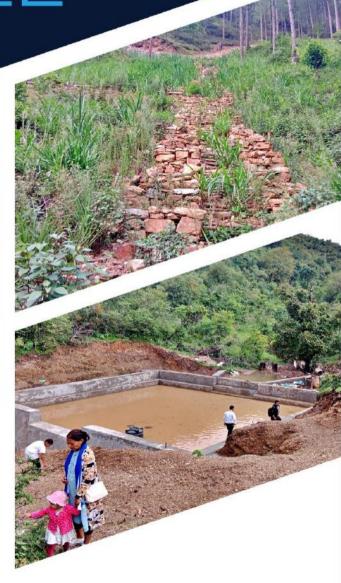
ACTIVITY PROFILE

079/80



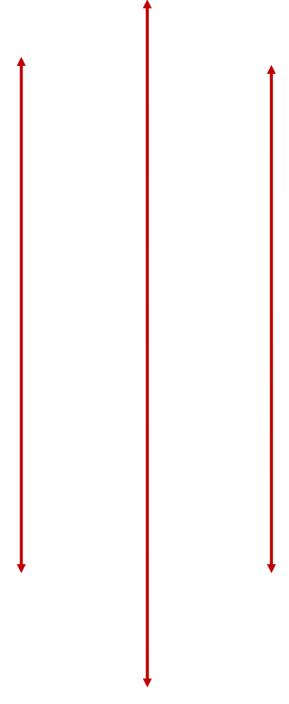




SOIL AND WATERSHED MANAGEMENT OFFICE, ROLPA



ACTIVITY PROFILE (079/80)





LUMBINI STATE GOVERNMENT
MINISTRY OF FORESTS AND ENVIRONMENT
SOIL AND WATERSHED MANAGEMENT OFFICE
MULPANI, ROLPA



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Cover Photo:

Robert Mahara Rakesh Shahi



LUMBINI STATE GOVERNMENT MINISTRY OF FORESTS AND ENVIRONMENT SOIL AND WATERSHED MANAGEMENT OFFICE MULPANI, ROLPA



FOREWORD

Watershed management is aimed at management of land and water resources, and is applied to an area of land that drains to a defined location along a stream or river. It also aims to take care of natural resources in a way that supports human needs for water, food, fibre, energy and habitat. Each watershed is unique in terms of physiography, ecology, climate, water quality, land use and human culture. Therefore any generalized approach to watershed management must be customized to each setting at the time of practice and implementation. Watershed management requires a long-term commitment that adapts in population change, climate, culture and resource-use demands. These issues are unique to each watershed.

Watershed degradation is common problem and consequences in Nepal, mainly caused by surface erosion, slope failure, landslides, debris flows and riverbank cuttings. Soil fertility or productivity is deteriorating due to accelerated surface soil erosion. Main reasons behind critical conditions of watersheds are the fragile and the youngest landform, unwise use of land resource without conservation practices, and destruction of forest and other natural resources for the driving of expanded population and their pressure on natural resources. SWMO Rolpa is a responsible government organization for soil conservation and watershed management in Rolpa, Pyuthan, and Rukum East districts of Lumbini province on behalf of the Province Government.

SWMO Rolpa has implemented watershed management activities (62 locations) in its working area in this fiscal year 079/80. It is very difficult to address public demands and requirements for watershed management throughout each district at once from a limited allocated budget. We have expended almost all allocated budget, mobilized peoples participation and tried to do better from limited financial and human resources, and finally achieved almost 100 percent physical and financial progress. This activity profile includes the summarized form of the implemented activities in working districts with photographs which will be useful to all stakeholders for learning and monitoring / evaluation purposes.

I would like to thanks Mr. Rakesh Shahi (Assistant Soil Conservation Officer) and all other staff for their contribution to the publication of this Activity Profile.

Robert Mahara

Watershed Management Officer Soil and Watershed Management Office Mulpani, Rolpa

ACRONYMS AND ABBREVIATIONS

ASCO: Assistant Soil Conservation Officer

BMC: Basin Management Centre

Cum: Cubic meter

DAGs: Dis-advantaged Groups

DSCO: District Soil Conservation Officer

DSCOs: District Soil Conservation Offices

DSCWM: Department of Soil Conservation and Watershed Management

Ha: Hectar

HHs: Households

IGAs: Income-Generating Activities

Km: Kilo-meter

M: Meter

Md: Man-days

MoFE: Ministry of Forest and Environment

MoFESC: Ministry of Forest, Environment and Soil Conservation

MoITFE: Ministry of Industry, Tourism, Forest and Environment

Nos.: Numbers

Sqm:Square meter

SCWM: Soil Conservation and Watershed Management

SWMO: Soil and Watershed Management Office

WMO: Watershed Management Officer

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SECTION 1: INTRODUCTION

1.1 BACKGROUND

The geologically unstable, rugged, and steep mountain topography of Nepal makes the country prone to high soil erosion rates. Natural calamities like soil erosion, floods, landslide, etc. occur naturally here due to weak geological conditions, seismic sensitivity, and intense monsoon rainfall. In addition, human activities like improper land use, unscientific cultivation practices, deforestation, overgrazing, and construction of development infrastructures without integrating conservation measures have also exacerbated the problems of soil erosion, landslide, flooding, and environmental degradation. The impact of climate change further aggravates the high erosion rates in Nepal causing huge loss of life and property and environmental degradation. These detrimental factors are destroying our arable land by reducing land productivity and food production, consequently affecting the socio-economic conditions of most of the Nepalese people who depend upon those resources for their livelihood.

However, soil and watershed management has a significant role to play in solving such problems created by soil erosion, floods, landslides, etc. The Soil Conservation and Watershed Management (SCWM) programs help to prevent the loss of soil fertility, balance the interaction of watershed resources (water, soil, forest, people, animals), and improve the living standards of the people by making wise use of these resources. Sustainable and balanced economic development is, therefore, possible through the rational utilization of these watershed resources.

In this context, the SCWM program was for the first time recognized as an important program by the Government of Nepal in 1974 A.D. (2031 B.S.) when a new department, the Department of Soil and Water Conservation, was established under the umbrella of the Ministry of Forest. Later the name of the department was changed to the Department of Soil Conservation and Watershed Management (DSCWM). After that 61 Soil Conservation Offices were established on a district basis to provide SCWM services. In the present context of Federal System and Reconstructing Nepal, the role and responsibility of the District Soil Conservation Office (DSCO) have been reorganized, restructured, and transformed into Basin Management Centre (BMC) (in Federal Government) and Soil and Watershed Management Offices (SWMOs) (in State Governement) to deliver various SCWM programs through integrated and adaptive watershed (Basin) resource management approach from the existing political boundary approach.

Presently, there is one Watershed and Landslide Division and 5 BMCs under the Ministry of Forest and Environment (MoFE) of Federal Government System and 16 SWMOs with 5 temporary offices under the MoITFE and MoFE of State Government System, to address the burning issues of soil erosion, mass movement, land degradation and desertification in 77 districts of Nepal. Accordingly, SWMO, Liwang, Rolpa was established temporarily under MoFE of Lumbini Province in 2078 B.S.

1.2 WORKING AREA

The SWMO, Rolpa is the office with manpower related to different thematic areas. The office, including technicians from the forest, agriculture, and engineering sector, has been trying to address the problem of soil erosion and land degradation through various integrated SCWM activities. The office covers three districts of Lumbini Province as shown in the figure below:

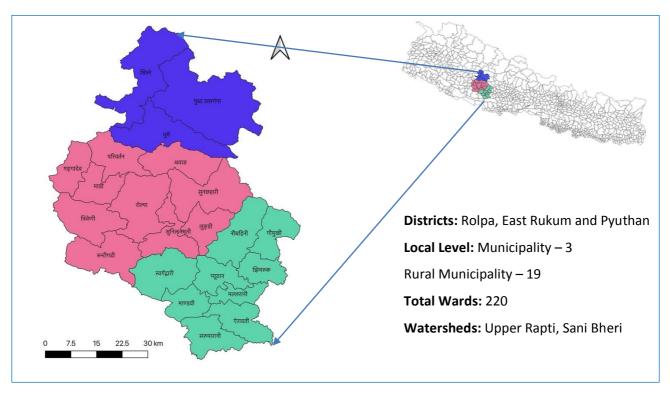


Figure 1: Working Area

1.3 WATERSHED CONDITION OF THE WORKING AREAS

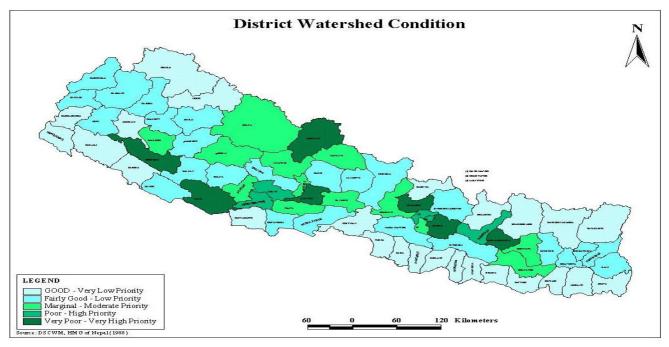


Figure 2: District Watershed Condition (Source:DSCWM)

It was found that the watershed condition of working areas of SWMO, Rolpa are as follows;

• Pyuthan----Marginal Rolpa------Fairly Good Rukum East----Marginal

The marginal and fairly good watershed conditions of the Pyuthan, Rolpa and Rukum East districts respectively, are also on the verge of rapid deterioration due to the over-exploitation of watershed resources and construction of development infrastructures mainly roads without integrating conservation measures.

1.4 VISION, GOAL, OBJECTIVES, STRATEGIES, WORKING STRATEGIES, AND ACTIVITIES

1.4.1 VISION

To support building a climate-friendly and prosperous society through integrated and sustainable management of watershed resources based on river systems.

1.4.2 GOAL

To help in improving the living standards of the people by reducing natural disasters, adapting to climate change, enhancing productivity, and balancing the interdependence of watershed resources through integrated and adaptive watershed management.

1.4.3 OBJECTIVES

- To mitigate the risk of loss of life, property, and development infrastructure through integrated management of geo-environmentally sensitive, important, and priority watersheds.
- To contribute to the socio-economic prosperity of the people by enhancing the availability of water and increasing the land productivity quantitatively and qualitatively through rational utilization of watershed resources.
- To develop and expand the appropriate technology by assessing the impact of climate change through study and research.
- To provide watershed management services in a smooth, simple, and transparent manner following the principles of good governance, inclusiveness, and participation.
- To improve water regime & reduce silt load in rivers.
- To raise awareness about different aspects of SCWM activities among local people.

1.4.4 STRATEGIES

- To make River System and Watershed Area a planning and management unit.
- To formulate and implement the plan by adopting an integrated and adaptive approach.
- To conduct programs in a participatory, cooperative, and coordinated manner.
- To adopt people-centred (service, production, environment friendly, ritual) concept in watershed management.
- To promote watershed good governance (such as the utilization of resources based on land capability, landslide area, water source, etc.)
- To ensure the upstream and downstream linkage for the management and utilization of watershed resources.

1.4.5 WORKING STRATEGIES

- To identify, classify and prioritize watersheds according to different levels of watersheds (Watershed/Basin, Sub-watershed, Micro-watershed)
- To make and implement various watershed management plans (Provincial, Local) based on the classification of watersheds.
- To adopt multiple uses of one watershed with integrated, adaptive, and participatory watershed management approaches.
- To conduct conservation work in a productive, income-generating, and market-oriented manner.
- To provide integrated management services by establishing coordination and partnership with green agencies related to the green sector (forest, agriculture, animal husbandry, and water resources).
- To expand and improve the institutional/organizational structure for basin management.

- To give special priority to watershed management of Chure area.
- To disseminate and coordinate various aspects of watershed management.
- To conduct necessary and appropriate adaptation and disaster management programs at the watershed level by assessing the risks created due to climate change.
- To give special emphasis on programs that support the storage, renewal, and sustainable use of Too Little Water (especially during winter season) in line with the Too Much Water –Too Little Water Management concept.
- To carry out all conservation works and efforts in the upper watershed and lower watershed areas of the district in an integrated, adaptive, and participatory way with the scientific belief that the conservation of the upstream will benefit the downstream areas.
- To develop and implement an appropriate system of Payment for Environment Services (PES).

1.4.6 ACTIVITIES

The following are the programs currently being implemented by SWMO, Rolpa under the watershed management program;

- Watershed/Sub-watershed Prioritization and Management Plan Preparation
- Planning, Capacity Building, and Coordination Workshops
- Hot Spot Identification/Hazard Zoning/Prioritization/Mapping
- Mapping of Local Levels Based on the Watershed/Sub-watershed/River System
- Watershed Management for Eco-tourism
- Landslide/Gully/Torrent Control/ Emergency Landslide Control
- Bio-engineering River/Stream Bank Protection
- Soil Conservation along the Road (Road Slope Stabilization)
- Water Source Protection/Conservation Pond/ Wetland Identification and Management
- Sensitive Watershed Area Protection
- Partnership Soil Conservation
- Fruit Tree/Fodder/Grass Plantation/Bio-Engineering
- Nursery Establishment/Seedling Production
- Conservation Extension Material Production/ Co-ordination Workshop and Meeting
- Monitoring/Joint Monitoring/Evaluation

1.5 ORGANIZATIONAL STRUCTURE

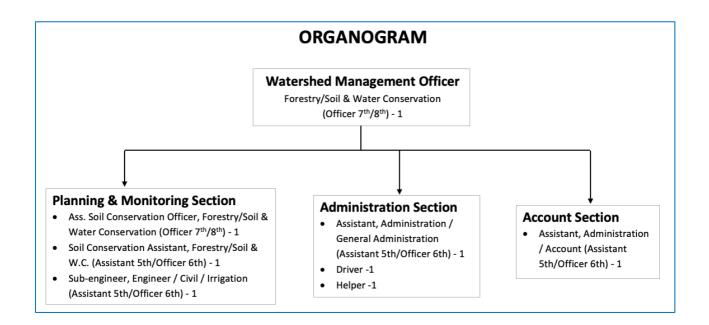


Figure 3: Organizational Chart

1.6 RECRUITMENT STATUS

Table 1: Recruitment Status

s.	Post	Service	Group/Sub-	Class/Level	Total No. of	Recruit Stat		Vacant
N.	Post	Service	Groups	Clussy Ec vel	Post	Perma nent	Temp orary	
1	Watershed Management Officer	Forest	Soil and Water Conservation	Officer Level 8 th /7 th	1	1		
2	Assistant Soil Conservation Officer	Forest	Soil and Water Conservation	Officer Level 8 th /7 th	1	1		
3	Soil Conservation Assistant	Forest	Soil and Water Conservation	Assistant Level 5 th /Officer Level 6 th	1			1
4	Sub-Engineer	Engineering	Civil/Irrigation	Assistant Level 5 th /Officer Level 6 th	1			1
5	Accountant	Administration	Account	Assistant Level 5 th /Officer Level 6 th	1			1
6	Nayab Subba	Administration	General Administration	Assistant Level 5 th /Officer Level 6 th	1			1
7	Driver	Administration	General Administration		1		1	
10	Office Helper	Administration	General Administration		1		1	

1.7 ALLOCATED PROGRAM AND BUDGET

The following annual program is formulated by MoFE, Lumbini Province for the execution of SCWM activities in the working areas of the SWMO, Rolpa:

1.7.1 SOIL AND WATERSHED MANAGEMENT PROGRAM (Budget in Rs Lakh)

Table 2: Allocated Budget & Program (Province Government)

CNa	Purament	l local	Rolpa		
S.No.	Program	Unit	Qty	Budget	
Programme					
1	Emergency Landslide Control	Nos	4	54	
2	Gully, Landslide & Torrent Control	Nos	10	112	
3	Sensitive Watershed Area Protection	Nos	3	32	
4	River/Stream Bank Protection	K.m.	0.4	23	
5	Soil Conservation along Rural Road	K.m.	0.45	30	
6	Fruit/Fodder Tree, Grass Plantation	Ha.	15	8	
7	Seedling Production (Fodder/Bio-engineering Species)	No.	1	3	
8	Soil Conservation through Brush Layering, Fascine, Palisade	No.	1	5	
9	Soil Conservation Work through Bamboo Crib Wall Construction	No.	1	5	
10	Office Periphery Beutification	No.	1	1	
11	Pahiro Niyantran, Gangadev Ga.Pa. 2, Jinawang, Rolpa	No.	1	15	
12	Pahiro Niyantran, Gangadev Ga.Pa. 7, Raank, Rolpa	No.	1	15	
13	Recharge Pond Construction, Gangadev Ga.Pa. 4, Pakhapani, Rolpa	No.	1	8	
14	Darekhola Tatbandhan, Rolpa Na. Pa. 5, Bajhawang, Rolpa	No.	1	20	
15	Baghthala Jalasaya Nirman, Rolpa Na.Pa. 6, Rolpa	No.	1	10	
16	Puranogaun Nadi Tatbandhan, Rolpa Na.Pa. 5, Rolpa	No.	1	10	
17	Panighat Tatbandhan, Rolpa Na. Pa. 5, Bajhawang, Rolpa	No.	1	15	
18	Satdobato Jalasaya Nirman, Rolpa Na.Pa 3, Rolpa	No.	1	10	
19	Jedwang Tatbandhan Tatha Pahiro Niyantran, Rpa Na Pa. 5, Rolpa	No.	1	5	
20	Jutung Khola Tatbandhan, Lungri Ga. Pa 03, Chiurafed, Rolpa	No.	1	10	
21	Siundada Pahiro Niyantran, Airawati Ga. Pa. 5, Pyuthan	No.	1	7	

Jhimrukh Jaladhaar Kashetra Wyawasthaapan Tatha Sanrakshan, Pyuthan	No.	1	15
Dhamche Pahiro Niyantran, Naubahini Ga.Pa. 3, Pyuthan	No.	1	5
Chhatipata Lankuri Kha Nadi Niyantran, Jhimrukh Ga.Pa. 7, Pyuthan	No.	1	10
Daringe Dalit Basti Pahiro Niyantran, Naubahini Ga.Pa. 7, Pyuthan	No.	1	8
Kaprakhola Simpani Motorbatoma Bhu-Sanrakshan, Jhimrukh Ga.Pa. 7, Pyuthan	No.	1	8
Tusarekhola Chhipchhipe Pahiro Niyantran, Jhimrukh Ga. Pa.7, Pyuthan	No.	1	10
Jugekholla Pahiro Niyantran, Naubahini Ga.Pa. 2, Pyuthan	No.	1	5
Lungkhla Jaladhaar Kshetra Sanrakshan, Naubahini Ga. Pa. 1, Pyuthan	No.	1	15
Tiwachuli khanepani Mul Sanrakshan, Bhume Ga.Pa.5, Rukum Purba	No.	1	5
Ratdaha Boksodaha Sanrakshan, Putha Uttarganga Ga Pa. 9, Rukum Purba	No.	1	8
Total Program Cost Under Capital Heading			487
inder Current Heading			
Conservation Extension Material Production / Co-ordinationWorkshop / Meeting / Training / Activity Profile Publication	No.	1	3
Field Gear Management	No.	1	0.21
,	No.	1	0.21 3.21
Field Gear Management	No.	1	
Field Gear Management Total Program Cost Under Current Heading	No.	1	3.21
	Dhamche Pahiro Niyantran, Naubahini Ga.Pa. 3, Pyuthan Chhatipata Lankuri Kha Nadi Niyantran, Jhimrukh Ga.Pa. 7, Pyuthan Daringe Dalit Basti Pahiro Niyantran, Naubahini Ga.Pa. 7, Pyuthan Kaprakhola Simpani Motorbatoma Bhu-Sanrakshan, Jhimrukh Ga.Pa. 7, Pyuthan Tusarekhola Chhipchhipe Pahiro Niyantran, Jhimrukh Ga. Pa. 7, Pyuthan Jugekholla Pahiro Niyantran, Naubahini Ga.Pa. 2, Pyuthan Lungkhla Jaladhaar Kshetra Sanrakshan, Naubahini Ga. Pa. 1, Pyuthan Tiwachuli khanepani Mul Sanrakshan, Bhume Ga.Pa.5, Rukum Purba Ratdaha Boksodaha Sanrakshan, Putha Uttarganga Ga Pa. 9, Rukum Purba Total Program Cost Under Capital Heading Inder Current Heading Conservation Extension Material Production / Co-ordinationWorkshop / Meeting	Dhamche Pahiro Niyantran, Naubahini Ga.Pa. 3, Pyuthan Chhatipata Lankuri Kha Nadi Niyantran, Jhimrukh Ga.Pa. 7, Pyuthan No. Daringe Dalit Basti Pahiro Niyantran, Naubahini Ga.Pa. 7, Pyuthan No. Kaprakhola Simpani Motorbatoma Bhu-Sanrakshan, Jhimrukh Ga.Pa. 7, Pyuthan No. Tusarekhola Chhipchhipe Pahiro Niyantran, Jhimrukh Ga. Pa. 7, Pyuthan No. Jugekholla Pahiro Niyantran, Naubahini Ga.Pa. 2, Pyuthan No. Lungkhla Jaladhaar Kshetra Sanrakshan, Naubahini Ga. Pa. 1, Pyuthan No. Tiwachuli khanepani Mul Sanrakshan, Bhume Ga.Pa.5, Rukum Purba No. Ratdaha Boksodaha Sanrakshan, Putha Uttarganga Ga Pa. 9, Rukum Purba No. Total Program Cost Under Capital Heading Inder Current Heading Conservation Extension Material Production / Co-ordinationWorkshop / Meeting	Dhamche Pahiro Niyantran, Naubahini Ga.Pa. 3, Pyuthan Chhatipata Lankuri Kha Nadi Niyantran, Jhimrukh Ga.Pa. 7, Pyuthan Daringe Dalit Basti Pahiro Niyantran, Naubahini Ga.Pa. 7, Pyuthan Kaprakhola Simpani Motorbatoma Bhu-Sanrakshan, Jhimrukh Ga.Pa. 7, Pyuthan No. 1 Tusarekhola Chhipchhipe Pahiro Niyantran, Jhimrukh Ga. Pa. 7, Pyuthan No. 1 Jugekholla Pahiro Niyantran, Naubahini Ga.Pa. 2, Pyuthan Lungkhla Jaladhaar Kshetra Sanrakshan, Naubahini Ga. Pa. 1, Pyuthan No. 1 Tiwachuli khanepani Mul Sanrakshan, Bhume Ga.Pa. 5, Rukum Purba No. 1 Ratdaha Boksodaha Sanrakshan, Putha Uttarganga Ga Pa. 9, Rukum Purba No. 1 Total Program Cost Under Capital Heading Inder Current Heading Conservation Extension Material Production / Co-ordinationWorkshop / Meeting

1.7.2 CONTINGENT GRANT PROGRAM TRANSFERRED BY FEDERAL GOVERNMENT (Budget in Rs Lakh)

Table 3: Allocated Budget & Program (Federal Government)

S.No.	Drogram	Unit	Rolpa		
5.NO.	Program	Unit	Qty	Budget	
Programme					
1	Jaljala Jalasaya Nirman, Thawang Ga.Pa., Rolpa	No.	1	10	
2	Fagam, Fuliban, Seram & Gaam Pahiro Niyantran, Sunchhahari Ga.Pa., Rolpa	No.	1	15	
3	Puwakhola Pahiro Niyantran, Pariwartan Ga.Pa. 2, Rangsi, Rolpa	No.	1	10	
4	Tarikhola Tatbandhan, Gangadev Ga.Pa. 6, Rolpa	No.	1	10	
5	Pahiro Niyantran Tatha Wyawasthapan, Jawune Panipokhari Sadak, Jhimrukh Ga.Pa. 1, Pyuthan	No.	1	15	
6	Pahiro Niyantran Tatha Wyawasthapan, Ghatachaur Khel Maidaan, Jhimrukh Ga.Pa. 1, Pyuthan	No.	1	15	
7	Water Source Protection, Rukum Purba	No.	1	10	
Α	Total Program Cost Under Capital Heading			85	

1.8 ANNUAL BUDGET AND EXPENDITURE

1.8.1 SOIL AND WATERSHED MANAGEMENT PROGRAM (Budget in Rs Lakh)

Table 4: Annual Budget & Expenditure (Province Government)

S.	Program		Annual Target			Annual Physical Progress			Annual Expenditure	
N.	· ·		Qty	Wtg	Budget	Qty	Wtg	%	Amount	%
Prog	ram Under Current Heading									
1	Emergency Landslide Control	Nos	4	11.02	54	34	11.02	100	53.79	99.61
2	Gully, Landslide & Torrent Control	Nos	10	22.85	112	15	22.85	100	111.44	99.50
3	Sensitive Watershed Area Protection	Nos	3	6.53	32	5	6.53	100	32	99.99
4	River/Stream Bank Protection		0.4	4.69	23	0.4	4.69	100	22.97	99.88
5	Soil Conservation along Rural Road		0.45	6.12	30	0.45	6.12	100	29.93	99.76
6	Fruit/Fodder Tree, Grass Plantation	Ha.	15	1.63	8	15	1.63	100	8	100
7	Seedling Production (Fodder/Bio- engineering Species)	No.	120 00	0.61	3	120 00	0.61	100	2.96	98.83
8	Soil Conservation through Brush Layering, Fascine, Palisade	No.	1	1.02	5	1	1.02	100	5	99.96
9	Soil Conservation Work through Bamboo Crib Wall Construction	No.	1	1.02	5	1	1.02	100	4.99	99.84
10	Office Periphery Beutification	No.	1	0.20	1	1	0.20	100	0.96	96.00

