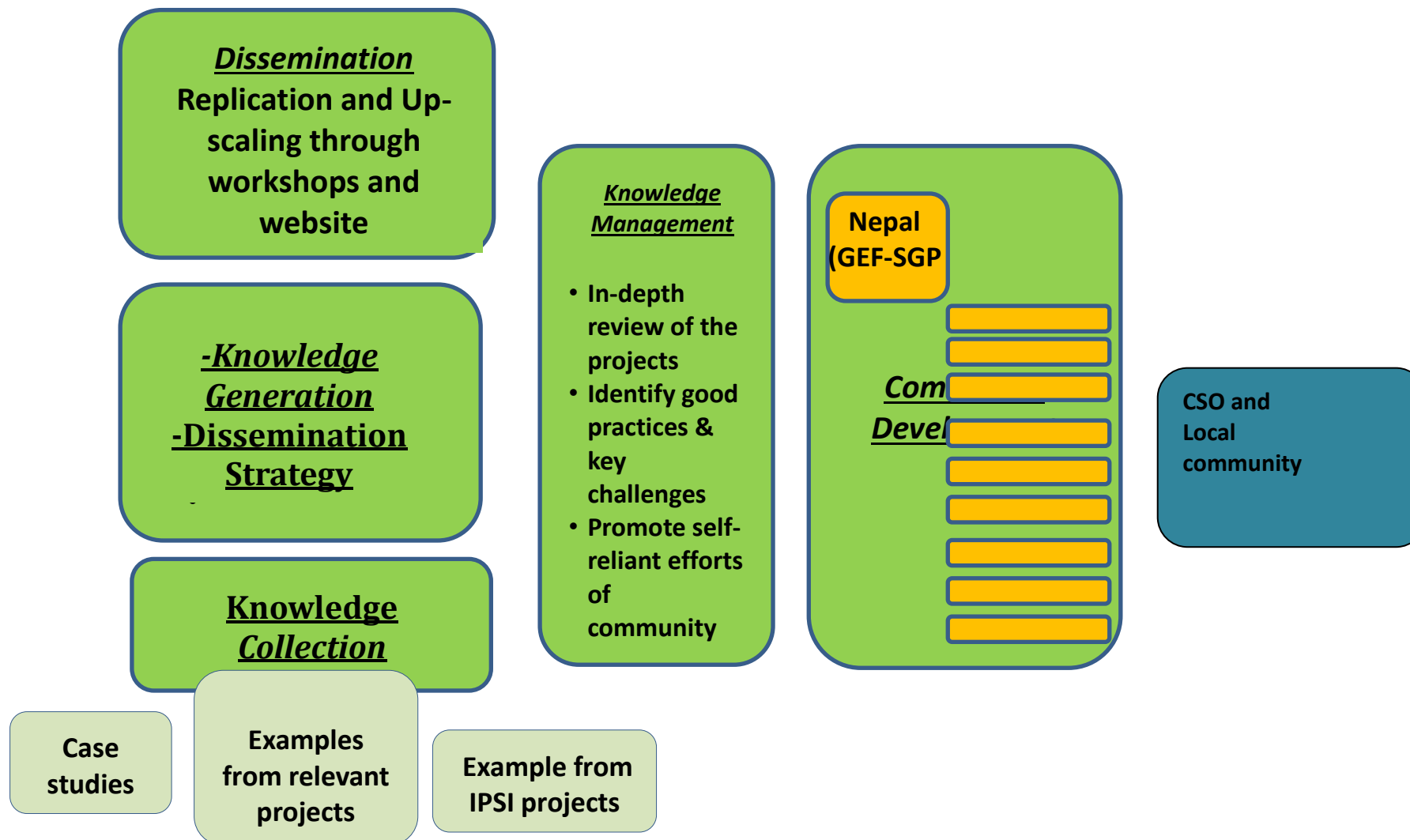
Total Project benefits

Men:

Women:

Children:

Annex 15: Institutional Structure and Implementation Arrangement





Annex 16: Terms of Reference (TOR) for National Steering Committee (NSC)

Global Environment Facility's Small Grants Programme (GEF/SGP)

Please be advised that these are generic TORs, based on the material about the NSC in the current GEF/SGP Operational Guidelines main text, and should be adopted after careful review and adjustment to fit country circumstances.

The Global Environment Facility's Small Grants Programme (GEF/SGP) is implemented by UNDP on behalf of the GEF Implementing Agencies – UNDP, UNEP and World Bank – and is executed by the United Nations Office for Project Services (UNOPS). The GEF focal areas and related criteria relevant to the GEF/SGP are: Biodiversity; Climate Change; International Waters; Persistent Organic Pollutants (POPs); Land Degradation; and Multiple Focal Area.

16.1 The NSC is a central element of the UNDP GEF/SGP and provides the major substantive contribution and oversight to the programme, in coordination with the NC. The NSC is normally composed of voluntary members from the NGO sector, academic and scientific institutions, other civil society organizations, UNDP (usually the Resident Representative and/or the SGP focal point in the Country Office), and the host government. A majority of members should be from the non-governmental sector. The NSC provides overall guidance and direction to the country programme, including the development, periodic revision, and implementation of the country programme strategy, and adaptation of global policies and criteria to country circumstances. It contributes to establishing mechanisms for country programme sustainability. The NSC is responsible for selecting and approving projects and for ensuring and monitoring their technical and substantive quality. NSC members are also encouraged to participate in pre-selection project site visits, providing advice on proposal reformulation or redesign if necessary and possible, and in project monitoring and evaluation. NSCs are encouraged to review an annual work plan proposed by the NC, and to conduct biennial substantive assessments of the programme with a view to identifying success stories and lessons for wider dissemination, as well as pitfalls to be avoided in the future. It is important that prospective NSC members understand that while project selection and approval is the core activity of the committee, their contribution in the other areas mentioned here is also crucial. It is also expected that NSC members will disseminate information on the GEF/SGP through their own networks and in general enhance visibility of the programme.

16.2 Under the UNDP GEF/SGP mandate and operational structure, the NSC is the key country- level body responsible for the strategic direction of the programme and for project selection and technical quality in accordance with GEF and SGP criteria and the CPS. While staffing and operational management of the SGP is undertaken through UNDP/UNOPS structures, no SGP project may be undertaken at the country level without the approval of the NSC. As such, the NSC must do its best to ensure the technical and substantive content of SGP grants, and the administrative and financial capacity of the NGO/CBO grant recipients. The UNDP Resident Representative or his/her delegate, as members of the NSC, are encouraged to provide any relevant information about these concerns, especially the financial and organizational integrity of NGOs and CBOs. Operationally, the decisions of the NSC are considered final provided they are consistent with these operational guidelines and the global strategic framework. However, neither



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the NSC as a body, nor its individual members, hold any legal or fiduciary responsibility for the SGP or its activities.

16.3 Description of Service and Terms of Reference

Project Number: **NEP/COMDEKS/2012/01**

Project Title: COMDEKS Landscape Baseline Assessment for Nepal Country Programme

These Terms of Reference (TOR) for the **local MDI-Nepal** will serve as the basis for the implementation of COMDEKS activities.

Scope of Work

The **local CSO** will implement the COMDEKS activities based on the general provisions mentioned in this TOR and in consultation with the COMDEKS management. The **local CSO** shall be totally responsible for implementing the project to develop COMDEKS baseline and strategy.

The project activity will be focused on preparing base on the COMDEKS indicators of resilience with participatory ways and developing country programme strategy for West Makawanpur.

Programme Implementation Process

In order to make the process more participatory, the project will be implemented in following phase:

Phase 1: The project team will organize a pre-workshop to orient the district stakeholders on the COMDEKS approaches, indicators and project modalities.

Phase 2: The project will collect data in line with landscape indicators of resilience and also organize VDC level workshop to orient the project and COMDEKS approaches at the grassroots level.

Phase 3: The project will organize main workshop where the findings of the baseline will be presented. During the workshop, the stakeholders' opinion will also be collected.

Phase 4: Based on the baseline and stakeholders opinion the project will prepare the workshop reports. Baseline report and COMDEKS landscape level country programme strategy.

Programme Implementation Structure

Implementation of programme activities will be done by the **local CSO** under the title "**COMDEKS Nepal**".