	Dahira Niyantran Cangaday Ca Da 3									
11	Pahiro Niyantran, Gangadev Ga.Pa. 2, Jinawang, Rolpa	No.	1	3.06	15	1	3.06	100	14.98	99.87
12	Pahiro Niyantran, Gangadev Ga.Pa. 7, Raank, Rolpa	No.	1	3.06	15	1	3.06	100	14.70	98
13	Recharge Pond Construction, Gangadev Ga.Pa. 4, Pakhapani, Rolpa		1	1.63	8	1	1.63	100	7.97	99.66
14	Darekhola Tatbandhan, Rolpa Na. Pa. 5, Bajhawang, Rolpa	No.	1	4.08	20	1	4.08	100	19.88	99.38
15	Baghthala Jalasaya Nirman, Rolpa Na.Pa. 6, Rolpa	No.	1	2.04	10	1	2.04	100	9.69	96.92
16	Puranogaun Nadi Tatbandhan, Rolpa Na.Pa. 5, Rolpa	No.	1	2.04	10	1	2.04	100	9.97	99.68
17	Panighat Tatbandhan, Rolpa Na. Pa. 5, Bajhawang, Rolpa	No.	1	3.06	15	1	3.06	100	14.91	99.40
18	Satdobato Jalasaya Nirman, Rolpa Na.Pa 3, Rolpa	No.	1	2.04	10	1	2.04	100	9.99	99.91
19	Jedwang Tatbandhan Tatha Pahiro Niyantran, Rpa Na Pa. 5, Rolpa	No.	1	1.02	5	1	1.02	100	4.98	99.66
20	Jutung Khola Tatbandhan, Lungri Ga. Pa 03, Chiurafed, Rolpa	No.	1	2.04	10	1	2.04	100	9.97	99.70
21	Siundada Pahiro Niyantran, Airawati Ga. Pa. 5, Pyuthan	No.	1	1.43	7	1	1.43	100	6.93	99.98
22	Jhimrukh Jaladhaar Kashetra Wyawasthaapan Tatha Sanrakshan, Pyuthan	No.	1	3.06	15	1	3.06	100	14.95	99.67
23	Dhamche Pahiro Niyantran, Naubahini Ga.Pa. 3, Pyuthan	No.	1	1.02	5	1	1.02	100	4.99	99.89
24	Chhatipata Lankuri Kha Nadi Niyantran, Jhimrukh Ga.Pa. 7, Pyuthan	No.	1	2.04	10	1	2.04	100	10	99.99
25	Daringe Dalit Basti Pahiro Niyantran, Naubahini Ga.Pa. 7, Pyuthan	No.	1	1.63	8	1	1.63	100	8	99.99
26	Kaprakhola Simpani Motorbatoma Bhu- Sanrakshan, Jhimrukh Ga.Pa. 7, Pyuthan	No.	1	1.63	8	1	1.63	100	7.94	99.28
27	Tusarekhola Chhipchhipe Pahiro Niyantran, Jhimrukh Ga. Pa.7, Pyuthan	No.	1	2.04	10	1	2.04	100	10	100
28	Jugekholla Pahiro Niyantran, Naubahini Ga.Pa. 2, Pyuthan	No.	1	1.02	5	1	1.02	100	5	99.99
29	Lungkhla Jaladhaar Kshetra Sanrakshan, Naubahini Ga. Pa. 1, Pyuthan	No.	1	3.06	15	1	3.06	100	14.93	99.56
30	Tiwachuli khanepani Mul Sanrakshan, Bhume Ga.Pa.5, Rukum Purba	No.	1	1.02	5	1	1.02	100	5	99.91
31	Ratdaha Boksodaha Sanrakshan, Putha Uttarganga Ga Pa. 9, Rukum Purba	No.	1	1.63	8	1	1.63	100	7.82	97.76
Α	Total Program Cost Under Capital Heading			99.35	487		99.35	100	484.65	99.52
	ram Under Current Heading									
1	Conservation Extension Material Production/CoordinationWorkshop/Meeting /Training/Activity Profile	No.	1	0.61	3	1	0.61	100	2.99	99.82
2	Field Gear Management		1	0.04	0.21	1	0.04	100	0.21	100
В	Total Program Cost Under Current Heading			0.65	3.21		0.14	100	3.20	99.83
С	Total Program Cost (A+B)			100.00	490.21		100	100	487.85	99.52
D	Administrative (Utilization & Operat. Cost)				63.91				39.22	61.38
E	Grand Total (C+D)				554.12				527.08	95.12

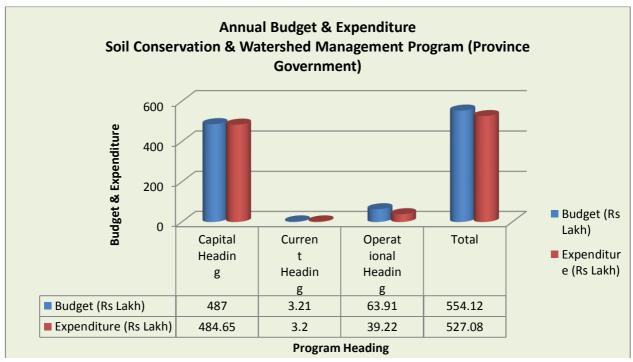


Figure 4: Annual Budget& Expenditure

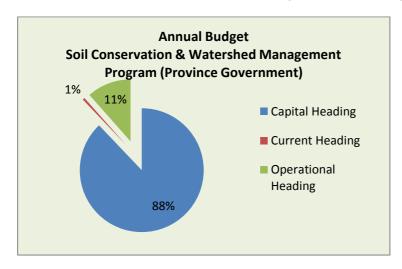


Figure 5: Annual Budget

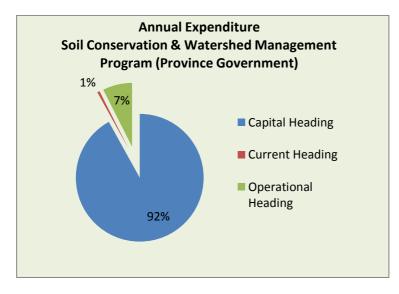


Figure 5: Annual Expenditure

In this Fiscal Year, about Five Crore Fifty Four Lakh Tweve Thusand Rupees, as an annual budget, has been allocated by Province Government to implement the soil conservation and watershed management activities in three working areas (districts) of SWMO, Rolpa . Analyzing the allocated budget, about 88% of the total budget was allocated under the capital program heading, 1% was allocated under the current program heading and 11% under the utilization and operation heading.

It was found that about Five Crore Twenty Seven Lakh Eight Thousand Rupees has been expended to complete the given targets of which 8% of the approved budget expended for activity profile was publication, salary, utilization & office operational cost while the rest of the budget, i.e. 92%, was expended on the implementation of different conservation and watershed management activities through different user groups in the 3 working areas of SWMO, Rolpa.

1.8.2 CONTINGENT GRANT PROGRAM TRANSFERRED BY FEDERAL GOVERNMENT (Budget in Rs Lakh)

Table 5: Annual Budget & Expenditure (Federal Government)

S. N.	Program		Unit Annual Target			Annual Physical Progress			Annual Expenditure	
14.			Qty	Wtg	Budget	Qty	Wtg	%	Amount	%
Prog	ram Under Current Heading									
1	Jaljala Jalasaya Nirman, Thawang Ga.Pa., Rolpa	No.	1	11.76	10	1	11.76	100	9.58	95.80
2	Fagam, Fuliban, Seram & Gaam Pahiro Niyantran, Sunchhahari Ga.Pa., Rolpa	No.	1	1765	15	2	1765	100	15	99.97
3	Puwakhola Pahiro Niyantran, Pariwartan Ga.Pa. 2, Rangsi, Rolpa	No.	1	11.76	10	1	11.76	100	10	100
4	Tarikhola Tatbandhan, Gangadev Ga.Pa. 6, Rolpa	No.	1	11.76	10	1	11.76	100	10	99.95
5	Pahiro Niyantran Tatha Wyawasthapan, Jawune Panipokhari Sadak, Jhimrukh Ga.Pa. 1, Pyuthan	No.	1	17.65	15	1	17.65	100	15	99.97
6	Pahiro Niyantran Tatha Wyawasthapan, Ghatachaur Khel Maidaan, Jhimrukh Ga.Pa. 1, Pyuthan	No.	1	17.65	15	1	17.65	100	15	100
7	Water Source Protection, Rukum Purba	No.	1	11.76	10	2	11.76	100	9.80	98.05
Α	Total Program Cost Under Capital Heading			100	85		100	100	84.37	99.26

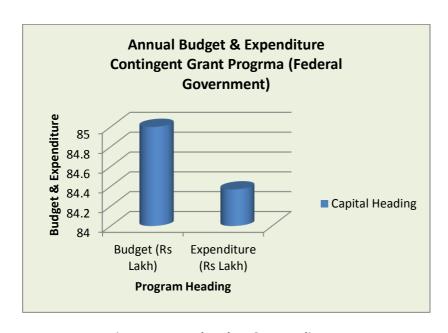


Figure 7: Annual Budget & Expenditure

In this Fiscal Year, about Eighty Five Lakh Rupees, as an annual budget, has been allocated by Province Government as Contingent Grant Program Transferred by Federal Government to implement the soil conservation and watershed management activities in three working areas (districts) of SWMO, Rolpa . Analyzing the allocated budget, about 100% of the total budget was allocated under the capital program heading.

It was found that about Eighty Four Lakh Thirty Seven Thousand Rupees has been expended to complete the given targets of which 99.26% of the approved budget was expended for the implementation of different soil conservation and watershed management activities through different user groups in the 3 working areas of SWMO, Rolpa.

SECTION 2: ACTIVITY PROFILE

2.1 ACTIVITY PROFILE OF ROLPA DISTRICT

1	Program: Gully, Lar	ndslide and Torrent Cor	ntrol							
2	Location: District/N Rolpa/Rolpa	Municipality:	Ward No: 1	LO Pla	ce: Bhanbhane	F/Y: 079/80				
	Co-ordinates:	Latitude: 28.327837	Latitude: 28.327837 Longitude: 82.665396							
3	Existing Site Proble Building	m: The landslide behi	nd the School	possess	a risk of damage	to the school				
4	Cost:									
а	Estimated	Total: 1153892.85	Office: 99994	42.15	Users: 153950.	70 Others:				
b	Actual Expenditure	Total: 1186148.99	Office: 98358	85.69	Users: 203363.	30 Others:				
5	Objectives:	a) to reduce soil eros b) to reduce the risk								
6	Technique Applied:	a) Structural: S (39.35m*0.67m*2.35	tone Maso 5m)	nary R	etaining Wall	Construction				
7	Implementation Process:	User Group and other Cost Estimation; Pro- Skilled Labour, Hoar	Co-ordination with Local Representatives, School Management Committee, User Group and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation;							
8	Employment:	684 md								
9	Gender/Social Consideration:	Both men and wome the genuine participa				sis was given to				
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.7 ha	mage to the so	chool bui	lding;	ıced;				
11	Benefitted HH:	Total: 100	Dalit: 30	Jar	najati: 30	Others: 40				
12	Problem/Obstacl es Faced:	No		"						
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	t has bee	en deducted for t	he maintenance				
14	Lesson Learned:	If real needs of the participate throughout achievements are possible.	out the activit	y implen th small e	nentation proce external support.	ss, thus greater				
15	Others; Name of:	User Group: Janta Aa	ı.Bi. Bhanbhan	e Wall Ni	rman Upabhokta	a Samiti				
		Chair Person: Bal Bdr	r. Mahara							
		Site Incharge: Rakesh	n Shahi (ASCO)							
		Watershed Manager	nent Officer: F	Robert M	ahara					
	1	l								



Figure 8: Bhanbhane Landslide Treatment

1	Program: Gully, Land	slide and Torrent Con	trol						
2	Location: District/Mo Rolpa/Rolpa	unicipality:	Ward No: 10	Place: Bhoksiwang	F/Y : 079/80				
	Co-ordinates:	Latitude: 28.371679							
3	Existing Site Problem land by bank cutting	n: The torrent possess	a risk of damag	e to the nearby settlen	nent & agricultural				
4	Cost:								
а	Estimated	Total: 891771.43	Office: 799956	.10 Users: 91815.3	3 Others:				
b	Actual Expenditure	Total: 887378.49	Office: 796239	.27 Users: 91139.2	3 Others:				
5	Objectives:	a) to reduce torrent b) to reduce devasta		ne downstream and su	rrounding area				
6	Technique Applied:	Box size 2m*1m*1n	a) Structural: Gabion Embankment Construction (Gabion Box 90 Nos; Box size Box size 2m*1m*1m=30 Nos.; Box size 1.5m*1m*1m=60 Nos. were used to construct 60m long Embankment)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour Cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	553 md							
9	Gender/Social Consideration:	Both men and wome genuine participation		nvolved; More emphas ed groups	sis was given to the				
10	Effect/Impact:	Reduce the risk of da	amage to the nea	g has been controlled; arby settlement & surro land has been conserve	ounding area;				
11	Benefitted HH:	Total: 70	Dalit: 30	Janajati: 40	Others:				
12	Problem/Obstacles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	has been deducted for	the maintenance				
14	Lesson Learned:	participate through achievements are po	out the activity ossible even with ctures construct	are to be addressed implementation pro small external support ted should be acco e structures.	cess, thus greater t.				
15	Others; Name of:			andhan Upabhokta Sa	miti				
		Chair Person: Govino	da Budha Magar						
		Site Incharge: Rakesh Shahi (ASCO)							





Figure 9: Bhoksiwang Dhangsi Khola Torrent Control

1	Program: Gully, Land	slide and Torrent Con	trol								
2	Location: District/Mi	unicipality:	Ward No: 10	Place: Tapakh	Munwang, Iola	F/Y : 079/80					
	Co-ordinates:	Latitude: 28.351219	Latitude: 28.351219, 28.35763 Longitude: 82.673082,								
3	Existing Site Problem settlement and agric	~	The Munwang & Tapakhola Torrent possess a risk of damage to the nearby ltural land								
4	Cost:										
а	Estimated	Total: 1114535.08	Office: 999	995.47	Users: 114539.61	Others:					
b	Actual Expenditure	Total: 1105988.80	Office: 992	2441.83	Users: 113546.98	Others:					
5	Objectives:	a) to reduce torrent b) to reduce devasta			wnstream and surrou	ınding area					
6	Technique Applied:	_	n=26 Nos.; B	ox size 1	struction (Gabion Bo .5m*1m*1m=90 Nos						
7	Implementation Process:	authorities; Field Vi the purchase of Gak cost; Unskilled Labo	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	690 md									
9	Gender/Social Consideration:	Both men and wome genuine participatio	•	•	ved; More emphasis v oups	vas given to the					
10	Effect/Impact:		amage to the	nearby s	peen controlled; ettlement and agricu has been conserved	ltural land;					
11	Benefitted HH:	Total: 70	Dalit: 30		Janajati: 30	Others: 10					
12	Problem/Obstacles Faced:	No	. L								
13	Maintenance/ Sustainability:	5% amount of total work, if some damage	•	unt has b	een deducted for the	maintenance					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bioengineering techniques to sustain the structures.									
15	Others; Name of:	•		Khahare	Niyantran Upabhokta	Samiti					
		Chair Person: Dhanr Site Incharge: Rakes		O)							
		Watershed Manage	ment Officer	: Robert	Mahara						

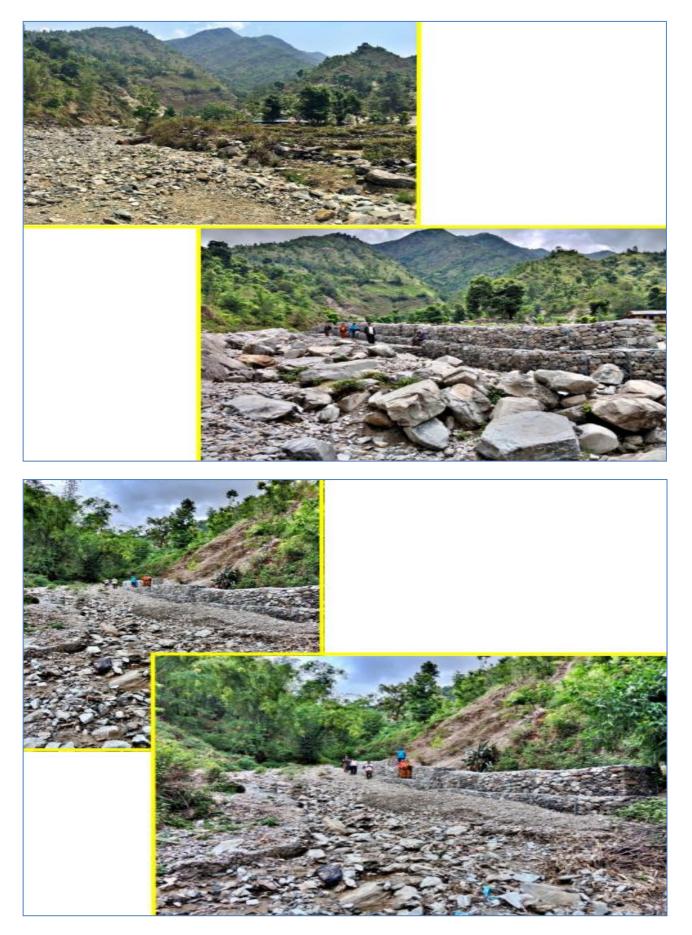


Figure 10: Munwang Tapakhola Torrent Control

1	Program: Gully, La	andslide and Torrent C	ontrol										
2	Location: District, Rolpa/Rolpa	Location: District/Municipality: Ward No: 1 Place: Lahariki Rolpa/Rolpa			Laharikhola	F/Y : 079/80							
	Co-ordinates:	Latitude: 28.289346	, 28.293964	Lo	ngitude: 82.658796,	96, 82.646463							
3	_	em: The Laharikhola Torrent possess a risk of damage to the rural road, nearby bund and agricultural land											
4	Cost:												
а	Estimated	Total: 2265058.14	Office: 19999	984.16	Users: 265073.98	Others:							
b	Actual Expenditure	Total: 2259121.31	Office: 19950	061.09	Users: 264060.22	Others:							
5	Objectives:	a) to reduce torrent l b) to reduce devasta	_	the dow	nstream and surrour	nding area							
6	Technique Applied:	2m*1m*1m=102 No	a) Structural: Gabion Embankment Construction (Gabion Box 184 Nos; Box size 2m*1m*1m=102 Nos.; Box size 1.5m*1m*1m=82 Nos. were used to construct 82m long embankment)										
7	Implementation Process:	authorities; Field Vis purchase of Gabion Unskilled Labour cos	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation										
8	Employment:	1387 md											
9	Gender/Social Consideration:	Both men and wome genuine participation	•	•	ved; More emphasis ups	was given to the							
10	Effect/Impact:	To some extent, torre Reduce the risk of da Approximately 0.8 ha	mage to the r	ural road	d, playground and nea	arby settlement;							
11	Benefitted HH:	Total: 59	Dalit: 17		Janajati: 22	Others: 20							
12	Problem/Obsta cles Faced:	No											
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	t has be	en deducted for the r	maintenance							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.											
15	Others; Name of:	User Group: Lahari K		Niyantra	n Upabhokta Samiti								
		Chair Person: Lokend	dra Sen										
		Site Incharge: Rakesl	n Shahi (ASCO)										
		Watershed Manager	ment Officer: F	Robert M	1ahara								



Figure 11: Laharikhola Torrent Control

1	Program: Gully, La	andslide and Torrent Cor	ntrol							
2	Location: District, /Rolpa	Ocation: District/Municipality : Rolpa Rolpa Ward No: 4			nce: ntawang	F/Y: 079/80				
	Co-ordinates:	Latitude: 28.3035	L		82.645267					
3	_		•	lly formation caused by the newly constructed road rural road and agricultural land						
4	Cost:									
а	Estimated	Total: 545966.51	Office: 49993	3.08 U	sers: 46033.44	Others:				
b	Actual Expenditure	Total: 542910.32	Office: 49881	5.57 U	sers: 44094.75	Others:				
5	Objectives:	a) to reduce soil erosiob) to reduce devastation			and surroundin	g area				
6	Technique Applied:	a) Structural: Stone M wall =37.8m long)	asonary Retaining \	Wall Const	truction (altoge	ther 5 nos. of				
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction materials Skilled labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	347md	347md							
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups								
10	Effect/Impact:	To some extent, erosio Reduce the risk of dam Approximately 0.3 ha c	age to the settleme	ent, rural r	oad and agricult	cural land;				
11	Benefitted HH:	Total: 16	Dalit: 1	Janajat	ti: 8	Others: 7				
12	Problem/Obsta cles Faced:	No								
13	Maintenance/ Sustainability:	5% amount of total pay work, if some damage		een deduc	ted for the main	ntenance				
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.								
		15 Others; Name User Group: Runtawang Dekhi Sunilmarg Motorbato Upak								
15	Others; Name of:	•		Motorbato	Upabhokta Sar	miti				
15	The state of the s	User Group: Runtawan Chair Person: Bhawana		Motorbato) Upabhokta Sar	miti				
15	The state of the s	•	a Thapa	Motorbato) Upabhokta Sar	miti				

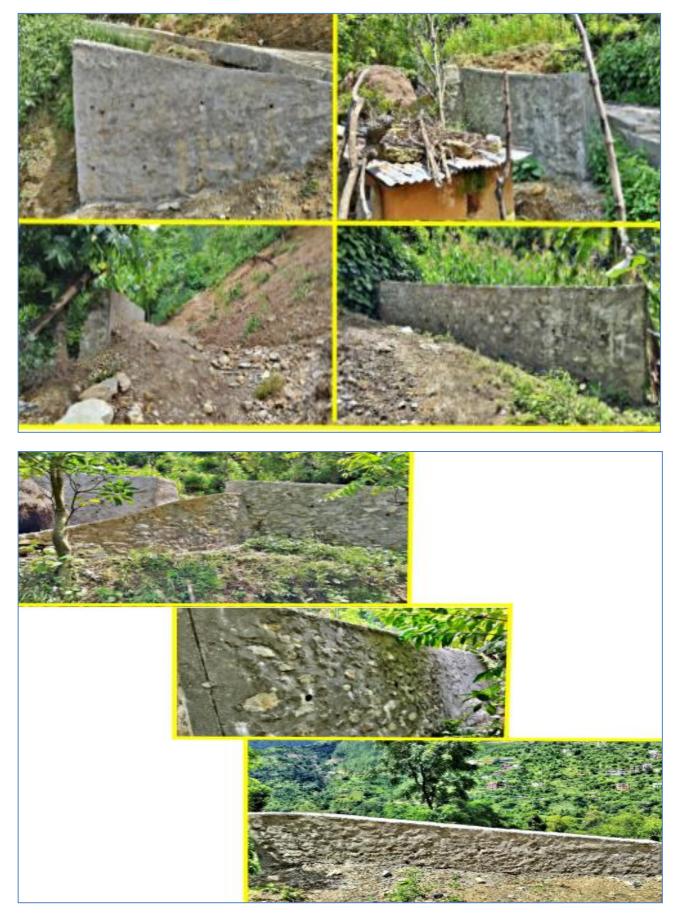


Figure 12: Runtawang Landslide Treatment

	Program: Gully, La												
2		/Municipality: Rolpa /Ro	olpa	Ward No: 5		Place: Jedwang	F/Y : 079/80						
	Co-ordinates:	Latitude: 28.25299			Longitu	de: 82.583614							
3	_	lem: The Landslide infrormation in the control of t	n: The Landslide infront of the Ward office possess a risk of damage to the ad and agricultural land										
4	Cost:												
а	Estimated	Total: 567219.97	Office	: 499986.	.01	Users: 67233.96	Others:						
b	Actual Expenditure	Total: 567219.97	Office	: 499986.	.01	Users: 67233.96	Others:						
5	Objectives:	a) to reduce soil erosic b) to reduce devastation				ream and surroun	ding area						
6	Technique Applied:	a) Structural: Gabion 2m*1m*1m=16 Nos. 1 4m high Gabion Retain	1.5m*1n	n*1m=32									
7	Implementation Process:	Co-ordination with Lo authorities; Field Visits purchase of Gabion B Unskilled Labour cost participation; Monitor	s; Surve Boxes, Sk was cor	ey, Design killed Lab ntributed	& Cost our, Ho	Estimation; Providerding Board from	de funds for the n Program cost;						
8	Employment:	348 md											
9	Gender/Social Consideration:	Both men and womer genuine participation (More emphasis v	vas given to the						
10	Effect/Impact:	To some extent, erosic Reduce the risk of dam Approximately 0.1 ha	nage to 1	the settle	ment, r	ural road and agric							
11	Benefitted HH:	Total: 25	Dalit: 1	10	Jana	jati: 8	Others: 17						
12	Problem/Obsta cles Faced:	Transportational diffic collected and transpor				packing work hav	e to be						
13	Maintenance/ Sustainability:	5% amount of total pa work, if some damage	-		s been c	leducted for the m	naintenance						
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.											
15 Others; Name User Group: Jedwang Tatbandhzn Tatha Pahiro Niyantran Upabho							okta Samiti						
	of:	Chair Person: Bir Bdr. B.K.											
	Site Incharge: Rakesh Shahi (ASCO)												
				ASCO)									