The local CSO will be responsible for formation of proposed profession team to implement the programme activities. The team members will be responsible to the grantee organization as well as the COMDEKS Nepal. The **local CSO** will also follow its own administrative and personnel policies to implement the activities. The local CSO will submit COMDEKS Nepal the CVs of recruited staff or consult for record.

The project will maintain separate account for the implementation of COMDEKS project. The **local CSO** will provide final report and bank statements on all expenditures.



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National Coordinator reserves the right to approve the work plans if there are any changes. The **local CSO** can request for the work plan and budget. The National coordinator reserves the right to approve the work plan upon receiving the satisfactory justification.

The **local CSO** should maintain transparency at all level of expenditure and project activities.

Annex 17: Workshop Schedules & Participants

17.1: Pre-workshop Programme Schedule

Date: 20 June 2012

Venue: Hotel Gaurishankar, Daman

Facilitator:

Mrs. Dip Maya Gurung, Monitoring Officer, MDI

Time	Activities	Resource Persons
7:00-10:00	Travel from Hetaunda to Daman	
10:00-10:30	Refreshment	
10:30-10:45	Registration of Participants	
10:45-11:00	Introduction	
11:00-11:30	Objective of the Workshop	Mr. Khop Narayan Shrestha, Executive Director, MDI-Nepal
11:30-12:00	Satoyama Initiatives in Nepal-Brief Introduction	Mr. Vivek Sharma, National Programme Assistant, UNDP GEF SGP, Kathmandu
12:00-13:15	Debriefing of SEPL Indicator	Mr. RoshanSubedi, Agriculture Coordinator, MDI-Nepal
13:15-14:00	Lunch	
14:00-15:00	Cont...Debriefing of SEPL Indicator	
15:00-16:00	Feedbacks and Comments	Participants
	Concept of COMDEKS Baseline Assessment Report	Dr. GovindKoirala, Team Leader
	Closing remarks by chairman	Mr. BhuwanPrakashBista, Local Development Officer, DDC, Makawanpur

17.2: Participants in Pre-workshop - Daman

S.N.	Name of Participants	Designation	Organization/Address
I.	District Representatives		
1.	Mr. BhuwanPrakashBista	Local Development Officer	District Development Committee, Makawanpur
2.	Mr. Mahesh Regmi	Senior Agriculture Development Officer	District Agriculture Development Office, Makawanpur
3.	Mr. Chet Narayan Kharel	District Livestock Officer	District Livestock Service Office, Makawanpur
4.	Mr. Khadananda Sharma	Vice Secretary	District Forest Office, Makawanpur
5.	Mr. BolBahadurKarki	Member	NGO Federation, Makawanpur
6.	Ms. PanchaMayaShyangtan	Chairperson	Federation of Community Forest Users' Group, Makawanpur
7.	Mr. Mahesh Chepang	Secretary	Nepal Chepang Association
8.	Mr. Pradip Kumar Mishra		District Soil Conservation Office, Makawanpur
9.	Mr. Raja Ram Thapa	Chief of Chepang Development Project, DDC	District Development Committee, Makawanpur
10.	Mr. PratapBista	Member	Nepal Journalist Association, Central Committee
11.	Mr. BhanuBhaktaAcharya	Chairperson	Nepal Journalist Association, Makawanpur
II.	Community Representatives		
12.	Ms. Kanchhi Maya Chepang	Chairperson	Churidanda Community Organization, Manahari
13.	Mr. Raj Kumar Chepang	Chairperson	SilingeAmriso Community Organization, Kankada
14.	Mr. SajiwanPraja	Former Chairperson	Niguretar Agricultural Cooperative Ltd. Raksirang
15.	Mr. Ram Chandra Praja	Secretary	Jharana Community Organization, Sarikhet
16.	Mr. BirBahadurChepang	Chairperson	Dhodaya Community Organization, Kalikatar
17.	Mr. SinghBahadur Thing	Chairperson	Saraswoti Community Organization, Bharta
18.	Mr. UmeshPraja	Member	Khairang Agroforestry Management Committee, Khairang
19.	Mr. Yam BahadurShyangbo	Chairperson	Bhumeswori Community Organization, Dandakharka
20.	Mr. SanuKanchhaTitung	Chairperson	Churiyamai Agriculture Cooperative Ltd., Handikhola
III.	UNDP GEF Small Grant Programme		
21.	Mr. Vivek Sharma	National Programme Assistant	UNDP Small Grant Programme
IV.	Consultants		
22.	Dr. GovindKoirala	Team Leader, COMDEKS Project	Freelancer
23.	Mr. Kumar Adhikari	Local Governance/Instituti	APDN, Kathmandu