Figure 13: Jedwang Landslide Treatment

1	Program: Gully, La	andslide and Torrent Co	ontrol									
2	Location: District, /Pariwartan	/Rural Municipality : Ro	lpa	Ward N	o: 2	Place: Simarangsi	F/Y : 079/80					
	Co-ordinates:	Latitude: 28.433256	j		Longit	ude: 82.54132						
3	Existing Site Prob Building	lem: The Landslide beh	n: The Landslide behind the school possess a high risk of damage to the Scho									
4	Cost:											
а	Estimated	Total: 1090936.57	Offic	ce: 99997	5.59	Users: 90960.9	9 Others:					
b	Actual Expenditure	Total: 1087791.39	Offic	c e: 999017	2.57	Users: 88778.8	Others:					
5	Objectives:	a) to reduce soil erosion b) to reduce devastation					ınding area					
6	Technique Applied:	a) Structural: (21.02m*0.70m*3.20	Stone m)	Mason	ary	Retaining Wal	ll Construction					
7	Implementation Process:	authorities; Field Visit purchase of Constru Program cost; Unskill	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation									
8	Employment:	694 md										
9	Gender/Social Consideration:	Both men and wome genuine participation				•	was given to the					
10	Effect/Impact:	To some extent, erosi Reduce the risk of dar Approximately 0.5 ha	nage to	the settl	ement,	rural road and ag						
11	Benefitted HH:	Total: 50	Dalit	: 10	Jan	ajati: 20	Others: 30					
12	Problem/Obsta cles Faced:	Transportational diffic		-	_							
13	Maintenance/ Sustainability:	-	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.									
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.										
15	Others; Name of:	User Group: Shree Bis			, Bidhya	alaya Byawasthapa	an Samiti					
		Chair Person: Tek Bdr	. Ghart	i.								
		Site Incharge: Rakesh	Shahi	(ASCO)								
		Watershed Managem	ent Of	ficer: Rob	ert Ma	hara						



Figure 14: Simarangsi Landslide Treatment

1	Program: Gully, La	andslide and Torrent Cor	ntrol							
2	Location: District, /Pariwartan	/Rural Municipality : Rol	ра	Ward No: 2 Place: Rangsi		Place: Puwakhola, Rangsi	F/Y : 079/80			
	Co-ordinates:	Latitude: 28.451916	Latitude: 28.451916 Longitude: 82.551748							
3	_		m: The Landslide caused bythe torrent baak cutting possess a risk of damage to							
4	Cost:									
а	Estimated	Total: 1128919.02	Offic	:e: 999966	5.90	Users: 128952.1	1 Others:			
b	Actual Expenditure	Total: 1128919.02	Offic	: e: 999966	5.90	Users: 128952.13	1 Others:			
5	Objectives:	a) to reduce soil erosio b) to reduce devastatin				_	ding area			
6	Technique Applied:	a) Structural: Gabion F Nos; Box size 2m*1m Nos. & 3m*1.5m*0.50 Retaining Wall & 9m lo	n*1m= 0m=13	48 Nos., 3 Nos.; w	1.5m*1	m*1m=47 Nos. 3	m*1m*0.50m=3			
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	695 md								
9	Gender/Social Consideration:	Both men and women genuine participation of				•	vas given to the			
10	Effect/Impact:	To some extent, erosion reduced; Reduce the risk of dame Approximately 0.7 had	age to	the settl	ement, ı	rural road and agric				
11	Benefitted HH:	Total: 25	Dalit:			ajati:	Others: 25			
12	Problem/Obsta cles Faced:	No								
13	Maintenance/ Sustainability:		5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.								
15	Others; Name of:	User Group: Puwakhol	a Pahi	ro Niyant	ran Upa	bhokta Samiti				
	VI.	Chair Person: Laaikram	n Oli							
		Site Incharge: Rakesh S	Shahi ((ASCO)						
		Watershed Manageme	ent Of	ficer: Rob	ert Mah	ara				





Figure 15: Puwakhola Landslide Treatment

1	Program: Gully, La	andslide and Torrent Cor	ntrol							
2	Location: District, /Gangadev	/Rural Municipality : Rol	pa	Ward No: 2 Place: Jinawang F/Y: 079						
	Co-ordinates:	Latitude: 28.430878		l	ongitu	ude: 82.397371				
3	Existing Site Prob school building &		m: The Landslide infront of the school building possess a risk of damage to the ural road							
4	Cost:									
а	Estimated	Total: 1661949.38	Offic	ce: 1499988.1	13	Users: 161961.2	5 Others:			
b	Actual Expenditure	Total: 1661949.38		c e: 1499988.1		Users: 161961.2	Others:			
5	Objectives:	a) to reduce soil erosio b) to reduce devastatin				eam and surroun	ding area			
6	Technique Applied:	a) Structural: Gabion F 2m*1m*1m=76 Nos. 1 4m high Gabion Retain	.5m*1	lm*1m=76 N		•	•			
7	Implementation Process:	Co-ordination with Local Representatives, School Management Committee and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	1043 md								
9	Gender/Social Consideration:		Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups							
10	Effect/Impact:	To some extent, erosic Reduce the risk of dam Approximately 0.65 ha	age to	the school b	ouildin	g & rural road;				
11	Benefitted HH:	Total: 65	Dalit	: 9	Janaja	ati: 56	Others:			
12	Problem/Obsta cles Faced:	Transportational difficution collected and transportation				packing work hav	e to be			
13	Maintenance/ Sustainability:		5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.								
15	Others; Name of:	User Group: Krishna A	a.Bi., l	Bidhyalaya By	awast	hapan Samiti				
		Chair Person: Tara Pra	sad Gl	harti Magar						
		Site Incharge: Rakesh S	Shahi	(ASCO)						
		Watershed Manageme	ent Of	ficer: Robert	Mahai	ra				





Figure 16: Jinawang Landslide Treatment

1	Program: Gully, La	andslide and Torrent Co	ntrol									
2	Location: District, /Gangadev	'Rural Municipality : Ro	lpa	Ward No: 7	7	Place: Sandada, Raank	F/Y : 079/80					
	Co-ordinates:	Latitude: 28.45197			Long	gitude: 82.459883						
3	Existing Site Prob agricultural land	lem: The Landslide pos	m: The Landslide possess a risk of damage to the settlement, rural road and									
4	Cost:											
а	Estimated	Total: 1661586.06	Offic	ce: 1499989.	70	Users: 161596.3	6 Others:					
b	Actual Expenditure	Total: 1630569.11	Offic	ce: 1469983.	03	Users: 160586.0	8 Others:					
5	Objectives:	a) to reduce soil erosicb) to reduce devastati				ream and surroun	ding area					
6	Technique Applied:	a) Structural: Gabion 2m*1m*1m=77 Nos. Gabion Retaining Wall	1.5m*	-		-						
7	Implementation Process:	authorities; Field Visit purchase of Gabion B Unskilled Labour cost	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation									
8	Employment:	1022 md										
9	Gender/Social Consideration:	Both men and women genuine participation				•	vas given to the					
10	Effect/Impact:	To some extent, erosic Reduce the risk of dan Approximately 0.7 ha	nage to	the settlem	ent, r	ural road and agrid						
11	Benefitted HH:	Total: 28	Dalit		Jana	jati: 13	Others: 15					
12	Problem/Obsta cles Faced:	Transportational diffic	ulties;				-1					
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.										
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.										
15	Others; Name of:	User Group: Sandada	Pahiro	Niyantran L	Jpabh	okta Samiti						
	J.,	Chair Person: Suwash	Chand	lra Pun								
		Site Incharge: Rakesh	Shahi	(ASCO)								
		Watershed Managem	ent Of	ficer: Robert	Maha	ara						

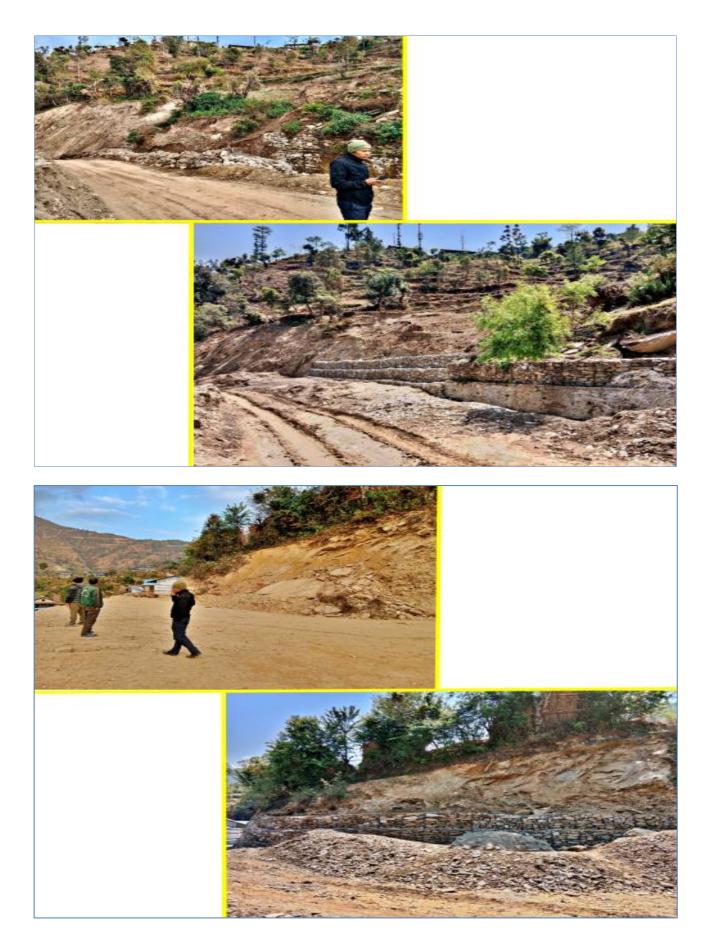


Figure 17: Sandada Landslide Treatment

1	Program: Gully, La	andslide and Torrent Co	ntrol							
2	Location: District, /Gangadev	/Rural Municipality : Ro	lpa	Ward No: 6		Place: Tarikhola	F/Y : 079/80			
	Co-ordinates:	Latitude: 28.518057	,		Long	gitude: 82.443022				
3	Existing Site Prob road and agricultu	lem: The Landslide in tural land	he way	to a school p	osses	ss a risk of damag	e to the rural			
4	Cost:									
а	Estimated	Total: 1125091.68	Offic	ce: 999994.97		Users: 125096.7	1 Others:			
b	Actual Expenditure	Total: 1125091.68	Offic	ce: 999994.97		Users: 125096.7	1 Others:			
5	Objectives:		to reduce soil erosion and mass movement to reduce devastating effects on the downstream and surrounding area							
6	Technique Applied:	a) Structural: Gabion 2m*1m*1m=40 Nos. 8m high Gabion Retai	1.5m*1	lm*1m=65 No		•	•			
7	Implementation Process:	Co-ordination with L authorities; Field Visit purchase of Gabion E Unskilled Labour cost participation; Monitor	s; Surv Boxes, was c	vey, Design & (Skilled Labour ontributed joir	Cost l	Estimation; Provider From Board from	de funds for the n Program cost;			
8	Employment:	695 md								
9	Gender/Social Consideration:	Both men and wome genuine participation				More emphasis v	vas given to the			
10	Effect/Impact:	To some extent, erosic Reduce the risk of dar Approximately 0.2 ha	nage to	the rural road	d and	l agricultural land				
11	Benefitted HH:	Total: 45	Dalit		Janaj	ati:	Others: 45			
12	Problem/Obsta cles Faced:	Transportational diffic collected and transpo				packing work hav	e to be			
13	Maintenance/ Sustainability:	5% amount of total pa work, if some damage	-		een d	educted for the m	naintenance			
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.								
15	Others; Name of:	User Group: Aadhunil	k Laligu	rans Krishak S	amul	าล				
	UI:	Chair Person: Nara Sir	ngh Rai	па						
		Site Incharge: Rakesh	Shahi	(ASCO)						
		Watershed Managem	ent Of	ficer: Robert N	Maha	ra				

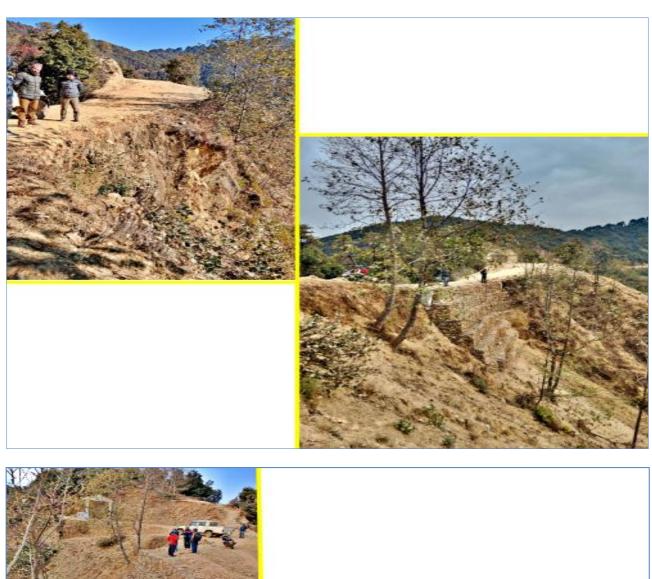




Figure 18: Tarikhola Landslide Treatment

1	Program: Gully, La	andslide and Torrent Co	ntrol					
2	Location: District, /Sunchhahari	/Rural Municipality : Rol	pa	Ward No: 6	•	Place: Fagaam	F/Y : 079/80	
	Co-ordinates:	Latitude: 28.31172	7		Lo	ngitude: 82.73856	56	
3	Existing Site Prob and agricultural la	lem: The gully formation	n poss	sess a risk of o	damag	ge to the settleme	ent, rural road	
4	Cost:							
а	Estimated	Total: 1113450.40	Offic	ce: 999996.98	3	Users: 113453.4	2 Others:	
b	Actual Expenditure	Total: 1104732.97	Offic	ce: 992486.50)	Users: 112246.5	Others:	
5	Objectives:	a) to reduce soil erosic b) to reduce devastatin				ream and surrour	iding area	
6	Technique Applied:	a) Structural: Gabion 2m*1m*1m=11 Nos., used to construct 2 no	1.5m	*1m*1m=61	Nos.,	1.5m*1m*0.50n		
7	Implementation Process:	Co-ordination with Lo authorities; Field Visits purchase of Gabion B Unskilled Labour cost participation; Monitori	s; Surv oxes, was c	vey, Design & Skilled Labou ontributed jo	Cost ır, Ho	Estimation; Provi arding Board fro	de funds for th m Program cos	
8	Employment:	690 md						
9	Gender/Social Consideration:	Both men and women genuine participation of				More emphasis	was given to th	
10	Effect/Impact:	To some extent, erosic Reduce the risk of dam Approximately 0.8 ha	nage to	the settlem	ent, rı	ural road and agri		
11	Benefitted HH:	Total: 100	Dalit	: 12	Jana	jati: 65	Others: 23	
12	Problem/Obsta cles Faced:	Transportational diffice collected and transpor				packing work hav	ve to be	
13	Maintenance/ Sustainability:	5% amount of total par work, if some damage			een c	leducted for the r	naintenance	
14	Lesson Learned:	lf real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
15	Others; Name of:	User Group:Kultung Kl	nola Pa	ahiro Niyantr	an Yo	ojana Upabhokta S	Samiti	
		Chair Person: Bishal G	harti N	Magar				
		Site Incharge: Rakesh	Shahi	(ASCO)				
		Watershed Manageme	ent Of	ficer: Robert	Maha	ara		

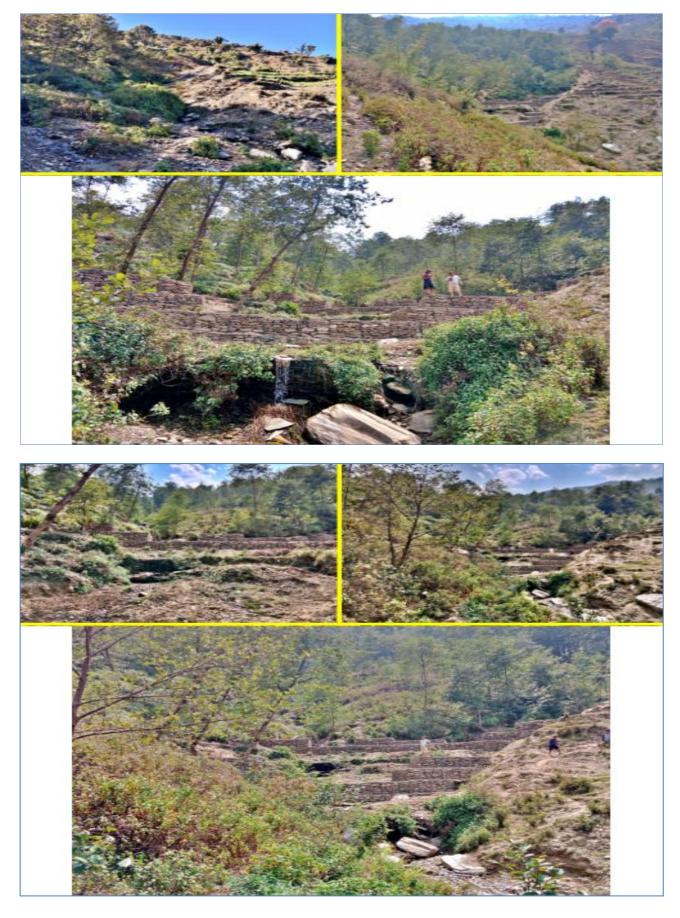


Figure 19: Fagam Landslide Treatment

1	Program: Gully, La	andslide and Torrent Co	ntrol					
2	Location: District, /Sunchhahari	/Rural Municipality : Ro	lpa	Ward No: 6		Place: Fagaam	F/Y : 07	79/80
	Co-ordinates:	Latitude: 28.311727	7		Lor	ngitude: 82.73856	6	
3	Existing Site Prob and barren land	lem: The Landslide pos	sess a	high risk of da	mag	e to the settlemer	nt, rural r	road
4	Cost:							
а	Estimated	Total: 627503.38	Offic	ce: 507042.76	i	Users: 120460.6	2 Oth	ners:
b	Actual Expenditure	Total: 627503.38	Offic	ce: 507042.76		Users: 120460.6	2 Oth	ners:
5	Objectives:	a) to reduce soil erosion b) to reduce devastation				ream and surroun	ding area	a
6	Technique Applied:	a) Vegetative: Bambo Amriso Rhizome, Sma				•	m) Const	truction,
7	Implementation Process:	Co-ordination with L authorities; Field Visit purchase of Bamboo, Program cost; Unskill cost and people partic	s; Surv Amrisc ed Lak	vey, Design & o, Smart Napie o, Smart Napie	Cost er, Sk s con	Estimation; Provi illed Labour, Hoar tributed jointly t	de funds ding Boa	for the ard from
8	Employment:	352 md						
9	Gender/Social Consideration:	Both men and wome genuine participation				More emphasis v	vas givei	n to the
10	Effect/Impact:	To some extent, erosic Reduce the risk of dar Approximately 0.5 ha	nage to	the settleme	ent, r	ural road and agri		and;
11	Benefitted HH:	Total: 100	Dalit	12	Jana	jati: 65	Other	rs: 23
12	Problem/Obsta cles Faced:	Local people didn't be techniques can contro			es of l	low cost soil conse	ervation	
13	Maintenance/ Sustainability:	5% amount of total pa work, if some damage	•		een o	deducted for the n	naintena	nce
14	Lesson Learned:	If real needs of the conthroughout the activity possible even with sm	ty impl	ementation p	roce	· · · · · ·		
15	Others; Name of:	User Group: Kultung k			an Y	ojana Upabhokta :	Samiti	
		Chair Person: Bishal G	iharti N	/lagar				
		Site Incharge: Rakesh	Shahi	(ASCO)				
		Watershed Managem	ent Of	ficer: Robert	Maha	ara		





Figure 20: Fagam Landslide Treatment

1	Program: Gully, La	andslide and Torrent Cor	ntrol						
2	Location: District, /Sunilsmriti	/Rural Municipality : Rol	ра	Ward No: 6	5	Place: Gajul	F	/Y: 079/80	
	Co-ordinates:	Latitude: 28.292277	7		Lor	ngitude: 82.7131	24		
3	Existing Site Prob building & rural ro	lem: The Landslide infro pad	ont of	the School p	osses	s a risk of damag	ge to	the Schoo;	
4	Cost:								
а	Estimated	Total: 168414.36	Offic	ce: 149926.65	5	Users: 18470.8	37	Others:	
b	Actual Expenditure	Total: 168414.36	Offic	c e: 149926.65	5	Users: 18470.8	37	Others:	
5	Objectives:	b) to reduce devastating effects on the downstream and surrounding area							
6	Technique Applied:	a) Structural: Gabion I 2m*1m*1m=16 Nos. construct 8m long & 4r	1.5m*	1m*1m=8 N	os.; ¡	provided by Off			
7	Implementation Process:	Co-ordination with Lo authorities; Field Visits purchase of Gabion Bo Unskilled Labour cost participation; Monitori	s; Surv oxes, was c	vey, Design & Skilled Labou ontributed jo	Cost ır, Ho	Estimation; Pro arding Board fr	vide om F	funds for the Program cost;	
8	Employment:	104 md							
9	Gender/Social Consideration:	Both men and women genuine participation of				More emphasis	was	given to the	
10	Effect/Impact:	To some extent, erosio Reduce the risk of dam Approximately 0.25 ha	age to	the school 8	k rura	l road	d;		
11	Benefitted HH:	Total: 90	Dalit	: 20	Jana	jati: 30		Others: 40	
12	Problem/Obsta cles Faced:	No		l .					
13	Maintenance/ Sustainability:	5% amount of total pay work, if some damage			een d	deducted for the	maii	ntenance	
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
15	Others; Name	User Group: Janajyoti I	Ma.Bi,	. Bidhyalaya B	Byawa	sthapan Samiti			
	of:	Chair Person: Yuvraj Su	ıbedi.						
		Site Incharge: Rakesh S	Shahi	(ASCO)					
		Watershed Manageme	ent Of	ficer: Robert	Maha	ara			





Figure 21: Gajul Landslide Treatment

1	Program: Emerge	ncy Landslide Protectio	n				
2	Location: District	/Municipality : Rolpa /R	Rolpa Ward No: 5	Place: Bajhawang	F/Y : 079/80		
	Co-ordinates:	Latitude: 28.2508	31	Longitude: 82.611527	,		
3	Existing Site Prob agricultural land	lem: The Landslide cau	ised by river bank c	utting possess a risk of	damage to the		
4	Cost:						
а	Estimated	Total : 795879.48	Office: 699960.37	Users: 95919.1	Others:		
b	Actual Expenditure	Total: 793166.90	Office: 697689.82	Users: 95477.0	Others:		
5	Objectives:	a) to reduce soil erosi b) to reduce devastat		ment lownstream and surrou	ınding area		
6	Technique Applied:	•	; ; Box size 1.5m*1	nstruction (Gabion Box .m*1m=40 Nos.; were	•		
7	Implementation Process:	authorities; Field Visi purchase of Gabion	ts; Survey, Design Boxes, Skilled Labo t was contributed j	ves, User Groups and & Cost Estimation; Prov our, Hoarding Board fro ointly through progran	vide funds for the om Program cost;		
8	Employment:	485 md					
9	Gender/Social Consideration:	Both men and wome genuine participation		olved; More emphasis roups	was given to the		
10	Effect/Impact:	To some extent, erosi Reduce the risk of dar Approximately 0.5 ha	mage to the agricul		l;		
11	Benefitted HH:	Total: 40	Dalit: 20	Janajati: 15	Others: 5		
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total pa work, if some damage	•	been deducted for the r	maintenance		
14	Lesson Learned: If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
15	Others; Name of:	User Group: Odarne F		Jpabhokta Samuha			
		Chair Person: Tek Bdr	. Mahara				
		Site Incharge: Rakesh	Shahi (ASCO)				
		Watershed Managen	nent Officer: Rober	t Mahara			