S.N.	Name of Participants	Designation	Organization/Address
		onal Expert	
24.	Mr. PramodLamsal	GIS Specialist	Geo Spatial System Pvt Ltd
V.	MRC Nepal		
25.	Mr. Bharat Khadka	Chief Executive Officer (CEO)	MRC Nepal
26.	Ms. Gita Bhusal	Programme Manger	MRC Nepal
VI.	Journalists		
27.	Mr. RabindraGhimire	Reporter	Pratidhoni FM, Daman
28.	Mr. Shiva Kumar Kashi	Reporter	Hetauda Today Daily
29.	Mr. BhanuBhaktaAcharya	Chairperson	Nepal Journalist Association, Makawanpur
VII.	MDI- Nepal		
30.	Mr. Khop Narayan Shrestha	Executive Director	MDI-Nepal
31.	Mr. RoshanSubedi	Agriculture Coordinator	MDI-Nepal
32.	Mr. Binod Shrestha	Water Resource Engineer	MDI-Nepal

17.3: Post-workshop Programme Schedules – Sauraha

Date: 23 July 2012

Venue: Hotel Parkland, Sauraha, Chitwan

Facilitator:

Mrs. Dip Maya Gurung, Monitoring Officer, MDI

Time	Activities	Resource Persons
7:00-8:30	Travel from Hetaunda to Sauraha	
8:30-9:30	Breakfast, Hotel Parkland, Saurah, Chitwan	
9:30-10:00	Participants Registration	Ms. Dip Maya Gurung, Monitoring Officer, MDI
10:00-10:30	Introduction of the Participants	
	Chairing of the Programme Chairperson	Mr. Ram Krishna Thapa, Social Development Officer, DDC, Makawanpur
10:30-10:45	Welcome the Participants and objective of the Post-Workshop	Mr. Khop Narayan Shrestha, Exed Director, MDI
10:45-11:15	Brief Overview of Satoyama Initiatives In Nepal	Mr. Vivek Sharma, Programme Manager, UNDP GEF Small Grants Programme, Kathmandu
11:15-13:00	Detail of SEPL Indicators and Exercise on the 20 SEPL Indicators	Mr. RoshanSubedi, Agriculture Coordinator, MDI
13:00-14:00	Lunch	
14:00-14:20	Status of Private, Community and Leasehold forest in proposed 10 VDCs of Makawanpur	Mr. Khada Nanda Sharma, Vice-Secretary, District Forest Office, Makawanpur
14:20-14:40	Status of Agro-biodiversity and trend of agriculture productivity in proposed 10 VDCs of Makawanpur	Mr. Mahesh Regmi, Senior, Agriculture Development Officer, District Agriculture Development Office, Makawanpur
14:40-15:00	Tea Break	
15:00-17:00	Expert Reports	
15:00-16:00	1. Ecosystem Protection & Maintenance of Biodiversity 2. Agricultural Biodiversity	Dr. GovindKoirala, Team Leader
16:00-17:00	3. Knowledge Learning & Innovations 4. Social Equity & Infrastructure	Mr. Kumar Adhikari Consultant
17:00-17:20	Tea Break	
17:20-17:50	Feedbacks and Endorsement of COMDEKS Baseline Assessment	Participants
17:50-18:15	Opinions Community UNDP GEF Small Grant Programme Political Parties	Mr. SajiwanPraja, Former President Niguretar Agriculture Cooperative Raksirang
	Closing Remarks from Chairperson of the Workshop	Mr. Ram Krishna Thapa, Social Development Officer, DDC, Makawanpur
19:00-21:00	Tharu Cultural Programme with Refreshments	