Figure 22: Sulibagar Madikhola Landslide Treatment

1	Program: Emerge	ncy l	Landslide Protection	n					
2	Location: District,	/Mu	nicipality: Rolpa /R	olpa	Ward No: 4	Pla	ace: Office	F/`	Y : 079/80
	Co-ordinates:		Latitude: 28.3121	15		Long	itude: 82.62352	5	
3	_		Several man made evalent in the work				ndlsides, gully fo	rmatio	on, river
4	Cost:				-				
а	Estimated	Tot	tal: 1699955.86	Offic	ce: 1699955.86		Users:		Others:
b	Actual Expenditure	Tot	tal: 1699955.86	Offic	ce: 1699955.86		Users:		Others:
5	Objectives:	_	to reduce soil erosi to reduce devastat				_	ınding	area
6	Technique Applied:	_	Structural: Gabion*1m*1m=106 Nos.		•	-			
7	Implementation Process:	Dis Sur Pro	Co-ordination with Local Representatives, District Administration Office, District Disaster Management Committee and other concerned authorities; Field Visits Survey, Design & Cost Estimation; Procurement of Machine made Gabiion Boxes Provide Gabion Boxes at free of cost to several households referred by DAO Disaster Management Committee & related Ward office; Monitoring & Evaluation						
8	Employment:								
9	Gender/Social Consideration:		th men and wome nuine participation				More emphasis	was g	given to the
10	Effect/Impact:	Red agr	some extent, erosion duce the risk of dan ricultural land; proximately 1.8 ha	nage t	to the settlemer	nt, ru	ral road, other in		
11	Benefitted HH:		tal: 60	Dali		_	najati: 20	Othe	ers: 18
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:		amount of total park, if some damage	•		en de	educted for the i	mainte	enance
14	Lesson Learned:	: If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
15	Others; Name	Use	er Group: Several						
	of:	Cha	air Person:						
		Sit	e Incharge: Rakesh	Shahi	(ASCO)				
		Wa	atershed Managem	ent O	fficer: Robert N	1ahai	ra		





Figure 23: Gabin Boxes Procurement

1	-	ream Bank Protection		T	,			
2	Location: District, /Lungri	/Rural Municipality: R	olpa	Ward No		c e: Jutung K urafed	hola,	F/Y : 079/80
	Co-ordinates:	Latitude: 28.217681			Longitu	de: 82.8109	925	
3	_	blem: The irrigation Jutung khola bank cu		has been	damaged	& agricultu	ural land	d has been in
4	Cost:	Tatang Miola Salik Ca	8					
а	Estimated	Total : 1122013.29	0	ffice: 9999	99.07	Users: 122	2014.22	Others:
b	Actual Expenditure	Total: 1118996.31	0	ffice: 9969	82.09	Users: 122	2014.22	Others:
5	Objectives:	a) to prevent stream b) to protect the irrig		_	nserve agr	icultural lan	nd	
6	Technique Applied:	a) Structural: Gabio 1.5m*1m*0.5m=60 1.5m*1m*1m=60 No	Nos	.; Box	size 2m	*1m*1m=30	O Nos.	; Box size
7	Implementation Process:	Co-ordination with authorities; Field Vispurchase of Gabion Unskilled Labour coparticipation; Monite	sits; Su Boxes st was	rvey, Designs, Skilled Landon contribute	gn & Cost abour, Hoa ed jointly t	Estimation; arding Boar	Provide d from	funds for the Program cost;
8	Employment:	693 md						
9	Gender/Social Consideration:	Both men and wom genuine participation				More empl	nasis wa	s given to the
10	Effect/Impact:	To some extent, stre Reduce the risk of da Approximately 0.6 h	amage	to the irrig	ation cana	I and agricu	ıltural la	
11	Benefitted HH:	Total: 17	Dalit:		Janajati: 1	13	Others	: 4
12	Problem/Obsta cles Faced:	No						
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•		as been de	educted for	the mair	ntenance
14	Lesson Learned: If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
		ı						
15	Others; Name	User Group: Sakriya	Shanti	Yuwa Club	1			
15	Others; Name of:	User Group: Sakriya Chair Person: Rajesh						
15	· ·	,	Pun N	Лagar				

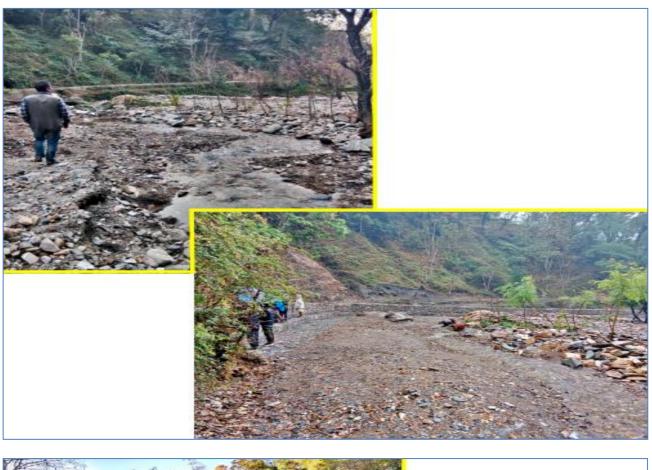




Figure 24: Jutung Khola Stream Bank Protection

2		/Municipality : Rolpa	Ward No	-		F/Y : 07	79/80		
	/Rolpa Co-ordinates:	Latitude: 28.2788	 48		nogaun itude: 82.58	2056			
3		lem: The Madikhola h							
•		iem me maammora i	145 possess a 11510	01 4411146	the agricuit	.arariana			
4	Cost:								
а	Estimated	Total: 1133643.16	Office: 99999	94.69	Users: 133	648.47	Others:		
b	Actual Expenditure	Total: 1130203.13	Office: 99713	38.35	Users: 133	064.78	Others:		
5	Objectives:	a) to prevent stream b) to conserve the a	-						
6	Technique Applied:	a) Structural: Gabio Box size 1.5m*1m 1.5m*1m*1m=65 N with Stud)	*0.5m=40 Nos.;	Box size	2m*1m*1r	n=25 No	s.; Box size		
7	Implementation Process:	Co-ordination with authorities; Field Vis purchase of Gabion Unskilled Labour co participation; Monit	sits; Survey, Desi Boxes, Skilled L st was contribut	gn & Cost abour, Ho ed jointly t	Estimation; arding Boar	Provide f d from P	funds for the rogram cost;		
8	Employment:	693 md							
9	Gender/Social Consideration:	Both men and wom genuine participatio			More emph	asis was	given to the		
10	Effect/Impact:	To some extent, stre Reduce the risk of da Approximately 0.8 h	amage to the agr	icultural lar	nd;		d;		
11	Benefitted HH:	Total: 14	Dalit:	Janajati: 5	5	Others:	9		
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	nas been de	educted for	the maint	enance		
14	Lesson Learned:	throughout the acti possible even with s	vity implementa mall external sup ures constructed	nstructed should be accompanied by bio-engineering					
15	Others; Name	User Group: Odabha	ariko Motorbato	Sarsafai Up	abhokta San	niti			
13		Chair Person: Man Bdr. Pun							
13	of:	Chair Person: Man B	Bdr. Pun						
13	oi:	Chair Person: Man E Site Incharge: Rakes							

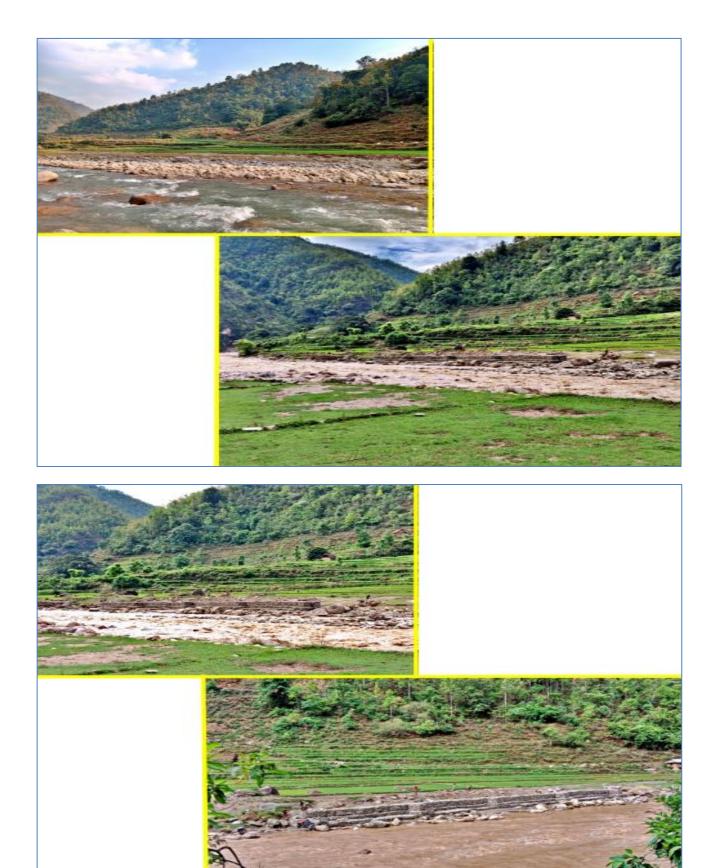


Figure 25: Puranogaun Madikhola Stream Bank Protection

1	Program: River/St	ream Bank Protection	ı					
2	Location: District, /Rolpa	/Municipality : Rolpa	Ward No: 5	Plac	ce: Panighat	F/Y:	079/80	
	Co-ordinates:	Latitude: 28.25120	07		Longitude: 82.6	1781		
3	_	lem: The Madikhola, d agricultural land	which flows along	side	the village, poss	sess a	risk of damage to	
4	Cost:	u agriculturarianu						
a	Estimated	Total: 1714753.17	Office: 1499996	5.09	Users: 214757	.08	Others:	
b	Actual Expenditure	Total: 1703888.53	Office: 1491209	.67	Users: 212678	.86	Others:	
5	Objectives:	a) to prevent stream b) to protect the set	_	ultura	al land			
6	Technique Applied:	a) Structural: Gabio 1.5m*1m*0.5m=52 1.5m*1m*1m=52 No	Nos.; Box	size	2m*1m*1m=1	.8 N	os.; Box size	
7	Implementation Process:	Co-ordination with authorities; Field Vis purchase of Gabion Unskilled Labour co participation; Monite	sits; Survey, Desig Boxes, Skilled La st was contribute	n & abour d joi	Cost Estimation, Hoarding Boa	; Prov rd fro	ide funds for the m Program cost;	
8	Employment:	1036 md						
9	Gender/Social Consideration:	Both men and wom genuine participation			•	hasis	was given to the	
10	Effect/Impact:	To some extent, stre Reduce the risk of da Approximately 0.8 h	amage to the settl	emei	nt and agricultu	ral lan		
11	Benefitted HH:	Total: 45 Da	alit: 15	Jar	najati: 15		Others: 15	
12	Problem/Obsta cles Faced:	Stones needed for podistance	acking work has to	be o	collected and tra	nspor	ted from very far	
13	Maintenance/ Sustainability:	5% amount of total p	•	as be	en deducted for	the m	naintenance	
14	Lesson Learned:	arned: If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
15	Others; Name of:	User Group: Odarne	Panighat Sichai Ja	al Upa	abhokta Samuha	3		
	oi.	Chair Person: Tek Bo	dr. Mahara					
		Site Incharge: Rakes	h Shahi (ASCO)					
		Watershed Manage	ment Officer: Rob	ert N	/lahara			

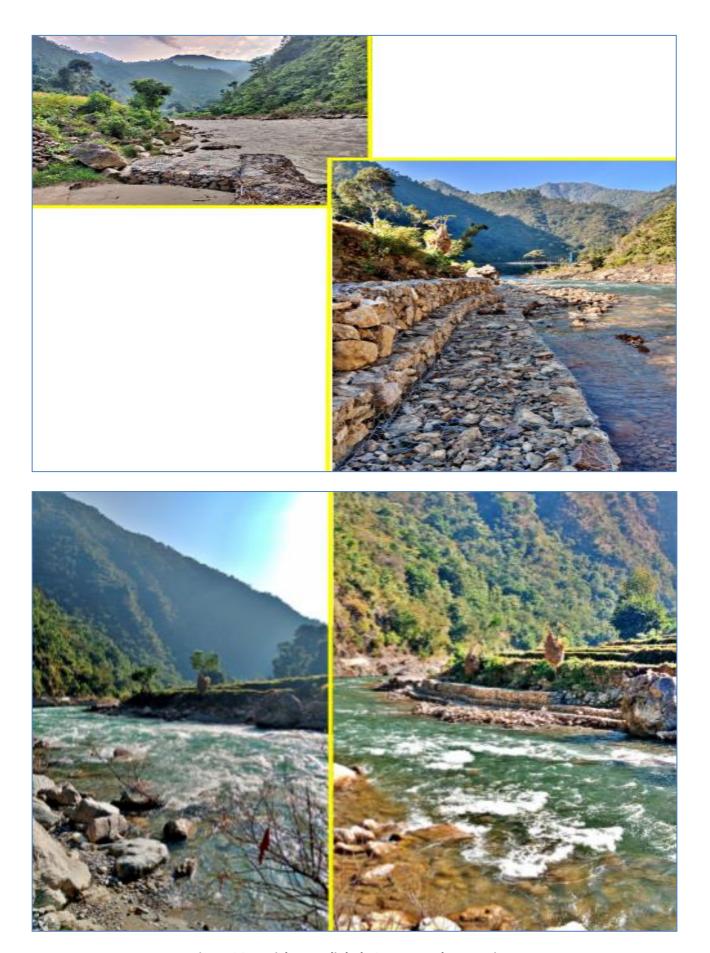


Figure 26: Panighat MadiKhola Stream Bank Protection

1	Program: River/St	tream Bank Protection	ı								
2	Location: District, /Rolpa	/Municipality : Rolpa	Ward No: 5	Place:	Darekhola	Y : 079/80					
	Co-ordinates:	Latitude: 28.2520)77	Lo	ngitude: 82.60						
3	_	lem: The Darekhola b	_	ed a land	dslide that pos	sess a	a risk of damage				
		, rural road and agricu	ıltural land								
4	Cost:										
а	Estimated	Total: 2209930.07	Office: 199995	54.70	Users: 20997	5.37	Others:				
b	Actual Expenditure	Total: 2195417.52	Office: 198755	53.96	Users: 20786	3.56	Others:				
5	Objectives:	a) to prevent stream b) to protect the set	_								
6	Technique Applied:	a) Structural: Gabic 2m*1m*1m=50 N 1.5m*1m*0.50m=50	Nos.; Box si	ze 1.5	5m*1m*1m=50) N	os. Box size				
7	Implementation Process:	Co-ordination with authorities; Field Vi purchase of Gabion Unskilled Labour co participation; Monit	sits; Survey, Des Boxes, Skilled est was contribu	ign & Co Labour, ted joint	ost Estimation; Hoarding Boar	Provi d fro	de funds for the m Program cost;				
8	Employment:	1382 md									
9	Gender/Social Consideration:	Both men and wom genuine participatio				nasis	was given to the				
10	Effect/Impact:	To some extent, rive Reduce the risk of da Approximately 0.8 h	amage to the set	tlement,	, rural road and	l agric					
11	Benefitted HH:	Total: 40	Dalit: 12	Janaja	ati: 16	О	thers: 12				
12	Problem/Obsta cles Faced:	Stones needed for p	acking work has			nspor	ted from very far				
13	Maintenance/ Sustainability:	5% amount of total work, if some damage		has beer	n deducted for	the m	aintenance				
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.									
15	Others; Name of:	User Group: Odarne		i Jal Upa	bhokta Samuh	a					
		Chair Person: Tek Bo	dr. Mahara								
		Site Incharge: Rakes	sh Shahi (ASCO)								
	Watershed Management Officer: Robert Mahara										



Figure 27: Darekhola Torrent Control

1		ream Bank Protection	100 100	0 -:		1 _	
2	/Lungri	/Rural Municipality: Rolp	oa Ward No	:3 Plac	ce: Jutung Khola	F	:/Y: 079/80
	Co-ordinates:	Latitude: 28.224324		Lon	gitude: 82.7976	58	
3	Existing Site Prob	lem: The Jutung khola p	ossess a risk o	f damage t	o agricultural la	nd by	stream bank
4	Cost:						
а	Estimated	Total: 902106.15	Office: 7999	83.62	Users: 102122	.53	Others:
b	Actual Expenditure	Total: 898928.26	Office: 7973	57.08	Users: 101571	18	Others:
5	Objectives:	a) to prevent stream bab) to conserve agricult	_				
6	Technique Applied:	a) Structural: Gabion 1.5m*1m*0.5m=30 1.5m*1m*1m=45 Nos.	Nos.; Box	size 2m	*1m*1m=22	los.;	Box size
7	Implementation Process:	Co-ordination with Lo authorities; Field Visits purchase of Gabion Bo Unskilled Labour cost participation; Monitori	; Survey, Desi oxes, Skilled L was contribut	gn & Cost abour, Hoa ed jointly t	Estimation; Production of the Estimation of the	vide f om P	unds for the rogram cost;
8	Employment:	554 md					
9	Gender/Social Consideration:	Both men and women genuine participation o			More emphasis	was	given to the
10	Effect/Impact:	To some extent, stream Reduce the risk of dam Approximately 0.8 ha o	age to the agr	cultural lar	nd;	rolled	d;
11	Benefitted HH:	Total: 39 Da	alit: 6	Janajati: 2	23 Oth	ers: 1	10
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total pay work, if some damage of		nas been de	educted for the I	maint	enance
14	Lesson Learned:	If real needs of the co	•		. •		
		possible even with sma The physical structures techniques to sustain the	II external sup constructed	•	accompanied b	y bic	
15	Others; Name	possible even with sma The physical structures	Il external sup constructed ne structures.	should be		y bic	
15	Others; Name of:	possible even with sma The physical structures techniques to sustain the	Il external sup s constructed ne structures. la Pahiro Niya	should be		y bio	
15		possible even with sma The physical structures techniques to sustain the User Group: Chiurakho	Il external sup s constructed ne structures. la Pahiro Niya Gharti Magar	should be		y bio	

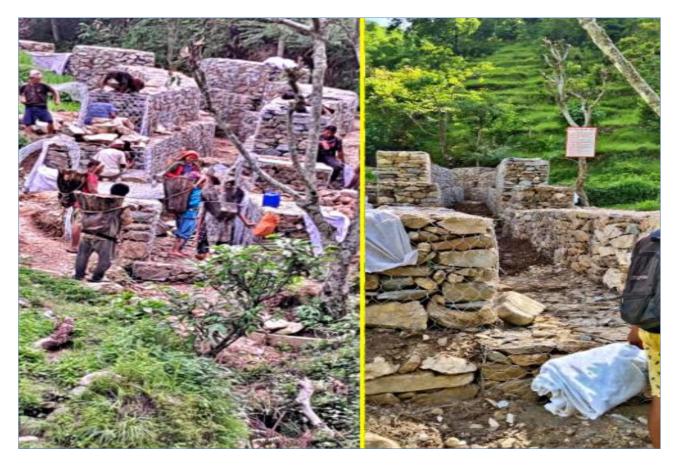




Figure 28: Jutung Khola Stream Bank Protection

_	Program: Water S	/na .t.t.alt. Dala	344 1 84 2		Calababata	- /v /	270/00							
2	/Rolpa	/Municipality: Rolpa	Ward No: 3		: Satdobato		079/80							
	Co-ordinates:	Latitude: 28.2716	07	Lo	ngitude: 82.66	6552								
4	~	lem: The excess runoff lide in the downstream	_	_										
	Estimated	Total: 1155108.88	Office: 999989	97	Users: 15511	10 01	Others:							
a														
b	Actual Expenditure	Total : 1165620.29	Office: 999186	0.32	Users: 16643	33.97	Others:							
5	Objectives:	a) to harvest the runo b) to control erosion a c) to use the harveste purposes	and landslides o d runoff water f	or irriga	ition, livestock									
6	Technique Applied:	a) Structural: Dam (wall 4 nos,=15.4m 348.80m3)		-	_		-							
7	Implementation Process:	Co-ordination with L authorities; Field Visi purchase of Construct cost; Unskilled Labou people participation;	ts; Survey, Designation Materials, Solir cost was con	gn & Co killed La ntribute	ost Estimation abour, Hoardi ed jointly thro	; Proviong Boar	de funds for the rd from Program							
8	Employment:	795 md												
9	Gender/Social Consideration:	Both men and wome genuine participation			•	hasis v	vas given to the							
10	Effect/Impact:	Properly harvest the r Reduce the risk of dar Support irrigation faci	mage in downstr			Itural la	and							
11	Benefitted HH:	Total: 16 Da	ılit: 1	Janaja	ti: 5	Othe	rs: 10							
12	Problem/Obsta cles Faced:	No				•								
13	Maintenance/ Sustainability:	5% amount of total pa work, if some damage	•	nas beer	n deducted for	the m	aintenance							
14	Lesson Learned: If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different fruit tree species which supports for income generation.													
15	Others; Name of:	User Group: Satdobat	to Jalasaya Nirm	an Upal	bhokta Samiti									
	Ji.	Chair Person: Prathar	n Roka											
		Site Incharge: Rakesh	Shahi (ASCO)				Site Incharge: Rakesh Shahi (ASCO)							
	Watershed Management Officer: Robert Mahara													



Figure 29: Satdobato Recharge Pond

1	Program: Water S	Source Protection/Co	onservation Pond				
2	Location: District/Municipality: Rolpa /Rolpa		Ward No: 6	Plac Darb	e: Baghthala, oot	F/Y : 079/80	
	Co-ordinates:	Latitude: 28.336	338	L	ongitude: 82.53	9503	
3	Existing Site Problem: The excess runoff water flowing through its own natural channel caused erosion and landslide in the downstream area; Lack of water for irrigation, livestock and other domestic purposes						
4	Cost:				T		
а	Estimated	Total: 1111772.99	Office: 999960	0.00	Users: 111812	.99 Others:	
b	Actual Expenditure	Total: 1079100.35		9.33	Users: 109841	.02 Others:	
5	Objectives:		on and landslides o			and other domestic	
6	Technique Applied:	a) Structural: Rec Holding Capacity=	-	ructior	n (L= 24m, B= 1	l1m, H= 1.5m; Water	
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board Placing from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	898 md					
9	Gender/Social Consideration:		men were equally on of disadvantage		•	asis was given to the	
10	Effect/Impact:		ne runoff water; damage in downsti facilities for approx			tural land	
11	Benefitted HH:	Total: 60	Dalit: 10	Jan	ajati: 30	Others: 20	
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different fruit tree species which supports for income generation.					
15	Others; Name of:	-	hala Pokhari Nirma	an Upa	bhokta Samiti		
		Chair Person: Ajen					
		Site Incharge: Rak					
		Watershed Management Officer: Robert Mahara					

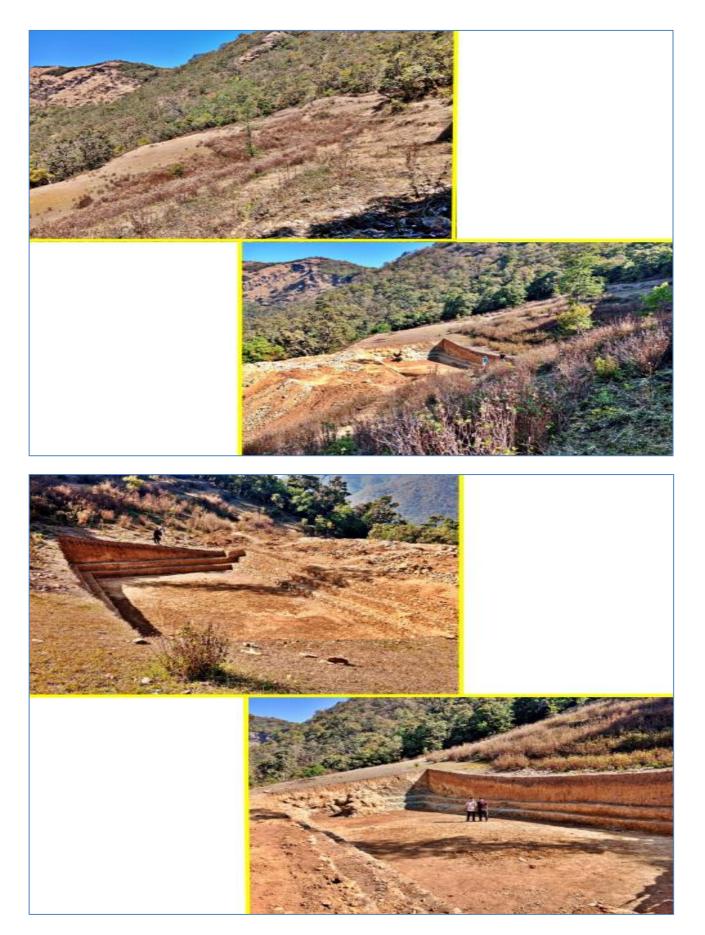


Figure 30: Baghthala Recharge Pond

1	Program: Water S	ource Protection/Co	onservation Pond				
2	Location: District/Rural Municipality: Rolpa /Thawang		Ward No: 1	Place	e: Jaljala	F/Y: 079/80	
	Co-ordinates:	Latitude: 28.4448	811	Long	Longitude: 82.72		
3	erosion and lands	lem: The excess run lide in the downstre		g througl	n its own nat	ural char	nnel caused
4	Cost:						
а	Estimated	Total: 999619.45	Office: 9996	19.45	Users:		Others:
b	Actual Expenditure	Total: 958404.65	Office: 9584	04.65	Users:		Others:
5	Objectives:	a) to harvest the rub) to control erosic		on down	stream area		
6	Technique Applied:	a) Structural: Recharge Pond Construction (9.9m*6m*1.35m; Water Holdin Capacity= 88.20m3)					Water Holding
7	Implementation Process:	Co-ordination with Local Representatives and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the construction of recharge pond by quotation; Monitoring & Evaluation					
8	Employment:	666 md					
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups					
10	Effect/Impact:	Properly harvest the Reduce the risk of		stream aı	rea		
11	Benefitted HH:	Total: 100	Dalit: 26	Janajati: 64 Others: 10			rs: 10
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different fruit tree species which supports for income generation.					
15	Others; Name of:	Firm name: Tribeni Construction & Transportation Pvt. Ltd.					
	oi.	Chair Person: Lakap Budha					
		Site Incharge: Rakesh Shahi (ASCO)					
		Watershed Management Officer: Robert Mahara					



Figure 31: Jaljala Recharge Pond

1	Program: Water S	ource Protection/Co	onservation Pond				
2	Location: District/Rural Municipality: Ward No: 4 Place: I Rolpa /Gangadev		: Pakhapani F/Y : 079/80				
	Co-ordinates:	Latitude: 28.494	163, 28.519017	L	ongitude: 82.438	3065, 82.427476	
3	Existing Site Problem: The excess runoff water flowing through its own natural channel caused erosion and landslide in the downstream area; Lack of water for irrigation, livestock and other domestic purposes						
	Cost: Estimated	Total: 901168.54	Office: 799943	0.04	Users: 101225.	60 Others:	
а							
b	Actual Expenditure	Total: 898271.46	Office: 797224	1.29	Users: 101047.	17 Others:	
5	Objectives:	a) to harvest the runoff water b) to control erosion and landslides on downstream area c) to use the harvested runoff water for irrigation, livestock and other domestic purposes					
6	Technique Applied:	=	harge Pond Consing Capacity= 1137.9			ern Pond of different	
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the constriction of Recharge pond, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	923 md					
9	Gender/Social Consideration:		men were equally on of disadvantage		•	asis was given to the	
10	Effect/Impact:		ne runoff water; damage in downstr facilities for approx			ıltural land	
11	Benefitted HH:	Total: 132	Dalit: 24	Jana	ajati:	Others: 108	
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different fruit tree species which supports for income generation.					
15	Others; Name	User Group: Dalsinge Krishak Samuha					
	of:						
	of:	Chair Person: Dipe	ndra K.C.				
	of:	Chair Person: Dipe					

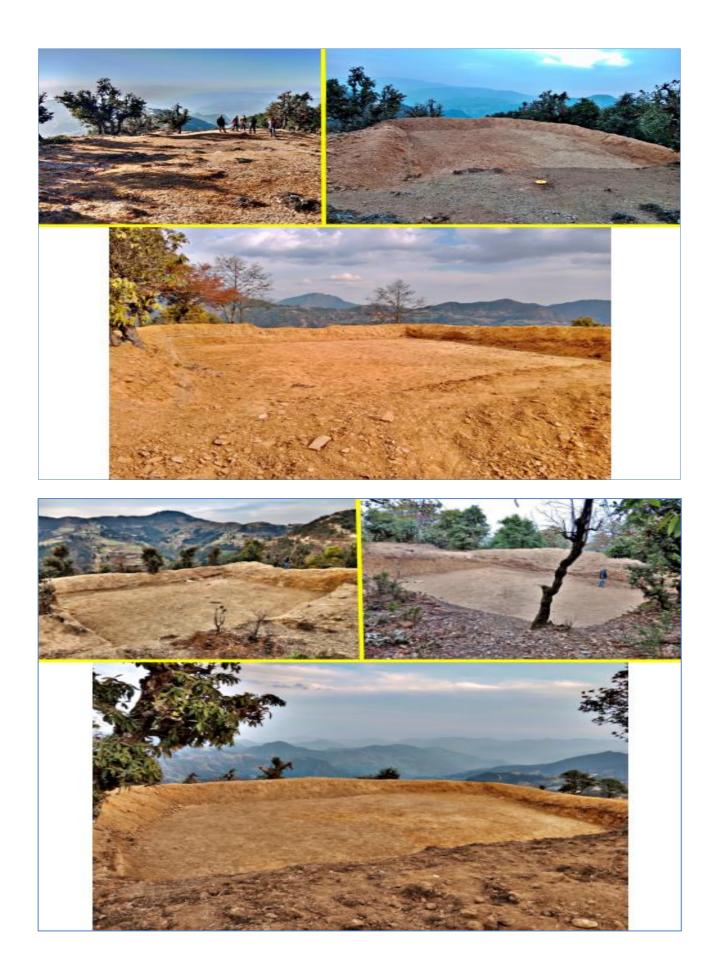


Figure 32: Pakhapani Recharge Pond

2	Location: Different Places of Rolpa, Rukum Ward No:		m Ward No:	Place:	F/Y : 079/80		
_	East and Pyuthan	• •	Wala ito.	i lacc.	171.075/00		
	Coordinate:	Latitude: 28.256458, 2	8.299387	Longitude: 82	.716993, 82.630504		
		Latitude: 28.636982, 2	8.105636	Longitude: 82	.549261, 82.745818		
3	Existing Site Prob	lem: High demand of fr	uit tree seedlings				
4	Cost:						
а	Estimated	Total: 800000.00	Office: 800000.0	0 Users:	Others:		
b	Actual Expenditure	Total: 800000.00	Office: 800000.0	0 Users:	Others:		
5	Objectives:	of the rural people b) to promote agro-for	a) to promote IGAs, ensure employment opportunities and improve the livelihood of the rural people b) to promote agro-forestry				
6	Technique Applied:	a) Vegetative: Distribution and plantation of 2340 nos. of Mango Seedlings, 1825 nos. of Litchi Seedlings, 2100 nos. of Lemon Seedlings, 1500 nos. of Orange Seedlings, 700 nos. of Kimbu Seedlings & 5000 nos. of Smart Napier Sets					
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Purchasing, Distribution & Plantation of Mango/Litchi/Lemon/Orange/Kimbu/Smart Napier Seedlings; Monitoring & Evaluation					
8	Employment:						
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups					
10	Effect/Impact:	It will support IGAs, ensure employment opportunities and improve the livelihood of rural people Plantation of Approx. 44 ha of land					
11	Benefitted HH:	Total: 1860 Da	alit: 620 Ja	anajati: 780	Others: 460		
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	Fund has not been allocated for maintenance from the office. Users will do, if necessary.					
14	Lesson Learned:	More emphasis should be given to women & marginalized groups in these types of income generating activities; Indeed, active participation, proper care and maintenance of the planted seedlings results in effective & successful project					
15	Others; Name of:	User Group: Different	User Groups				
	J	Chair Person: Different					
		Chair Person: Differen	ι				
		Site Incharge: Rakesh					





Figure 33: Fruit Seedlings Distribution & Plantation

1	Program: Soil Cor	nservation Work Along	g Rural Road				
2	Location: District/Municipality: Rolpa/Rolpa		Ward No: 2	Place: Salwang	F/Y : 079/80		
	Coordinate:	Latitude: 28.30662	5	Longitude: 82.591	.885		
3	agricultural land	lem: The soil erosion	em: The soil erosion & landslide possess a risk of damage to the rural road and				
4	Cost:						
а	Estimated	Total: 889481.39	Office: 799991.96	Users: 89489.4	4 Others:		
b	Actual Expenditure	Total: 889481.39	Office: 799991.96	Users: 89489.4	4 Others:		
5	Objectives:	a) to reduce soil ero b) to reduce devasta c) to improve the ro	ating effects on the				
6	Technique Applied:	-	•		on Box 50 Nos; Box size to construct 20m long		
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	556 md					
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups					
10	Effect/Impact:	To some extent, erosion and mass movement has been reduced; Reduce the risk of damage to the rural road; Approximately 0.04 km of rural road & 0.1ha of agricultural land has been conserved					
11	Benefitted HH:	-	Dalit: 10	Janajati: 10	Others: 30		
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.					
15	Others; Name	User Group: Salwan	g tatbandhan Nirm	an Aayojana Upabh	okta Samiti		
	of:	Chair Person: Anil D	rson: Anil Dangi				
		Site Incharge: Rakes	sh Shahi (ASCO)				
		Watershed Management Officer: Robert Mahara					

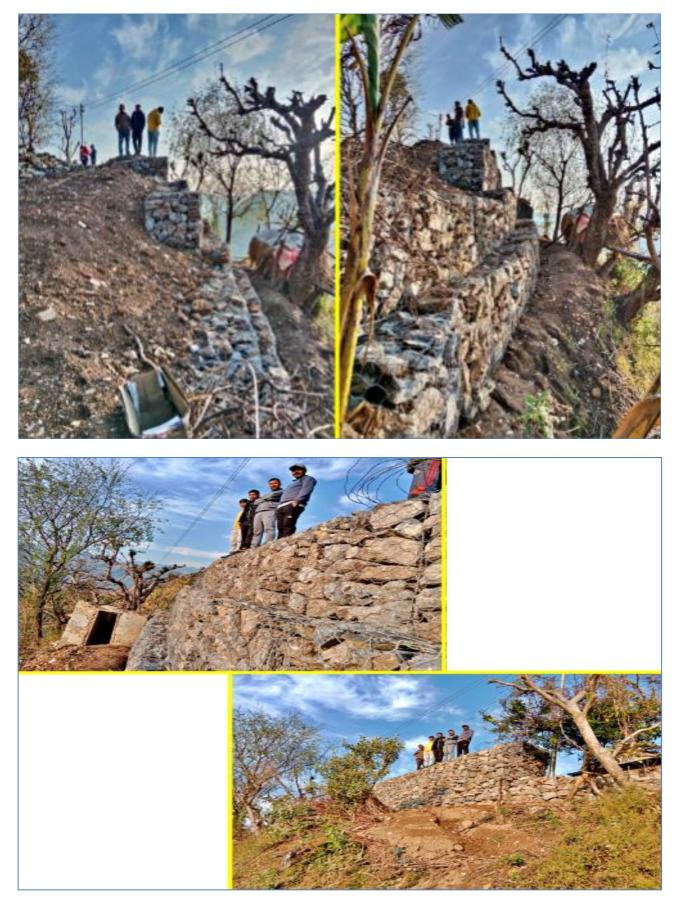


Figure 34: Salwang Rural Road Conservation

1	Program: Soil Conservation Work Along Rural Road						
2	Location: District/Municipality: Rolpa/Rolpa		Ward No: 4	Place: Barreck	F/Y: 079/80		
	Coordinate:	Latitude: 28.2984	Latitude: 28.298414 Longitude: 8		82.636739		
3	Existing Site Prob and agricultural la	lem: The Landslide possess a risk of damage to the rural road, Army Staff Building nd					
4	Cost:						
а	Estimated	Total: 199803.64	Office: 199803.64	1 Users:	Others:		
b	Actual Expenditure	Total: 199803.64	Office: 199803.64	1 Users:	Others:		
5	Objectives:	a) to reduce soil ero b) to reduce devast					
6	Technique Applied:	a) Structural: Stone	Masonary Retainir	ng Wall Construct	ion (9m*0.7m*1.95m)		
7	Implementation Process:	Co-ordination with Local Representatives and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the construction of Retaining Wall through quotation; Monitoring & Evaluation					
8	Employment:	120 md					
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups					
10	Effect/Impact:	To some extent, erosion and mass movement has been reduced; Reduce the risk of damage to the rural road; Approximately 0.02 km of rural road & 0.06 ha of agricultural land has been conserved					
11	Benefitted HH:	Total: 20	Dalit: 8	Janajati: 8	Others: 4		
12	Problem/Obsta cles Faced:	No					
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.					
15	Others; Name	Firm Name: Shubha	am Nirman Sewa				
	of:	Chair Person: Anju	Kumari K.C. Dangi				
		Site Incharge: Rake	sh Shahi (ASCO)				
		Watershed Management Officer: Robert Mahara					





Figure 35: Barreck Landslide Treatment

1	Program: Sensitiv	e Watershed Area Pro	tection				
2	Location: District, /Rolpa	/Municipality : Rolpa	Ward No: 6	Place: Darbot	F/Y : 079/80		
	Coordinate:	Latitude: 28.327471		Longitude: 82.5390	79		
3	Existing Site Prob due to old pipelin	lem: The water source	e was unprotected	d and drinking water fa	ncilities was lacking		
4	Cost:	·					
а	Estimated	Total: 1010786.39	Office: 833248.2	25 Users: 177583.1	3 Others:		
b	Actual Expenditure	Total: 917400.65	Office: 749330.0	Users: 168070.6	Others:		
5	Objectives:	a) to protect the wat b) to support drinking		e water quality or its r	egime		
6	Technique Applied:	Masonary Protection	a) Structural: Intake Construction (L= 2.75m, B= 1.30m, H= 0.80m; Stone Masonary Protection Wall Construction=12.2 m long altogether; Pipeline Construction=1150m)				
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	521 md					
9	Gender/Social Consideration:	Both men and women genuine participation		•	asis was given to the		
10	Effect/Impact:	Protect the water so Support drinking faci	•	· · · · · · · · · · · · · · · · · · ·			
11	Benefitted HH:	Total: 80	Dalit: 15	Janajati: 35	Others: 30		
12	Problem/Obsta cles Faced:	No State 15					
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	as been deducted for t	he maintenance		
13	•	work, if some damag If real needs of the throughout the active possible even with sr	e occurs. community are to rity implementation all external supporters constructed	be addressed, village on process, thus grea ort. should be accompan	ers readily participate		
	Sustainability: Lesson Learned: Others; Name	work, if some damag If real needs of the throughout the active possible even with sr The physical structure.	e occurs. community are to vity implementation mall external supports are constructed around thw water	o be addressed, villago on process, thus grea ort. should be accompan er source	ers readily participate ter achievements are		
14	Sustainability: Lesson Learned:	work, if some damag If real needs of the throughout the activ possible even with sr The physical structu different tree species	e occurs. community are to vity implementation all external supported successive constructed successive around the water of the control of t	o be addressed, villago on process, thus grea ort. should be accompan er source	ers readily participate ter achievements are		
14	Sustainability: Lesson Learned: Others; Name	work, if some damag If real needs of the of throughout the active possible even with some throughout the active possible even with some three physical structure different tree species. User Group: Saurya U	e occurs. community are to vity implementation all external supported around thw water around the water aljyoti D.C.	o be addressed, villago on process, thus grea ort. should be accompan er source	ers readily participate ter achievements are		



Figure 36: Darbot Water Source Protection

1	Program: Sensitiv	e Watershed Area Pro	tection					
2	Location: District, /Rolpa	/Municipality : Rolpa	Ward No: 10	Place: Bhanbhane	F/Y : 079/80			
	Coordinate:	Latitude: 28.3295	28	Longitude: 82.673065	5			
3	Existing Site Prob	lem: The water source	e was unprotected a	and lack of drinking wa	ter facilities			
4	Cost:							
а	Estimated	Total: 441525.83	Office: 268532.19	Users: 172993.64	Others:			
b	Actual Expenditure	Total: 419625.44	Office: 251618.96	Users: 168006.48	Others:			
5	Objectives:	a) to protect the water source, improve water quality or its regimeb) to support drinking water facilities						
6	Technique Applied:	a) Structural: Intake Construction 2nos. (L= 1.6m, B= 0.80m, H= 0.95m; Pipeline Construction=2600m)						
7	Implementation Process:	authorities; Field Vis purchase of Construc cost; Unskilled Labo	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	175 md						
9	Gender/Social Consideration:	Both men and wom genuine participation	• •	volved; More emphas groups	is was given to the			
10	Effect/Impact:	Protect the water so Support drinking faci	•					
11	Benefitted HH:	Total: 40	Dalit: 2	Janajati: 4	Others: 34			
12	Problem/Obsta cles Faced:	No	<u> </u>	I	I			
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	been deducted for the	e maintenance			
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different tree species around thw water source						
15	Others; Name of:	User Group: Dhawar		ı Samiti				
		Chair Person: Ba Bdr	Mahara					
		Site Incharge: Rakes	h Shahi (ASCO)					
		Watershed Manager	ment Officer: Rober	t Mahara				





Figure 37: Bhanbhane Water Source Protection

1	Program: Sensitiv	e Wateshed Area Pro	tection						
2	Location: District, Rolpa /Sunilsmriti	/Rural Municipality:	Ward No: 3	Plac Mijh	e: Barhathan, ning	F/Y: 079/80			
	Co-ordinates:	Latitude: 28.25	5404	L	ongitude: 82.70	713			
3		lide in the downstrea	_	_	through its own natural channel caused vater for irrigation, livestock and other				
a	Estimated	Total: 231892.69	Total: 231892.69						
b	Actual Expenditure								
5	Objectives:	b) to control erosion	a) to harvest the runoff water b) to control erosion and landslides on downstream area c) to use the harvested runoff water for irrigation, livestock and other domestic purposes						
6	Technique Applied:	a) Structural: Rech. Capacity= 314m3)	a) Structural: Recharge Pond Construction (Dia=20m H= 1.15m; Water Holding Capacity= 314m3)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the construction of Earthern recharge pnd, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	207 md							
9	Gender/Social Consideration:	Both men and won genuine participation	•		•	nasis was given to the			
10	Effect/Impact:	Properly harvest the Reduce the risk of d Support irrigation fa	amage in downs			tural land			
11	Benefitted HH:	Total: 105	Dalit: 35	Jan	ajati: 35	Others: 35			
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of total work, if some dama	• •	has be	en deducted for	the maintenance			
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different fruit tree species which supports for income generation.							
15	Others; Name of:	User Group: Barhat		an Upa	bhkta Samuha				
		Chair Person: Kesh							
		Site Incharge: Rakes							
		Watershed Manage	ement Officer: Ro	bert M	lahara				





Figure 38: Mijhing Recharge Pond

1	Program: Bamboo	Crib Wall Constructi	on , Brush Layerin	g, Faso	cine & Palisade Co	onstruction	
2	Location: District, /Rolpa	/Municipality : Rolpa	Ward No: 1,4		e:Chhapdhunga,	F/Y : 079/80	
	Co-ordinates:	Latitude: 28.2969	937, 28.297079	Long	situde: 82.64675,	82.647013	
3	Existing Site Prob canal and agricult	•	ossess a risk of da	mage t	o the settlement,	rural road, irrigation	
4	Cost:						
а	Estimated	Total: 1338972.33	Office: 117299	99.05	Users: 165973.2	29 Others:	
b	Actual Expenditure	Total: 1141410.74	Office: 999024	1.08	Users: 142386.0	Others:	
5	Objectives:	a) to reduce soil ero b) to reduce devast				-	
6	Technique Applied:	PalisadeConstructio	a) Structural: Bamboo Crib Wall, Bamboo Wattlling, Jute Netting, Brush Layering, PalisadeConstruction Amriso, Smart Napier, Vetiver, Bamboo & Nigalo Plantation				
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Bamboo Poles, various seedings, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	613 md					
9	Gender/Social Consideration:	Both men and won genuine participation			•	asis was given to the	
10	Effect/Impact:	To some extent, ero Reduce the risk of d Approximately 0.7 l	amage to the sett	lemen	t, rural road & irr	igation canal;	
11	Benefitted HH:	Total: 40	Dalit: 12	Jan	ajati: 20	Others: 8	
12	Problem/Obsta cles Faced:	No		'			
13	Maintenance/ Sustainability:	5% amount of total work, if some dama	• •	as bee	en deducted for t	ne maintenance	
14	Lesson Learned:	throughout the acti possible even with s	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. Use of Bio-engineering techniques is effective				
15	Others; Name of:	User Group: Lahari		Bikash	n Samuha		
		Chair Person: Dil Bd	lr Gurung				
		Site Incharge: Rakes	sh Shahi (ASCO)				
		Watershed Manage	ement Officer: Rol	ert M	ahara		



Figure 39: Bamboo Crib Wall, Fascine, Wattling Construction

1	Program: Seedling	g Production (Fodde	r/Bioengineering	Species)			
2	Location: District, /Rolpa	/Municipality : Rolpa	Ward No: 1	Plac	e: Mewang	F/Y : 079/80		
	Co-ordinates:	Latitude: 28.294	1506	Lon	gitude: 82.6434	22		
3	grass species to t there was a dema		ural hazards preva		n of different bio-engineering tree, shrub ent in the working area of SWM, Rolpa; Als			
4	Cost:							
а	Estimated	Total: 302772.44	Office: 3027	72.44	Users:	Others:		
b	Actual Expenditure	Total: 296490.00	Office: 29649	90.00	Users:	Others:		
5	Objectives:	b) to distribute the prevalent in the wo	a) to produce different types of bio-engineering r fodder species b) to distribute the produced species for the treatment of varius natural hazards prevalent in the working area					
6	Technique Applied:	a) Vegetative: Bhu Production (150 no	, .		•	, Bamboo Culm Cutting .)		
7	Implementation Process:	Co-ordination with Local Representatives and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the production of different types of seedings through quotation; Monitoring & Evaluation						
8	Employment:	350 md						
9	Gender/Social Consideration:	Both men and wo genuine participat	·	•	•	hasis was given to the		
10	Effect/Impact:		• • •	_		vhich can further be king area of SWMO,		
11	Benefitted HH:	Total: 300	Dalit: 90	Jan	ajati: 120	Others: 90		
12	Problem/Obsta cles Faced:	No		l				
13	Maintenance/ Sustainability:	5% amount of tota work, if some dam	• •	has be	en deducted fo	r the maintenance		
14	Lesson Learned:	throughout the ac possible even with	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. Use of Bio-engineering species is effective in treatment of different natural bazards					
15	Others; Name of:	Firm Name: Dajub Chair Person: Rish		an Jadu	buti Firm			
		Site Incharge: Rak	esh Shahi (ASCO)					
		Watershed Manag	gement Officer: R	obert M	lahara			



Figure 40: Seedling Production

2.2 ACTIVITY PROFILE OF RUKUM EAST DISTRICT

1	Program: Gully, La	andslide and Torrent C	ontrol							
2		Rural Municipality:	Ward No: 7	Place: Gunaam	F/Y : 079/80					
	Coordinate:	Latitude: 28.52499	3	Longitude: 82.713	3034					
3	_	ng Site Problem: The landslide & gully formation possess a risk of damage to the nearby ment, rural road and agricultural land								
4	Cost:									
а	Estimated	Total: 889719.45	Office: 799991.75	Users: 89727.	.70 Others:					
b	Actual Expenditure	Total: 889719.45	Office: 799991.75	Users: 89727.	.70 Others:					
5	Objectives:	=	a) to reduce soil erosion and mass movement from landslide & gully b) to reduce devastating effects on the downstream and surrounding area							
6	Technique Applied:	Nos; Box size 2m*1n	a) Structural: Gabion Retaining Wall & Check-dam Construction (Gabion Box 66 Nos; Box size 2m*1m*1m=54 Nos., Box size 1.5m*1m*1m=12 Nos. were used to construct 12m long, 3m high Gabion Retaining Wall & 10 nos. of check-dam)							
7	Implementation Process:	Co-ordination with authorities; Field Vis purchase of Gabion cost; Unskilled Labo	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	517 md								
9	Gender/Social Consideration:	Both men and wom genuine participation		•	asis was given to the					
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.3 ha	mage to the settlen	nent and rural road;	•					
11	Benefitted HH:	Total: 50	Dalit: 5	Janajati: 45	Others:					
12	Problem/Obsta cles Faced:	No	ı	1						
13	Maintenance/ Sustainability:	5% amount of total p work, if some damag	•	been deducted for	the maintenance					
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.								
15	Others; Name	User Group: Khandh	ara Chhellophalne N	Iirman Upabhokta S	amiti					
	of:	Chair Person: Dal Bd	r. Sunar							
		Site Incharge: Rakes	n Shahi (ASCO)							
	I	Watershed Manager		Site Incharge: Rakesh Shahi (ASCO)						