17.4: Participants in Post Workshop – Sauraha

S.N.	Name of Participants	Designation	Organization
I.	District Representatives		
1.	Mr. Ram Krishna Thapa	Social Development Officer	District Development Committee, Makawanpur
2.	Mr. Mahesh Regmi	Senior Agriculture Development Officer	District Agriculture Development Office, Makawanpur
3.	Mr. Chet Narayan Kharel	District Livestock Officer	District Livestock Service Office, Makawanpur
4.	Mr. Khada Nanda Sharma	Vice-Secretary	District Forest Office, Makawanpur
5.	Mr. Buddha Sharan Lama	Chairperson	NGO Federation, Makawanpur
6.	Mr. Bharat Khadka	CEO	MRC Nepal, Hetauda
7.	Ms. Pancha Maya Syangtan	Chairperson	Federation of Community Forest Users' Group, Makawanpur
8.	Mr. Mahesh Chepang	Secretary	Nepal Chepang Association
9.	Dr. Sanjeev Kumar Singh	District Health Officer	District Health Office, Makawanpur
10.	Ms. MunuSigdel	Vice Chairman	District Women Coordination Committee, Makawanpur
11.	Mr. PratapBista	Member	Nepal Journalist Association, Central Committee
12.	Mr. BhanuBhaktaAcharya	Chairperson	Nepal Journalist Association, Makawanpur
13.	Mr. Shiva Kumar Kashi	Journalist	Hetauda Today
II.	Representatives from Political Parties		
14.	Mr. Raghu Raman Neupane	President	Nepali Congress
15.	Mr. Govinda Ram Chepang	Former Constituent Assembly Member	CPN (UML)
16.	Mr. IndraBahadurPariyar (Nayan)	District Secretary	CPN (Maoist)
17.	Mr. Sita Ram Bartaula	Regional Chairperson	National Democratic Party
18.	Mr. BhimsenMahat	District Secretary	CPN (ML)
19.	Mr. Man NathTimalsina	District Incharge	CPN (United)
III.	Community Representatives		
20.	Ms. Kanchhi Maya Chepang	Chairperson	Churidanda Community Organization, Manahari
21.	Mr. Raj Kumar Chepang	Chairperson	SilingeAmriso Community Organization, Kankada
22.	Mr. SajiwanPraj	Former Chairperson	Niguretar Agricultural Cooperative Ltd. Raksirang
23.	Mr. RamchandraPraj	Chairperson	Jharana Community Organization, Sarikhet
24.	Mr. Singh Bahadur Thing	Chairperson	BhartaAgroforestry User's Committee, Bharta
25.	Mr. UmeshPraj	Member	Khairang Agroforestry Management Committee, Khairang
26.	Mr. Yam BahadurShyangbo	Chairperson	Bhumishwori Community Organization, Dandakharka
27.	Mr. SanuKanchhaTitung	Chairperson	Churiya Agriculture Cooperative Ltd.,

S.N.	Name of Participants	Designation	Organization
			Handikhola
IV.	UNDP GEF Small Grant Programme		
28.	Mr. Vivek D. Sharma	National Programme Assistant	UNDP GEF Small Grant Programme
29.	Mr. AakalThapa	Driver	UNDP GEF Small Grant Programme
V.	Consultants		
30.	Dr. GovindKoirala	Team Leader	Freelancer
31.	Mr. Kumar Adhikari	Consultant	APDN
VI.	MDI-Nepal		
32.	Mr. Khop Narayan Shrestha	Executive Director	MDI-Nepal
33.	Mr. RoshanSubedi	Agriculture Coordinator	MDI-Nepal
34.	Mr. Binod Shrestha	Engineer	MDI-Nepal
35.	Ms. Deep Maya Gurung	Monitoring Officer	MDI-Nepal, Regional Office Nepalgunj
36.	Mr. Rajan Lamichane	Admin Finance Assistant	MDI-Nepal
37.	Mr. NavinSubedi	Field Officer	MDI-Nepal
38.	Mr. Ram Krishna Praja	Field Supervisor	MDI-Nepal
39.	Ms. Anisha Lama	Office Assistant	MDI-Nepal
40.	Mr. RavinHamal	Driver	MDI-Nepal