Figure 416: Gunam Gully & Landslide Treatment

1	Program: Gully, L	andslide and To	rrent Cont	rol				
2	Location: District, Rukum East/Puth	•	ality:	Ward No: 1	Place: Maiko	F/Y: 079/80		
	Coordinate:	Latitude:	28.68040	38	Longitude: 8	2.8832100		
3	Existing Site Prob agricultural land	lem: The torre	nt possess	a risk of dama	ge to the water so	urce, water tank-tap an		
4	Cost:							
а	Estimated	Total: 910535	5.77	Office: 799959.	.68 Users: 1105	76.09 Others:		
b	Actual Expenditure	Total: 897451	1.72	Office: 788756.	15 Users: 1086	95.96 Others:		
5	Objectives:		a) to reduce erosion & torrent bank cutting b) to reduce devastating effects on the downstream and surrounding area					
6	Technique Applied:	_ ·	a) Structural: GabionEmbankment Construction (Gabion Box 50 Nos; Box size 1.5m*1m*1m=50 Nos.) were used to construct 30m long Embankment)					
7	Implementation Process:	authorities; F purchase of Unskilled Lab	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	408 md	408 md					
9	Gender/Social Consideration:			were equally disadvantaged		nphasis was given to th		
10	Effect/Impact:	Reduce the ri	sk of dama	ge to the wate	ank cutting has bee er source, water tar nd has been conse	nk & tap;		
11	Benefitted HH:	Total: 70	Dali	it: 20	Janajati: 30	Others: 20		
12	Problem/Obsta cles Faced:	Transportatio	nal difficul	ties; one of the	e remote area of Lu	ımbini province		
13	Maintenance/ Sustainability:	5% amount of work, if some			as been deducted f	or the maintenance		
14	Lesson Learned:	throughout the possible even The physical	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.					
15	Others; Name	User Group:	Ekikrit Yuw	a Bikash Kendr	a			
	of:	Chair Person:	: Bikash Pu	n Magar				
		Chair Person: Bikash Pun Magar Site Incharge: Rakesh Shahi (ASCO)						
		Watershed Management Officer: Robert Mahara						





Figure 42: Maikot Torrent Control

1	Program: Emerge	ncy Landslide Treatmo	ent					
2	Location: District, Rukum East/Putha	/Rural Municipality: a Uttarganga	Ward No: 9	Plac Kha	rawang	F/Y : 0	79/80	
	Coordinate:	Latitude: 28.67	7257	Lon	gitude: 82.791	.797		
3	_	lem: The Landslide ca	_	he sch	ool building &	posse	ss a risk of	
4	Cost:							
а	Estimated	Total: 2053471.81	Office: 1300092	.56	Users: 25337	79.25	Others:500000	
b	Actual Expenditure	Total: 2023901.89	Office: 1283208	.35	Users: 24069	93.54	Others: 500000	
5	Objectives:	a) to prevent erosion b) to reduce devasta			ment from landslide e downstream and surrounding area			
6	Technique Applied:	a) Structural: Gabion Wall Construction (Gabion Box 180 Nos; Box size 2m*1m*1m=100 Nos.; Box size 1.5m*1m*1m=80Nos.; were used to construct 24m long * 6m high Gabion wall plus 16m long Gabion wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	1554 md	1554 md					
9	Gender/Social Consideration:	Both men and wom genuine participatio				nphasis	was given to the	
10	Effect/Impact:	To some extent, ero Reduce the risk of da Approximately 0.5 h conserved	amage to the sch	ool bu	ıilding;			
11	Benefitted HH:		Dalit: 120	Janaja	ati: 110	Other	rs: 20	
12	Problem/Obsta cles Faced:	Transportational dif	ficulties; one of t	ne ren	note area of Lu	ımbini _l	province	
13	Maintenance/ Sustainability:	5% amount of total work, if some damag	•	nas be	en deducted f	or the r	maintenance	
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
15	Others; Name	User Group: Kharaw	ang Jaladhar Ksh	etra S	anrakshan Upa	abhokta	a Samiti	
	of:	Chair Person: Dewa	Prasad Roka					
		Site Incharge: Rakes	sh Shahi (ASCO)					
		Watershed Manage	ment Officer: Ro	bert N	/lahara			

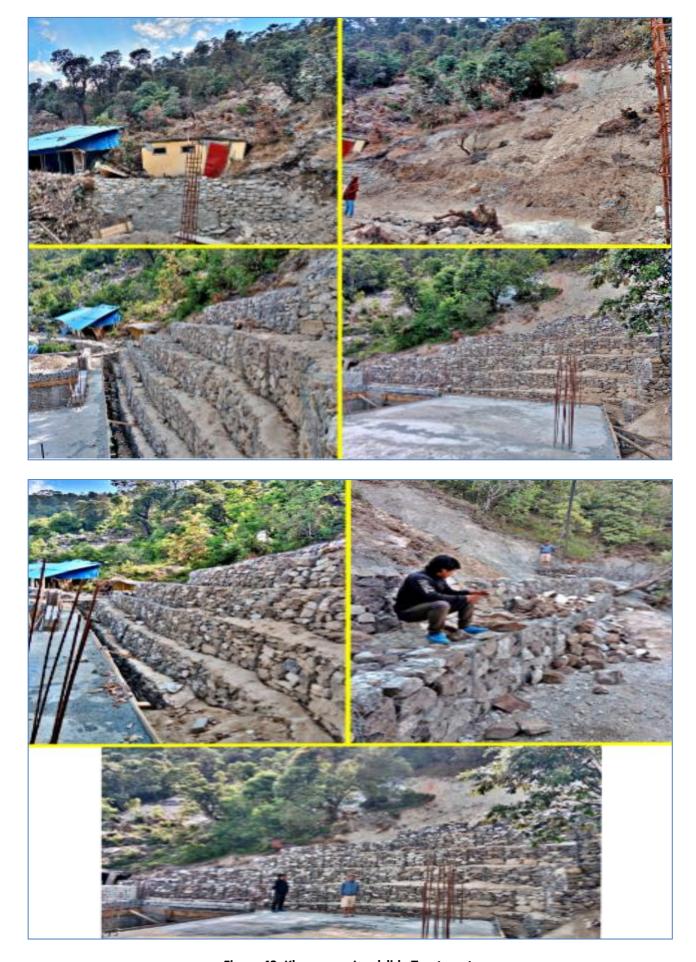


Figure 43: Kharawang Landslide Treatment

2		ream Bank Protection /Rural Municipality:	Ward No: 3	3 Place: Sa	ni Bheri	F/Y : 079/80		
_	Rukum East /Sisne		wara ito.	Mulpani	ili Bricii,	171.075/00		
	Co-ordinates:	Latitude: 28.63486	54		e: 82.573699			
3	_	olem: The Sani Bheri r	iver poassess a r	isk of damage	to the suspen	sion bridge &		
•	settlement upside							
4	Cost:		Total: 1152920.02					
а	Estimated	Total: 1152920.02		Office: 999931.56 Users: 152988.				
b	Actual Expenditure	Total: 1152920.02	Office: 999931.56 Users: 152988.46 C					
5	Objectives:	a) to prevent river ba b) to protect the susp	-	tlement & cor	nserve agriculti	ural land		
6	Technique Applied:	1.5m*1m*0.5m=46	a) Structural: Gabion Spur Construction (Gabion Box 131 Nos; Box size 1.5m*1m*0.5m=46 Nos.; Box size 2m*1m*1m=58 Nos.; Box size 1.5m*1m*1m=27 Nos.; were used to construct a Gabion Spur)					
7	Implementation Process:	authorities; Field Visit purchase of Gabion I Unskilled Labour cost	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	646 md						
9	Gender/Social Consideration:	Both men and wome genuine participation			e emphasis was	given to the		
10	Effect/Impact:	To some extent, strea Reduce the risk of dar Approximately 0.4 ha	nage to suspension	on bridge & se	ttlement;	ed;		
11	Benefitted HH:	Total: 100	Dalit: 35	anajati: 20	Others:	45		
12	Problem/Obsta cles Faced:	No			l			
13	Maintenance/ Sustainability:	5% amount of total pa work, if some damage	•	s been deduct	ed for the mair	tenance		
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
			User Group: Mulpani Jholunge Pul Sanrakshan Upabhkta Samiti					
15	Others; Name	User Group: Mulpani	Jholunge Pul Sanr	akshan Upabh	ıkta Samiti			
15	Others; Name of:	User Group: Mulpani Chair Person: Balak Bo		akshan Upabh	kta Samiti			
15			dr. Khadka	akshan Upabh	ıkta Samiti			





Figure 44: Mulpani River Bank Protection

1	1 Program: Water Source Protection/Conservation Pond							
2	Location: District, Rukum East /Bhur	/Rural Municipality	Ward No: 4	Pla	ce: Sakim	F/Y : 0	79/80	
	Coordinate:	Latitude: 28.60	3524	Lor	ngitude: 82.63	8795		
3	Existing Site Prob drinking water fac	lem: The water sou cilities	rce was unprotected	d and v	water tank wa	ıs damaş	ged; Lack of	
4	Cost:							
а	Estimated	Total: 594356.60	Office: 499959	.17	Users: 9439	7.42	Others:	
b	Actual Expenditure	Total: 579189.39 Office: 484791.97 Users: 94397.			7.42	Others:		
5	Objectives:		a) to protect the water source, improve water quality or its regime b) to support drinking water facilities					
6	Technique Applied:	a) Structural: I Construction						
7	Implementation Process:	authorities; Field ' purchase of Const cost; Unskilled La	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	311 md						
9	Gender/Social Consideration:		omen were equally ion of disadvantage			phasis v	was given to the	
10	Effect/Impact:	Protect the water Support drinking fa	source; improved wacilities	ater q	uality			
11	Benefitted HH:	Total: 24	Dalit: 3	Jana	ijati: 15	0	thers: 6	
12	Problem/Obsta cles Faced:	No						
13	Maintenance/ Sustainability:	5% amount of total if some damage or	l payable amount h	as bee	n deducted fo	r the ma	aintenance work,	
14	Lesson Learned:	throughout the ac possible even with The physical stru	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different tree species around the water source					
15	Others; Name of:		gaun Pahiro Rokthar	m Upal	bhokta Samiti			
		Chair Person: Karr						
		Site Incharge: Rak	esh Shahi (ASCO)					
		Watershed Manag	gement Officer: Rob	ert Ma	hara			





Figure 45: Sakim Water Source Protection

1	Program: Water S	Source Protection/Cons	servation Pond					
2	Location: District, Rukum East /Bhui	Rural Municipality:	Ward No: 5	Pla	ce: Daliwang	F/Y : 0	79/80	
	Coordinate:	Latitude: 28.59306	-1	Lon	gitude: 82.659	892		
3	Existing Site Prob	lem: The water source	e was unprotected	; Lack	of drinking wa	iter faci	lities	
4	Cost:							
а	Estimated	Total: 690045.45	Office: 525189.	73	Users: 16485	55.72	Others:	
b	Actual Expenditure	Total: 654456.19	Office: 499552.4	46	Users: 15490)3.73	Others:	
5	Objectives:	a) to protect the water source, improve water quality or its regimeb) to support drinking water facilities						
6	Technique Applied:	a) Structural: Water	a) Structural: Water Tank-2nos./ Tap-4nos./ Pipeline-1350m Construction					
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	323 md						
9	Gender/Social Consideration:	Both men and wom genuine participation			•	ohasis v	vas given to the	
10	Effect/Impact:	Protect the water so Support drinking faci	•	ater q	uality			
11	Benefitted HH:	Total: 35 D	alit: 25	Jana	jati: 5	0	thers: 5	
12	Problem/Obsta cles Faced:	No				1		
13	Maintenance/ Sustainability:	5% amount of total p if some damage occu	•	s beei	n deducted for	the ma	intenance work,	
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different tree species around the water source						
15	Others; Name of:	User Group: Daliwan Upabhokta Samiti	g Tallo Okhar Gair	a Muh	nan Sanrakshar	nTatha ⁻	Tanki Nirman	
		Chair Person: Uttam	an Nepali					
		Site Incharge: Rakes	h Shahi (ASCO)					
		Watershed Manager	ment Officer: Robe	ert Ma	hara			



Figure 46: Daliwang Water Source Protection

1	Program: Water S	Source Protection/Co	nservation Pond					
2	Location: District, Rukum East /Sisne	/Rural Municipality:	Ward No: 5	Pla	ce: Kamaldaha	F/Y : 079/80		
	Coordinate:	Latitude: 28.610	067	Lor	ngitude: 82.6239	53		
3	Existing Site Prob	lem: The kamaldaha	pond was affected	l by er	osion & sedimen	t deposition		
4	Cost:							
а	Estimated	Total: 588789.48	Office: 493459	.63	Users: 95329.8	Others:		
b	Actual Expenditure	Total: 588789.48	Office: 493459	.63	Users: 95329.8	Others:		
5	Objectives:	a) to reduce the erd b) to improve the w		ion in	the pond			
6	Technique Applied:	_	a) Structural: Stone Masonary Wall Construction (Stone Masonary Wall Construction-33.60m long)					
7	Implementation Process:	authorities; Field V purchase of Constr cost; Unskilled Lab	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation					
8	Employment:	323 md						
9	Gender/Social Consideration:	Both men and wor genuine participation			-	asis was given to the		
10	Effect/Impact:	Reduce the erosion Improve the water		n the p	oond			
11	Benefitted HH:	Total: 100	Dalit: 20	Jana	ajati: 45	Others: 35		
12	Problem/Obsta cles Faced:	No						
13	Maintenance/ Sustainability:	5% amount of total if some damage occ		as bee	n deducted for th	ne maintenance work,		
14	Lesson Learned:	throughout the act possible even with the The physical struct	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different tree species around the water source					
15	Others; Name of:	User Group: Kamal		al Nirm	nan Upabhokta S	amiti		
		Chair Person: Rosh	an Shah					
		Site Incharge: Rake	sh Shahi (ASCO)					
		Watershed Manage	ement Officer: Rob	ort Ma	hara			



Figure 47: Kamaldaha Protection Work

1	Program: Water S	Source Protection/Con	servation Pond					
2	Location: District/Rural Municipality: Rukum East /Putha Uttarganga		Ward No: 9	Pla	ce: Lahabang	F/Y : 079/80		
	Coordinate:	Latitude: 28.6791	42	Longitude: 82.76		9747		
3	Existing Site Prob settlement & agri	lem: The overflow wa	ater from the ratod	aha p	ond possess a ris	k of damage	to the	
4	Cost:							
а	Estimated	Total: 889390.01	Office: 799996.6	Office: 799996.65 Users: 89393.36		6 Othe	ers:	
b	Actual Expenditure	Total: 869522.81	Office: 782182.18				ers:	
5	Objectives:	a) to manage the overflow water from the pond b) to reduce the devastating effects on the downstream & surrounding area						
6	Technique Applied:	a) Structural: Dam Construction (9.8m*0.75m*1.75m)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	404 md						
9	Gender/Social Consideration:	Both men and won genuine participatio			•	asis was giv	en to the	
10	Effect/Impact:	Manage the overflow Reduce the risk of da	•		& agricultural la	nd		
11	Benefitted HH:	Total: 20	Palit: 4	Jana	jati: 12	Others: 4	1	
12	Problem/Obsta cles Faced:	Transportational diff	ficulties; One of the	remo	ote area of Lumb	ini Province		
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.						
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different tree species around the water source						
15	Others; Name of:	User Group: Kharaw		etra Sa	nrakshan Upabl	nokta Samiti		
		Chair Person: Dewa						
		Site Incharge: Rakes	h Shahi (ASCO)					
		Watershed Manage	ment Officer: Robe	ert Ma	hara			



Figure 48: Ratodaha Protection Work

2	Program: Soil Cor		Ward No: 7	Diago Dakhagaun	F/Y : 079/80				
	Rukum East/Sisne	/Rural Municipality:	ward No: /	Place: Pakhagaun	F/Y: 0/9/80				
	Coordinate:	Latitude: 28.638428		Longitude: 82.553016					
3	Existing Site Prob	lem: The Landslide p	ossess a risk of dan	amage to the rural road and agricultural land					
4	Cost:								
а	Estimated	Total: 1128309.61	Office: 999990.21	Users: 128319.	Others:				
b	Actual Expenditure	Total: 1128309.61	Office: 999990.22	Users: 128319.	40 Others:				
5	Objectives:	·	a) to reduce soil erosion and mass movement from landslideb) to reduce devastating effects on the downstream and surrounding area						
6	Technique Applied:	2m*1m*1m=44Nos	a) Structural: Gabion Retaining Wall Construction (Gabion Box 98 Nos; Box size 2m*1m*1m=44Nos., Box size 1.5m*1m*1m=54Nos. were used to construct 27m long & 3m high Gabion Retaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskille Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	646 md							
9	Gender/Social Consideration:		Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups						
10	Effect/Impact:	Reduce the risk of d	amage to the rural	vement has been red road; 0.15 ha of agricultu					
11	Benefitted HH:	Total: 40	Dalit: 10	Janajati: 20	Others: 10				
12	Problem/Obsta cles Faced:	No	No						
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
15	Others; Name	User Group: Sanokh	iola Madhara Kane	wang Sadak Sanraks	han Upabhokta Samiti				
	of:	Chair Person: Hari Budha							
			Site Incharge: Rakesh Shahi (ASCO)						
		Site Incharge: Rakes	sh Shahi (ASCO)						





Figure 49: Pakhagaun Rural Road Conservation

2	-	Rural Municipality:	Ward No:	5 Plac	e: Sani Bheri,	F/Y: 079/80			
	Rukum East /Bhu			Balu					
	Co-ordinates:	Latitude: 28.631185			gitude: 82.621343				
3	Existing Site Prob agricultural land	lem: The Sani Bheri riv	er poassess a ris	sk of dam	age to the & settl	ement upside &			
4	Cost:								
а	Estimated	Total: 1160138.64	Office: 99999	3.44	Users: 160145.20	Others:			
b	Actual Expenditure	Total: 1160138.64	Others:						
5	Objectives:		a) to prevent river bank cuttingb) to reduce the risk of damge to the settlement & agricultural land						
6	Technique Applied:	1.5m*1m*0.5m=68	a) Structural: Gabion Spur Construction (Gabion Box 154 Nos; Box size 1.5m*1m*0.5m=68 Nos.; Box size 2m*1m*1m=59 Nos.; Box size 1.5m*1m*1m=27 Nos.; were used to construct a Gabion Spur)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	646 md							
9	Gender/Social Consideration:	Both men and womer genuine participation of			More emphasis w	as given to the			
10	Effect/Impact:	To some extent, stream Reduce the risk of dam Approximately 0.8 ha	age to the settle	ement & a	gricultural land	lled;			
11	Benefitted HH:	Total: 30 D	alit: 5	Janajati: 1	.0 Other	's: 15			
12	Problem/Obsta cles Faced:	No	1		1				
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
				noula be	accompanied by	bio-engineering			
15	Others; Name		he structures.			bio-engineering			
15	Others; Name of:	techniques to sustain t	he structures. asti Tatha Nadi N			bio-engineering			
15		techniques to sustain t User Group: Baluwa Ba	he structures. esti Tatha Nadi N i Budha			bio-engineering			

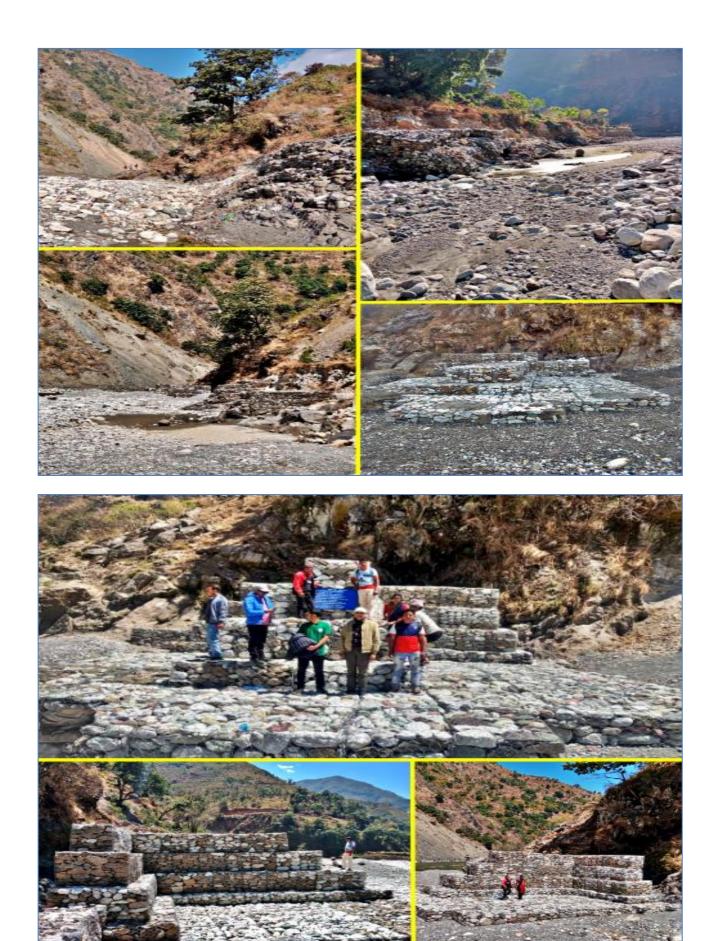


Figure 50: Baluwa Sensitive Watershed Area Protection

2.3 ACTIVITY PROFILE OF PYUTHAN DISTRICT

	Program: Gully, Landslide and Torrent Control							
2	Location: District, Pyuthan/Jhimrukh	'Rural Municipal		Ward No: 1	Place: Koladada, Dadakharka		F/Y : 079/80	
	Coordinate: Latitude: 2		.13233	.132332		itude: 83.0320	68	
3	Existing Site Problem: The landslide poss and agricultural land			sess a risk of dam	age to	the nearby set	tleme	ent , rural road
4	Cost:							
а	Estimated	Total: 1352042.24		Office: 1199967.96 Users: 1520		Users: 152074	4.28	Others:
b	Actual Total: 1347297.58 Expenditure			Office : 1195962	.54	Users: 151335	5.05	Others:
5	Objectives:	=	a) to reduce soil erosion and mass movement from landslide b) to reduce devastating effects on the downstream and surrounding area					
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 111 Nos; Box size Box size 2m*1m*1m=37 Nos.; Box size 1.5m*1m*1m=74 Nos. were used to construct 74m long Retaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	777 md						
9	Gender/Social	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups						
	Consideration:					•	hasis	was given to the
10	I -	To some extent Reduce the risk	pation c, erosi of dar		group ement ement	t has been red and rural road;	uced;	
10	Consideration:	To some extent Reduce the risk	pation c, erosi of dar	of disadvantaged on and mass mov mage to the settle of agricultural lar	group emenement ement end has	t has been red and rural road;	uced;	
	Consideration: Effect/Impact:	To some extent Reduce the risk Approximately	oation , erosi of dar 0.8 ha	of disadvantaged on and mass mov mage to the settle of agricultural lar	group emenement ement end has	t has been red and rural road; been conserve	uced;	
11	Consideration: Effect/Impact: Benefitted HH: Problem/Obsta	To some extent Reduce the risk Approximately Total: 100 No	c, erosi of dar 0.8 ha Dalit	of disadvantaged on and mass movemage to the settle of agricultural lare: 20	group ement ement d has	t has been red and rural road; been conserve	uced; d	
11 12	Consideration: Effect/Impact: Benefitted HH: Problem/Obsta cles Faced: Maintenance/	To some extent Reduce the risk Approximately Total: 100 No 5% amount of t if some damage If real needs of throughout the possible even w	oation c, erosi of dar 0.8 ha Dalit otal pa e occur f the ce activ vith sm	of disadvantaged on and mass movemage to the settle of agricultural lares: 20 ayable amount had a community are to ity implementationall external supportes constructed significant supportes constructed significant supportes and supportes constructed significant supportes const	group ement and has Jana s been o be a on proport.	t has been rediand rural road; been conserve ajati: 20 deducted for the deducted, villagoness, thus green	uced; d o the m gers r ater s	thers: 60
11 12 13	Consideration: Effect/Impact: Benefitted HH: Problem/Obsta cles Faced: Maintenance/ Sustainability: Lesson Learned: Others; Name	To some extent Reduce the risk Approximately Total: 100 No 5% amount of t if some damage If real needs of throughout the possible even w The physical st techniques to s User Group: Ko	oation c, erosi of dar 0.8 ha Dalit otal pa e occur f the ce activ vith sm tructur ustain	of disadvantaged on and mass movemage to the settle of agricultural lares: 20 ayable amount had a community are to ity implementationall external supportes constructed significant supportes constructed significant supportes and supportes constructed significant supportes const	group ement and has Jana s been o be a on proport. hould	t has been redicand rural road; been conserve ajati: 20 deducted for deducted for deducted, villagocess, thus greep be accompani	the mater sied b	thers: 60 naintenance work, readily participate achievements are y bio-engineering
11 12 13	Consideration: Effect/Impact: Benefitted HH: Problem/Obsta cles Faced: Maintenance/ Sustainability: Lesson Learned:	To some extent Reduce the risk Approximately Total: 100 No 5% amount of t if some damage If real needs of throughout the possible even w The physical st techniques to s User Group: Ko Samiti	oation c, erosi of dar 0.8 ha Dalit otal pa e occur f the ce activ vith sm tructur ustain	of disadvantaged on and mass movemage to the settle of agricultural lares: 20 Example amount has some and external supporters constructed so the structures.	group ement and has Jana s been o be a on proport. hould	t has been redicand rural road; been conserve ajati: 20 deducted for deducted for deducted, villagocess, thus greep be accompani	the mater sied b	thers: 60 naintenance work, readily participate achievements are y bio-engineering
11 12 13	Consideration: Effect/Impact: Benefitted HH: Problem/Obsta cles Faced: Maintenance/ Sustainability: Lesson Learned: Others; Name	To some extent Reduce the risk Approximately Total: 100 No 5% amount of t if some damage If real needs of throughout the possible even w The physical st techniques to s User Group: Ko	otal pae occur f the ce activ vith sm tructur ustain	of disadvantaged on and mass movemage to the settle of agricultural lares: 20 ayable amount had a settle and the settle amount had all external supported and the structures. a Pahiro Niyantrares.	group ement and has Jana s been o be a on proport. hould	t has been redicand rural road; been conserve ajati: 20 deducted for deducted for deducted, villagocess, thus greep be accompani	the mater sied b	thers: 60 naintenance work, readily participate achievements are y bio-engineering





Figure 51: Koladada Landslide Treatment

1	Program: Gully, La	andslide and Torre	nt (Control					
2		Location: District/Rural Municipality: Pyuthan/Sarumarani		ard No: 3	Place: Dhadkhola Kalakhola		, F/Y : 079/80		
	Coordinate:	Latitude: 27.900828				Longitude: 82	2		
3	Existing Site Probland	lem: The torrent p	poss	sess a risk of c	amage	e to the nearby	y settlen	nent and agricultural	
4	Cost:								
а	Estimated	Total: 1129287.5	1129287.52 Office: 999985.2		85.27	Users: 131	756.26	Others:	
b	Actual Expenditure	Total: 1124707.2	29 Office: 993666.92 Users: 131040.37		Others:				
5	Objectives:	a) to reduce soil erosion and torrent bank cutting b) to reduce devastating effects on the downstream and surrounding are				unding area			
6	Technique Applied:	1.5m*1m*1m=9	a) Structural: Gabion Embankment Construction (Gabion Box 126 Nos; Box size 1.5m*1m*1m=90 Nos.; Box size 1.5m*1m*0.50m=36 Nos. were used to construct 54m long Emabnkment)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board Placing from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	646 md	646 md						
9	Gender/Social Consideration:	Both men and v		•	-		empha	sis was given to the	
10	Effect/Impact:	Reduce the risk of	To some extent, erosion and toreent bank cutting has been reduced; Reduce the risk of damage to the settlement and agricultural land; Approximately 0.6ha of agricultural land has been conserved						
11	Benefitted HH:	Total: 60		Dalit: 30	J	anajati: 10	0	thers: 20	
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
15	Others; Name	User Group: Dha	ndk	khola Kalakhol	a Khal	nare Niyantran	Upabho	okta Samiti	
	of:	Chair Person: Ke	sha	b Acharya					
		Site Incharge: Ra	kes	sh Shahi (ASCC))				
		Watershed Man	age	ment Officer:	Rober	t Mahara			



Figure 52: Dhandkhola Kalakhola Torrent Control

1	Program: Gully, La	andslide and Torren	t Control					
2	Location: District/Municipality: Pyuthan/Pyuthan		Ward No: 3	Place:	Barkhola	F/Y : 079/80		
	Coordinate:	Latitude: 28.1124	404 Longitude			: 82.842191		
3	Existing Site Prob road and agricultu	lem: The gully formural land	nation possess a	a risk of	damage to tl	ne nearby	settlement, rural	
4	Cost:							
а	Estimated	Total: 1059996.31	Office: 9499	91.72	Users: 110	0004.59	Others:	
b	Actual Expenditure	Total: 1059996.31	31 Office: 949991.72 Users: 1		Users: 110	0004.59	Others:	
5	Objectives:		a) to reduce soil erosion and check the gully b) to reduce devastating effects on the downstream and surrounding area					
6	Technique Applied:	1.5m*1m*1m=76	a) Structural: Gabion Check-Dam Construction (Gabion Box 109 Nos; Box size 1.5m*1m*1m=76 Nos.; Box size 1.5m*1m*0.50m=33 Nos. were used to construct 2 Nos. of check-dam)					
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Box, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	618 md	618 md					
9	Gender/Social Consideration:		Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups					
10	Effect/Impact:	Reduce the risk of	To some extent, erosion and gully formation has been controlled; Reduce the risk of damage to the settlement and rural road; Approximately 0.6 ha of agricultural land has been conserved					
11	Benefitted HH:	Total: 40	Dalit: 20	J	anajati: 7		Others: 13	
12	Problem/Obsta cles Faced:	No						
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.						
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
15	Others; Name	User Group: Jumr	i Khola Sanraks	han Upa	bhokta Sami	ti		
	of:	Chair Person: Rab	indra Pandey					
		Site Incharge: Rak	esh Shahi (ASC	O)				
	1	Watershed Management Officer: Robert Mahara						



Figure 53: Barkhola Gully Treatment

1		andslide and Torrent Co						
2	Location: District, Pyuthan/Jhimrukh		Ward No: 7	Pla	ace: Tusara	F/`	Y : 079/80	
	Coordinate:	Latitude: 28.14426	66	Lo	ngitude: 82.955	5135		
3	Existing Site Prob and agricultural la	lem: The landslide poss and	sess a risk of dam	age to	the nearby set	ttleme	nt, rural road	
4	Cost:							
а	Estimated	Total: 1114402.56	Office: 999992	.70	Users: 11440	9.86	Others:	
b	Actual Expenditure	Total: 1114402.56	Office: 999992	.70	Users: 11440	9.86	Others:	
5	Objectives:	a) to reduce soil erosio b) to reduce devastatii		-		roundi	ng area	
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 90 Nos; Box size 2m*1m*1m=52 Nos.; Box size 1.5m*1m*1m=38 Nos. were used to construct 16m long & 7m long Gabion Retaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	650 md						
9	Gender/Social Consideration:	Both men and wome genuine participation (•	hasis v	was given to the	
10	Effect/Impact:	To some extent, erosic Reduce the risk of dam Approximately 0.45 ha	nage to the rural	road	& settlement;			
11	Benefitted HH:	Total: 40 Da	alit: 10	Janaja	ati:	Ot	hers: 30	
12	Problem/Obsta cles Faced:	No	1					
13	Maintenance/ Sustainability:	5% amount of total pa if some damage occurs	•	s beei	n deducted for	the ma	aintenance work,	
14	Lesson Learned:	If real needs of the conthroughout the activity possible even with small the physical structure techniques to sustain the sustain the physical structure.	ty implementational external supposes constructed s	on pro ort.	ocess, thus gre	ater a	chievements are	
15	Others; Name	User Group: Tushare k	(hola Chhipchhip	e Pahi	iro Niyantran U	pabho	kta Samiti	
	of:	Chair Person: Ritu Giri						
		Clian Person. Mita Oli i						
		Site Incharge: Rakesh						

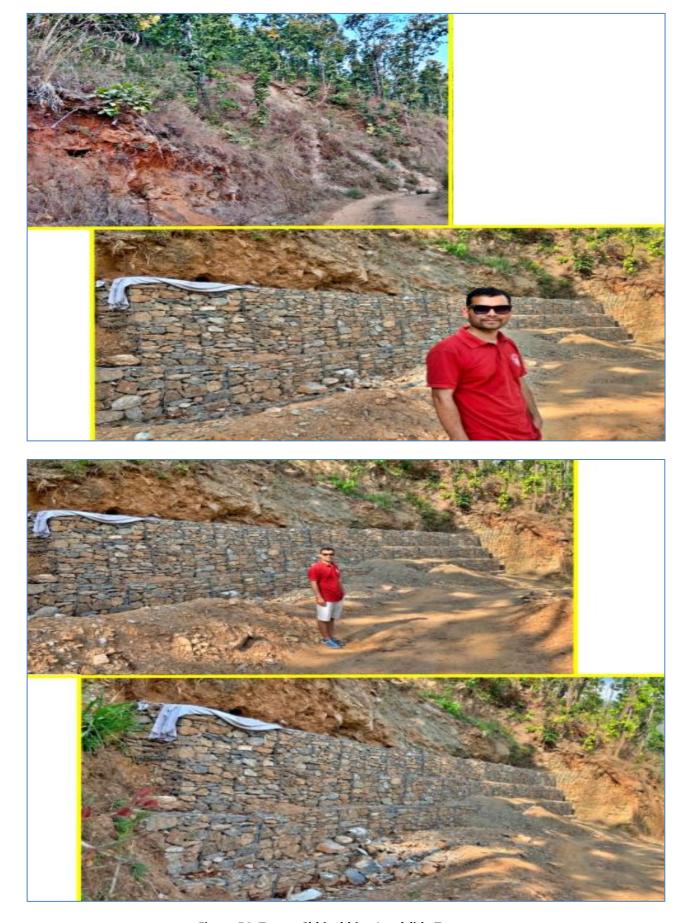


Figure 54: Tusara Chhipchhipe Landslide Treatment

1	Program: Gully, La	andslide and Torrent	Control						
2	Location: District, Pyuthan/Jhimrukh	/Rural Municipality:	Ward No: 7	Place: Kaprakhola	F/Y : 079/80				
	Coordinate:	Latitude: 28.15751	7	Longitude: 82.96652	8				
3	Existing Site Prob and agricultural la	· ·	ossess a risk of dar	nage to the nearby set	tlement, rural road				
4	Cost:								
а	Estimated	Total: 913228.03	Office: 799980.4	3 Users: 113247.6	0 Others:				
b	Actual Expenditure	Total: 913228.03	Office: 799980.43 Users: 113247.60		Others:				
5	Objectives:		a) to reduce soil erosion and mass movement from landslide b) to reduce devastating effects on the downstream and surrounding area						
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 66 Nos; Box size 2m*1m*1m=44 Nos. & Box size 1.5m*1m*1m=22 Nos. were used to construct 22m long & 4m high Gabion Retaining Wall							
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	517 md							
9	Gender/Social Consideration:	Both men and wor genuine participation			hasis was given to the				
10	Effect/Impact:	Reduce the risk of d	amage to the sett	vement has been reduement and rural road; and has been conserve					
11	Benefitted HH:	Total: 40	Dalit: 10	Janajati: 5	Others: 25				
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of total if some damage occ	• •	as been deducted for	the maintenance work,				
14	Lesson Learned:	throughout the act possible even with s	ivity implementat small external suppures constructed	ion process, thus gre port.	gers readily participate ater achievements are ied by bio-engineering				
15	Others; Name	User Group: Kaprek	hola Simpani Mot	orbato Bhu-sanraksha	n Upabhokta Samiti				
	of:	Chair Person: Sudar	shan G.C.						
		Site Incharge: Rakes	sh Shahi (ASCO)						
		Watershed Manage	ement Officer: Rob	ert Mahara					





Figure 55: Kaprakhola Landslide Treatment

2	_	/Rural Municipality:	Ward No: 1	Plac	ce: Jawune	F/Y: (F/Y : 079/80			
	Pyuthan/Jhimrukh Coordinate:	Latitude: 28.12322		Lon	gitude: 82.041	266				
			10116							
3	_	lem: The landslide and road and agricultural l	•	posse	ess a risk of dar	nage to	the nearby			
4	Cost:						_			
а	Estimated	Total: 1664695.02	2 Office: 1499997.99 Users: 164697.03 Others:							
b	Actual Expenditure	Total: 1664695.02	Office: 1499997	499997.99 Users: 164697.03 Others:						
5	Objectives:	1 · · ·	a) to reduce soil erosion and mass movement from landslide and gully b) to reduce devastating effects on the downstream and surrounding area							
6	Technique Applied:	Nos; Box size 2m*1 1.5m*1m*0.5m=10	A) Structural: Gabion Retaining Wall/Check-Dam Construction (Gabion Box 144 Nos; Box size 2m*1m*1m=87 Nos.; Box size 1.5m*1m*1m=47 Nos.; Box size 1.5m*1m*0.5m=10 Nos. were used to construct 22m long/5m high, 12m ong/3m high GabionRetaining Wall and 9m long/2m high Gabion Check-dam)							
7	Implementation Process:	authorities; Field Vis purchase of Gabion E Unskilled Labour cos	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	975 md								
9	Gender/Social Consideration:	Both men and wom genuine participation				phasis	was given to the			
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.7 ha	mage to the settle	emen [.]	t and rural roa	d;				
11	Benefitted HH:	Total: 45	Dalit: 10		Janajati: 20	C	Others: 15			
12	Problem/Obsta cles Faced:	No			I					
13	Maintenance/ Sustainability:	5% amount of total p if some damage occu	•	as bee	en deducted fo	r the m	aintenance work,			
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.								
		The physical structu	res constructed	should	d be accompa	inied by	y bio-engineering			
15	Others; Name	The physical structu	res constructed : the structures.			inied by	y bio-engineering			
15	Others; Name of:	The physical structu techniques to sustain	res constructed in the structures. Sadak Sanrakshar			inied by	y bio-engineering			
15	<u>-</u>	The physical structu techniques to sustain User Group: Jawune	res constructed in the structures. Sadak Sanrakshar hapa Chhetri			inied by	y bio-engineering			





Figure 56: Jawune Landslide Treatment

1	Program: Gully, La		1	Dia	an Chatachaus	F/V: 070/00		
2	Pyuthan/Jhimrukh	/Rural Municipality:	Ward No: 1	Plac	ce: Ghatachaur	F/Y : 079/80		
	Coordinate:	Latitude: 28.109773	3	Lon	gitude: 82.047257			
3	Existing Site Prob playgraound and	lem: The landslide pos agricultural land	ssess a risk of dan	nage t	o the nearby settle	ement, rural road ,		
4	Cost:							
а	Estimated	Total: 1721929.33	Office: 1499990	.15	Users: 221939.18	Others:		
b	Actual Expenditure	Total: 1721929.33	Office: 1499990	Office: 1499990.15 Users: 221939.18				
5	Objectives:	a) to reduce soil eros b) to reduce devastat				unding area		
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 135 Nos; Box size 2m*1m*1m=81 Nos.; Box size 1.5m*1m*1m=54 Nos. were used to construct 54m long/3m high GabionRetaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	975 md						
9	Gender/Social Consideration:	Both men and wome genuine participation				sis was given to the		
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.95h	mage to the settl	emen	t, playground and	rural road;		
11	Benefitted HH:	Total: 45	Dalit: 10		Janajati: 20	Others: 15		
12	Problem/Obsta cles Faced:	No				1		
13	Maintenance/ Sustainability:	5% amount of total p if some damage occu		as bee	en deducted for the	e maintenance work,		
14	Lesson Learned:	If real needs of the throughout the activ possible even with sn The physical structu techniques to sustain	rity implementati nall external supp res constructed	ion proort.	ocess, thus greate	er achievements are		
15	Others; Name	User Group: Ghatach	aur Pahiro Niyan	tran U	Ipabhkota Samiti			
	of:	Chair Person: Kapil G	.C.					
		Site Incharge: Rakesh Shahi (ASCO)						
		Site ilicilarge. Nakesi						

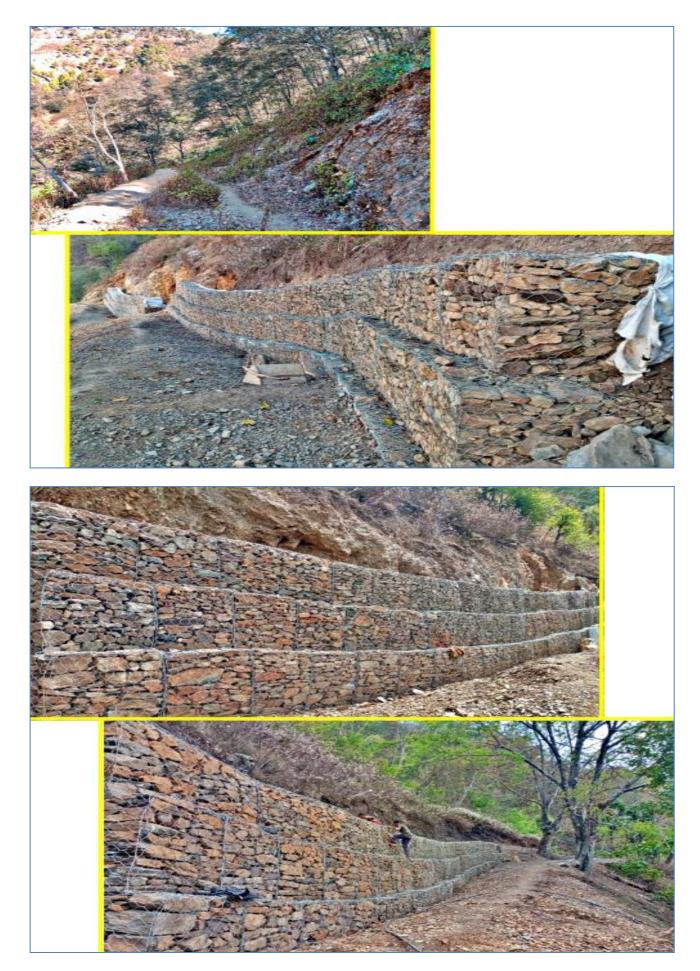


Figure 57: Ghatchaur Landslide Treatment

1	Program: Gully, L	andslide and Torrent Co	ontrol					
2	Location: District, Pyuthan/Airawati	/Rural Municipality:	Ward No: 5	Place: Pyarpa	atti F/Y	': 079/80		
	Coordinate:	Latitude: 28.042906		Longitude: 82	2.867691			
3	Existing Site Prob and agricultural la	lem: The landslide pos	sess a risk of dan	nage to the nea	rby settlen	nent, rural road		
4	Cost:							
а	Estimated	Total: 796937.98	Office: 699980.20 Users: 96957.79 Others:					
b	Actual Expenditure	Total: 790500.82	Office: 694808.9	Users: 9	Others:			
5	Objectives:		to reduce soil erosion and mass movement from landslide to reduce devastating effects on the downstream and surrounding area					
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 80 Nos; Box size 2m*1m*1m=20 Nos.; Box size 1.5m*1m*1m=60 Nos. were used to construct 40m long GabionRetaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	452 md						
9	Gender/Social Consideration:	Both men and wome genuine participation			e emphasi	s was given to the		
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.9 ha	mage to the settl	ement and rura	al road;	;		
11	Benefitted HH:	Total: 20	Dalit: 3	Janajati	: 15	Others: 2		
12	Problem/Obsta cles Faced:	No			I			
13	Maintenance/ Sustainability:	5% amount of total particles if some damage occur	-	as been deduct	ed for the	maintenance work,		
14	Lesson Learned:	If real needs of the throughout the activ possible even with sn The physical structu techniques to sustain	rity implementati nall external supp res constructed	on process, th ort.	us greater	achievements are		
15	Others; Name	User Group: Siundad	a Pahir Roktham	Upabhokta San	niti			
	of:	Chair Person: Num Be	dr. Rana					
	1	Site Incharge: Rakesh Shahi (ASCO)						
		Site Incharge: Rakesh	Shahi (ASCO)					



Figure 58: Siundada Landslide Treatment

1	Program: Gully, L	andslide and Torrent C	ontrol						
2	Location: District Pyuthan/Naubahi	/Rural Municipality: ni	Ward No: 7	Plac	e: Daringe	F/Y : 079/80			
	Coordinate:	Latitude: 28.214154,	28.215791	Long	gitude: 82.872	707, 82	2.272590		
3	Existing Site Prob and agricultural la	lem: The landslide pos and	ssess a risk of dar	nage to	o the nearby s	ettleme	ent, rural road		
4	Cost:								
а	Estimated	Total: 910775.11	Office: 799986.	98	Users: 11078	8.13	Others:		
b	Actual Expenditure	Total: 910775.11	Office: 799986.	i.98 Users: 110788.13			Others:		
5	Objectives:		to reduce soil erosion and mass movement from landslide to reduce devastating effects on the downstream and surrounding area						
6	Technique Applied:	2m*1m*1m=45 Nos.	a) Structural: Gabion Retaining Wall Construction (Gabion Box 75 Nos; Box size 2m*1m*1m=45 Nos.; Box size 1.5m*1m*1m=30 Nos.; were used to construct 30m long/3m high GabionRetaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	520 md							
9	Gender/Social Consideration:	Both men and wom genuine participation				phasis	was given to the		
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.7 ha	mage to the sett	lement	and rural road	d;			
11	Benefitted HH:	Total: 30	Dalit: 7		Janajati: 15	C	Others: 8		
12	Problem/Obsta cles Faced:	No				l			
13	Maintenance/ Sustainability:	5% amount of total p if some damage occu		as bee	n deducted fo	r the m	aintenance work,		
14	Lesson Learned:	If real needs of the throughout the activ possible even with sn The physical structu techniques to sustain	vity implementat nall external suppres constructed	ion pro	ocess, thus gr	eater a	achievements are		
15	Others; Name	User Group: Daringe	Basti Badhi Pahir	o Niya	ntran Upabho	kta San	niti		
	of:	Chair Person: Dharar	n Bdr. G.C.						
	Î.	Site Incharge: Rakesh Shahi (ASCO)							
		Site Incharge: Rakesh	n Shahi (ASCO)						





Figure 59: Daringe Landslide Treatment

1	Program: Gully, La	andslide and Torrent Co	ontrol						
2	Location: District, Pyuthan/Naubahi	/Rural Municipality : ni	Ward No: 3	Plac	ce: Dhamche	F/Y:	079/80		
	Coordinate:	Latitude: 28.248594	•	Lon	gitude: 82.9420	.084			
3	Existing Site Prob and agricultural la	lem: The landslide pos	ssess a risk of dam	age t	o the nearby se	ettleme	ent, rural road		
4	Cost:								
а	Estimated	Total: 558325.00	Office: 499982.0	0	Users: 58343.	.00	Others:		
b	Actual Expenditure	Total: 558325.00	Office: 499982.0	00 Users: 58343.00			Others:		
5	Objectives:		a) to reduce soil erosion and mass movement from landslide b) to reduce devastating effects on the downstream and surrounding area						
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 45 Nos; Box size 2m*1m*1m=27 Nos.; Box size 1.5m*1m*1m=18 Nos.; were used to construct 10m long/5m high GabionRetaining Wall)							
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	325 md							
9	Gender/Social Consideration:	Both men and wome genuine participation				ohasis	was given to the		
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.1 ha	mage to the settle	emen	t and rural road	l;			
11	Benefitted HH:	Total: 45	Dalit:		Janajati: 15	(Others: 30		
12	Problem/Obsta cles Faced:	No			I	L			
13	Maintenance/ Sustainability:	5% amount of total p if some damage occu	•	is bee	en deducted for	the m	aintenance work,		
14	Lesson Learned:	If real needs of the throughout the active possible even with some the physical structure techniques to sustain	rity implementationall external supported series constructed s	on pr ort.	ocess, thus gr	eater a	achievements are		
15	Others; Name	User Group: Dhamch	e Pahiro Niyantra	n Upa	abhokta Samiti				
	of:	Chair Person: Gange	Giri						
		Site Incharge: Rakesh	Shahi (ASCO)						
		Watershed Managen	nent Officer: Robe	ert M	ahara				
	•	•							





Figure 60: Dhamche Landslide Treatment

1	Program: Gully, L	andslide and Torrent Co	ontrol							
2	Location: District, Pyuthan/Naubahi	/Rural Municipality: ni	Ward No: 2	Place: Jugekhola, Ligha	F/Y: 079/80					
	Coordinate:	Latitude: 28.244847	7	Longitude: 82.906	579					
3	Existing Site Prob and agricultural la	lem: The landslide pos	sess a risk of dam	nage to the nearby s	ettlement, rural road					
4	Cost:									
а	Estimated	Total: 565191.86	Office: 499962.4	Users: 65229	0.43 Others:					
b	Actual Expenditure	Total: 565191.86	Office: 499962.4	Users: 65229	Others:					
5	Objectives:		a) to reduce soil erosion and mass movement from landslide b) to reduce devastating effects on the downstream and surrounding area							
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 46 Nos; Box size 2m*1m*1m=30 Nos.; Box size 1.5m*1m*1m=16 Nos. were used to construct 16m long/3m high GabionRetaining Wall)								
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	325md								
9	Gender/Social Consideration:	Both men and wome genuine participation			phasis was given to the					
10	Effect/Impact:	To some extent, erosi Reduce the risk of da Approximately 0.2 ha	mage to the settle	ement and rural roa	d;					
11	Benefitted HH:	Total: 30	Dalit: 7	Janajati: 15	Others: 8					
12	Problem/Obsta cles Faced:	No		l						
13	Maintenance/ Sustainability:	5% amount of total particles if some damage occur		as been deducted fo	r the maintenance work,					
14	Lesson Learned:	throughout the activ possible even with sm	rity implementati nall external supp res constructed s	on process, thus goort.	agers readily participate reater achievements are inied by bio-engineering					
15	Others; Name	User Group: Juge Kho	ola Pahiro Niyantr	an Upabhokta Sami	ti					
	of:	Chair Person: Yam Bo	lr. Gharti Magar							
		Site Incharge: Rakesh	Shahi (ASCO)	Site Incharge: Rakesh Shahi (ASCO)						



Figure 61: Jugekhola Landslide Treatment

1	,	andslide and Torrent Co	1						
2	Pyuthan/Naubahi		Ward No: 1		ce: Sijwang	-	079/80		
	Coordinate:	Latitude: 28.293945	5	Lon	gitude: 82.937	671			
3	Existing Site Prob and agricultural la	lem: The landslide pos and	ssess a risk of dam	nage t	o the nearby se	ettleme	ent, rural road		
4	Cost:								
а	Estimated	Total: 1684344.55	Office: 1499983	499983.38 Users: 184361.18 Others:					
b	Actual Expenditure	Total: 1676469.89	Office: 1493370	.493370.55 Users: 183099.33 Others:					
5	Objectives:		a) to reduce soil erosion and mass movement from landslide b) to reduce devastating effects on the downstream and surrounding area						
6	Technique Applied:	2m*1m*1m=76 Nos. Nos. were used to	A) Structural: Gabion Retaining Wall Construction (Gabion Box 142 Nos; Box size 2m*1m*1m=76 Nos.; Box size 1.5m*1m*1m=58 Nos.; Box size 1.5m*1m*0.5m=8 Nos. were used to construct 44m long/3m high GabionRetaining Wall & 10m ong/2mhigh Gabion Check-dam)						
7	Implementation Process:	authorities; Field Vis purchase of Gabion B Unskilled Labour cos	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	970 md							
9	Gender/Social Consideration:	Both men and wome genuine participation				phasis	was given to the		
10	Effect/Impact:	To some extent, eros Reduce the risk of da Approximately 0.2 ha	mage to the settle	emen [.]	t and rural road	d;			
11	Benefitted HH:	Total: 45	Dalit: 10		Janajati: 20	C	Others: 15		
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of total p if some damage occu	•	as bee	en deducted for	r the m	aintenance work,		
14	Lesson Learned:	If real needs of the throughout the activ possible even with sn The physical structu techniques to sustain	rity implementati nall external supp res constructed	on proort.	ocess, thus gr	eater a	achievements are		
15	Others; Name	User Group: Sijwang	Pahiro Niyantran	Upab	hokta Samiti				
	of:	User Group: Sijwang Pahiro Niyantran Upabhokta Samiti Chair Person: Gakule Budha Magar							
	01.	Chair Person: Gakule	Budha Magar						
		Chair Person: Gakule Site Incharge: Rakesh							

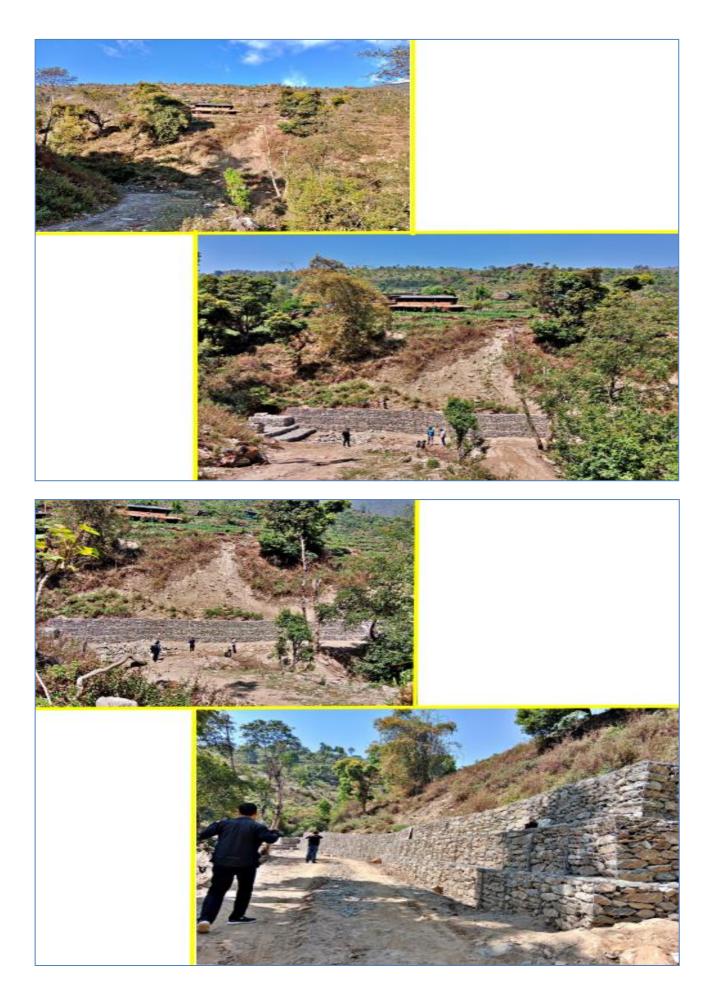


Figure 62: Sijwang Landslide Treatment

1	Program: Emerge	ncy Landsllide Protect	ion							
2	Location: District, Pyuthan/Jhimrukh	Rural Municipality:	Ward No: 7	Place: Chhatipata	F/Y : 079/80					
	Coordinate:	Latitude: 28.14799	95	Longitude: 82.946420	0					
3	Existing Site Prob	lem: The landslide po	ssess a risk of dam	age to the settlement	and agricultural land					
4	Cost:									
а	Estimated	Total: 1130580.13	Office: 999993.35	Users: 130586.78	Others:					
b	Actual Expenditure	Total: 1125866.91	Office: 996113.73	Users: 129753.18	Others:					
5	Objectives:			ovement from landslide ne downstream and surrounding area						
6	Technique Applied:	2m*1m*1m=8 Nos.;	a) Structural: Gabion Retaining Wall Construction (Gabion Box 115 Nos; Box size 2m*1m*1m=8 Nos.; Box size 1.5m*1m*1m=80 Nos.; Box size 1.5m*1m*0.50m=27 Nos. were used to construct 27m long/2m high & 35m long Gabion Retaining Wall)							
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled abour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	648 md								
9	Gender/Social Consideration:	Both men and won genuine participation		involved; More empha groups	asis was given to the					
10	Effect/Impact:	Reduce the risk of da	amage to the settle	rement has been reducement and rural road; and has been conserve	·					
11	Benefitted HH:	Total: 40	Dalit: 10	Janajati:	Others: 30					
12	Problem/Obsta cles Faced:	No								
13	Maintenance/ Sustainability:	5% amount of total prif some damage occurrences		s been deducted for th	ne maintenance work,					
14	Lesson Learned:	throughout the acti possible even with s	vity implementation with implementation with the constructed sures							
15	Others; Name	User Group: Tushare	e Khola Chhipchhip	e Pahiro Roktham Upa	bhokta Samiti					
	of:	Chair Person: Ritu G	iri							
		Site Incharge: Rakes	h Shahi (ASCO)							
		Watershed Manage	ment Officer: Robe	ert Mahara						



Figure 63: Chhatipata Landslide Treatment

1	Program: Emerge								
2	Pyuthan/Mandab		Ward No: 3	Place: Chiuria Paharo	F/Y : 079/80				
	Coordinate:	Latitude: 28.04199	90	Longitude: 82.76785					
3	~	lem: The landslide cand agricultural land	used by river bank	river bank cutting possess a risk of damage					
4	Cost:								
а	Estimated	Total: 797738.83	Office: 699962.15	Users: 97776.67	Others:				
b	Actual Expenditure	Total: 797738.83	Office: 699962.15	Users: 97776.67	Others:				
5	Objectives:			ting and mass moveme downstream and surro					
6	Technique Applied:	2m*1m*1m=33Nos.	a) Structural: Gabion Retaining Wall Construction (Gabion Box 77 Nos; Box size 2m*1m*1m=33Nos.; Box size 1.5m*1m*1m=22 Nos.; Box size 1.5m*1m*0.50m=22 Nos. were used to construct 22m long/3m high Gabion Retaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour cost, Hoarding Board from Program cost; Unskilled abour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	455 md							
9	Gender/Social Consideration:	Both men and wom genuine participatio		nvolved; More empha groups	sis was given to the				
10	Effect/Impact:	reduced; Reduce the risk of da	amage to the irriga	ting and mass moveme tion canal and agricultund has been conserved					
11	Benefitted HH:	Total: 30	Dalit: 10	Janajati: 5	Others: 15				
12	Problem/Obsta cles Faced:	No							
13	Maintenance/	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
	Sustainability:		•	s been deddcted for the	e maintenance work,				
14	Sustainability: Lesson Learned:	if some damage occi If real needs of the throughout the acti possible even with s	community are to vity implementation mall external supporters constructed s	be addressed, village on process, thus great	rs readily participate er achievements are				
14	Lesson Learned: Others; Name	if some damage occiling if real needs of the throughout the actipossible even with some of the physical structure techniques to sustain	community are to vity implementation mall external supporters constructed so the structures.	o be addressed, village on process, thus great ort.	rs readily participate er achievements are d by bio-engineering				
	Lesson Learned:	if some damage occiling if real needs of the throughout the actipossible even with some of the physical structure techniques to sustain	community are to vivity implementation mall external supporters constructed so the structures. Paharo Pahiro Rok	o be addressed, village on process, thus great ort. should be accompanied	rs readily participate er achievements are d by bio-engineering				
	Lesson Learned: Others; Name	if some damage occilified real needs of the throughout the actipossible even with some of the physical structure techniques to sustain the physical structure. User Group: Chiure	community are to vity implementation mall external supporters constructed son the structures. Paharo Pahiro Rokan Prasad Poudel	o be addressed, village on process, thus great ort. should be accompanied	rs readily participate er achievements are d by bio-engineering				



Figure 64: Chiuria Paharo Landslide Treatment

1	Program: River/St	tream Bank Protec	ction						
2	Location: District, Pyuthan/Pyuthan	• •		Ward No: 3		ce: Jhimrukh la, Tikuri		F/Y: 079/80	
	Co-ordinates:	Latitude: 28.11	5232	1	Lon	gitude: 82.87	6447		
3	Existing Site Probagricultural land	lem: The Jhimrul	kh Khola p	ossess a risk	of dama	ge to the sett	tlement	, rural road &	
4	Cost:								
а	Estimated	Total: 1327611.	63 C	Office: 119997	6.24	Users: 1276	35.39	Others:	
b	Actual Expenditure	Total: 1323533.	12 C	Office: 119626	52.00	Users: 1272	271.12	Others:	
5	Objectives:	a) to prevent ero b) to reduce the			_	nstream & su	rroundi	ng area	
	Technique Applied:	size 2m*1m*1 3m*1m*1m=46	m*1m*1m=46 Nos.; 3m*1m*0.50m=10 Nos.were used to construct 26m ong/3m high Gabion Embankment with stud)						
7	Implementation Process:	authorities; Field purchase of Ga Unskilled Labou	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	777 md	777 md						
9	Gender/Social Consideration:	Both men and v				More empha	isis was	given to the	
10	Effect/Impact:	To some extent, Reduce the risk Approximately 2	of damage	to the settle	ment & r	ural road;	trolled;		
11	Benefitted HH:	Total: 100	Dalit	: 20 J a	anajati: 3	35 (Others:	45	
12	Problem/Obsta cles Faced:	No							
13	Maintenance/ Sustainability:	5% amount of to work, if some da			been de	educted for th	ne main	tenance	
14	Lesson Learned:	If real needs of throughout the possible even w The physical str techniques to su	activity in ith small extures co	nplementatio xternal suppo onstructed sh	n proces rt.	s, thus great	er achi	evements are	
15	Others; Name of:	User Group: Jhir	mrukh Jala	dhaar Kshetra	a Sanrak	shan Upabho	kta Sam	iti	
	JI.	Chair Person: Ka	amal Raj Ri	jal					
		Site Incharge: Rakesh Shahi (ASCO)							
		Site ilicitarge. IV	akesii Silai	ni (ASCO)					

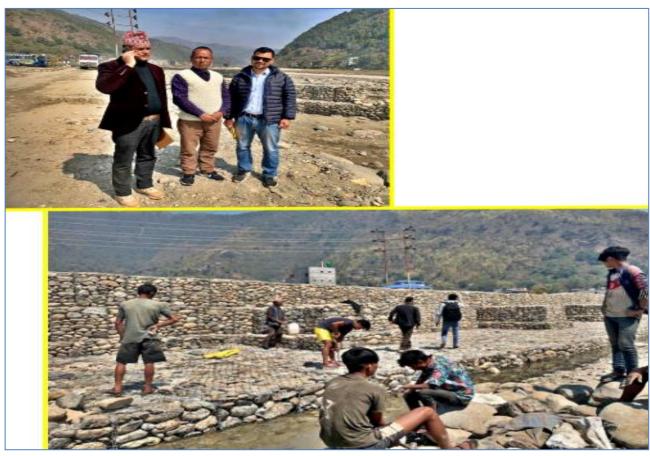




Figure 65: Jhimrukh River Bank Protection

2	Location: District	Ward No	: 1 Pla	ce: Arang Khola,	F/Y : 079/80				
_	Pyuthan/Sworgad	• •	vvara ive	Too	•	171.075/00			
	Co-ordinates:	Latitude: 28.054062	<u> </u>		gitude: 82.678659)			
3	_	olem: The Arang Khol	a possess a ris	k of dama	ge to the settlem	ent, suspension			
	bridge & agricultu	rai iand							
4	Cost:								
a	Estimated	Total: 553756.93	Office: 4999	78.24	Users: 53778.69	Others:			
b	Actual Expenditure	Total: 553756.93	Office: 4999		Others:				
5	Objectives:	a) to prevent erosion & river bank cutting b) to reduce the devastating effects on the downstream & surrounding area							
	Technique Applied:	a) Structural: Gabion Embankment Construction (Gabion Box 60 Nos; Box size 2m*1m*1m=12 Nos.; Box size 1.5m*1m*1m=24 Nos.; Box size 1.5m*1m*0.50m=24 Nos. were used to construct 24m long/2m high Gabion Embankment)							
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	325 md							
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups							
10	Effect/Impact:	To some extent, river bank cutting and erosion has been controlled; Reduce the risk of damage to the settlement & suspension bridge; Approximately 0.4 ha of agricultural land has been conserved							
11	Benefitted HH:	Total: 8	Dalit:	Janajati:	Othe	rs: 8			
12	Problem/Obsta cles Faced:	No			<u> </u>				
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
				should be	accompanied by	bio-engineering			
15	Others; Name		the structures.			bio-engineering			
15	Others; Name of:	techniques to sustain	the structures.			bio-engineering			
15		techniques to sustain User Group: Arang Kh	the structures. nola Niyantran L i Thapa Chhetri			bio-engineering			





Figure 66: Todyar Arang Khola River Bank Protection

2	Location: District,	Ward No:	7 Pla	ce: Chhatipata	F/Y: 079/80				
	Pyuthan/Jhimrukh Co-ordinates:	1 Latitude: 28.148436		Lon	gitudo: 92 046E99	,			
3					gitude: 82.946588				
3	land	lem: The Lankuri Khola possess a risk of damage to the settlement & agr							
4	Cost:								
а	Estimated	Total: 1114575.23	Office: 99991	Office: 999910.50 Users: 114664.7					
b	Actual Expenditure	Total: 1114575.23	Office: 99991	Office: 999910.50 Users: 114664.74					
5	Objectives:	a) to prevent erosion & stream bank cuttingb) to reduce the devastating effects on the downstream & surrounding area							
	Technique Applied:	a) Structural: Gabion Embankment Construction (Gabion Box 114 Nos; Box siz 2m*1m*1m=24 Nos.; Box size 1.5m*1m*1m=45 Nos.; Box size 15m*1m*0.50m=45 Nos. were used to construct 45m long/2m high Gabion Embankment)							
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	650 md							
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups							
10	Effect/Impact:	To some extent, river Reduce the risk of da Approximately 0.8 ha	mage to the settle	ement;		ed;			
11	Benefitted HH:	Total: 30	Dalit:	Janajati:	Other	r s: 30			
12	Problem/Obsta cles Faced:	No			"				
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.							
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.							
15	Others; Name User Group: Chhatipata ankuri Khola Nadi Niyantran Upabhokta Samit								
15	. c								
15	of:	Chair Person: Bishnu	Prasad Neupane						
15	of:	Chair Person: Bishnu Site Incharge: Rakesh	•						

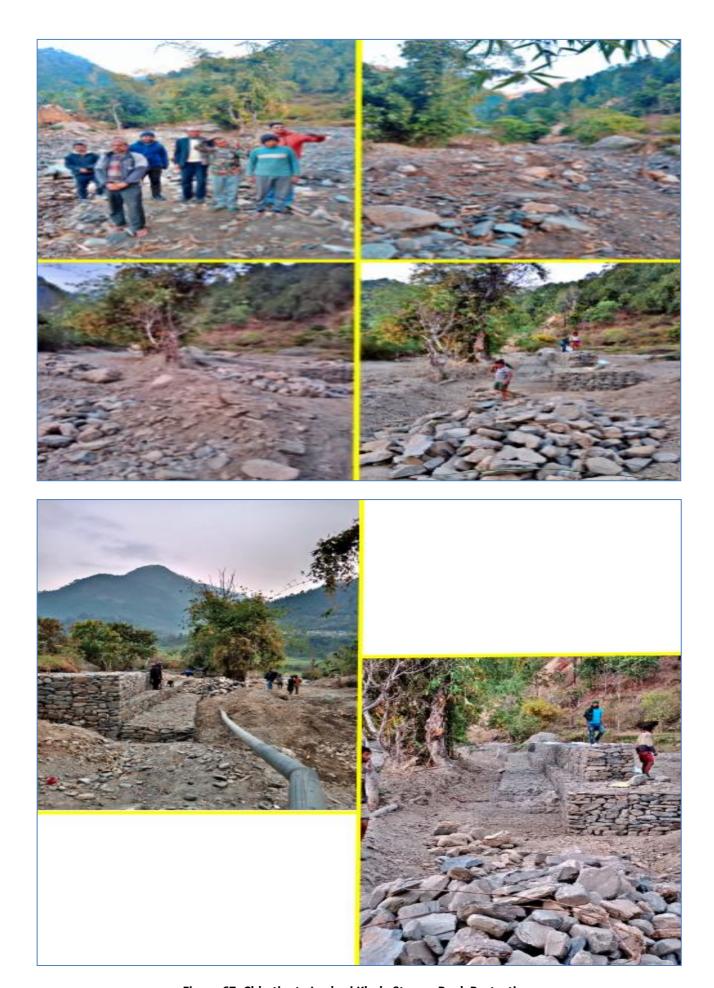


Figure 67: Chhatipata Lankuri Khola Stream Bank Protection

1	Program: Water Source Protection/Conservation Pond									
2	Location: District/Municipality: Pyuthan/Pyuthan			Ward No: 1		Place: Khairakot		F/Y : 079/80		
	Coordinate:		ı	ongitude: 82.8	356174					
3	Existing Site Prob	llem: The Pond constructed by the office in				previous year possess a risk for children				
4	Cost:									
а	Estimated	Total: 335538.88	0	ffice: 299882	.65	Users: 35656	5.23	Others:		
b	Actual Expenditure	Total: 337561.71	0	office: 298844	.06	Users: 38717	Others:			
5	Objectives:	a) to harvest the runoff and source waterb) to use the harvested runoff and source water for irrigation, livestock and other domestic purposesc) to reduce the risk of drowning for the chidren								
6	Technique Applied:	a) Structural: Masonary Wall Construction (L= 60m, B= 0.4.40m, H= 0.27m; Water Holding Capacity=226 m3); Chainink Fence Construction (60m long/1m high)								
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Construction Materials, Skilled Labour, Hoarding Board Placing from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation								
8	Employment:	194 md								
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups								
10	Effect/Impact:	Properly harvest Reduce the risk f				er;				
11	Benefitted HH:	Total: 50	Dalit:	10	Janaja	ti: 12	Other	rs: 28		
12	Problem/Obsta cles Faced:	No		I						
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.								
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by plantation of different tree species which supports for income generation.								
15	Others; Name of:	User Group: Khar			larmat	Tatha Nirman S	Samiti			
		Chair Person: Chitra Bdr Basnet								
		Site Incharge: Rakesh Shahi (ASCO)								
		Watershed Mana	geme	ent Officer: R	obert N	/lahara				





Figure 68: Khairakot Pond Maintenance & Fencing

1	Program: Soil Cor	nservation Work Alo	ng Rural Road					
2	Location: District/Rural Municipality: Pyuthan/Naubahini		Ward No: 7 Place:			F/Y : 079/80		
	Coordinate:	Latitude: 28.19831	.75, 28.199376	3 Lon	gitude: 82.8	3711092,	82.8673581	
3	_	lem: The landslide a Mairamare rural road		ting posse	ss a risk of	damage to	the different	
4	Cost:							
а	Estimated	Total: 1118921.47	Office: 99999647 Users: 118925.00				Others:	
b	Actual Expenditure	Total: 1118921.47	Office: 9999	99647	Users: 118	8925.00	Others:	
5	Objectives:	a) to reduce erosion, landslide and stabilize the road slopeb) to reduce devastating effects on the downstream and surrounding area						
6	Technique Applied:	a) Structural: Gabion Retaining Wall Construction (Gabion Box 95 Nos;Box size 2m*1m*1m=53 Nos.; Box size 1.5m*1m*1m=42Nos. were used to construct 28m long/4m high Gabion Retaining Wall)						
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation						
8	Employment:	650 md						
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups						
10	Effect/Impact:	To some extent, erosion and ruver bank cutting has been reduced; Reduce the risk of damage to the rural road and settlement; Approximately 0.05 km of rural road & 0.6 ha of agricultural land has been conserved						
11	Benefitted HH:	Total: 80	Dalit: 20		Janajati:	25	Others: 35	
12	Problem/Obsta cles Faced:	No	1		-	1		
13	Maintenance/ Sustainability:	5% amount of total payable amount has been deducted for the maintenance work, if some damage occurs.						
14	Lesson Learned:	If real needs of the community are to be addressed, villagers readily participate throughout the activity implementation process, thus greater achievements are possible even with small external support. The physical structures constructed should be accompanied by bio-engineering techniques to sustain the structures.						
15	Others; Name	User Group: Balle	Mairamare Sad	ak Sanraks	han Upabh	okta Sami	ti	
	of:	Chair Person: Sara	d Subedi					
		Site Incharge: Rakesh Shahi (ASCO)						
		Watershed Management Officer: Robert Mahara						

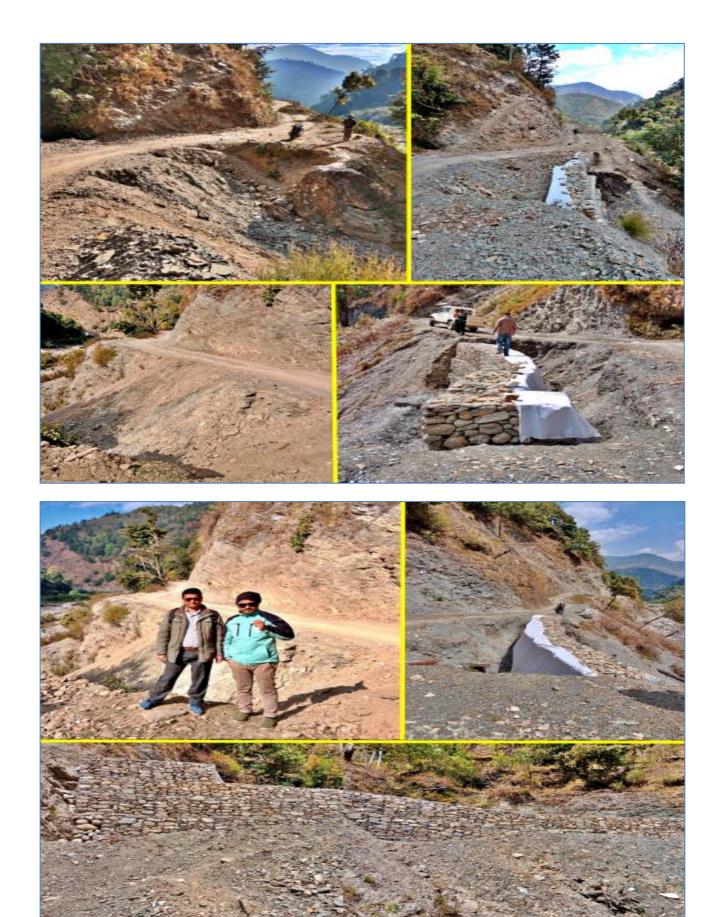


Figure 69: Balle Mairamare Rural Road Protection

2	_	Location: District/Municipality:			e: Jumri Khola,	F/Y : 079/80			
	Pyuthan/Pyuthan			Jum	<u>ri</u> gitude: 82.836752				
	Co-ordinates:	Latitude: 28.125894							
3	land	llem: The Jumri Khola possess a risk of damage to the Irrigation canal & agri							
4	Cost:								
а	Estimated	Total: 1101169.17	Office: 999996	users: 101172.71					
b	Actual Expenditure	Total: 1101169.17	Office: 999996	Office: 999996.46 Users: 101172.73					
5	Objectives:	a) to prevent erosion & river bank cuttingb) to reduce the devastating effects on the downstream & surrounding area							
	Technique Applied:	a) Structural: Gabion Embankment Construction (Gabion Box 116 Nos; Box size 2m*1m*1m=26 Nos.; Box size 1.5m*1m*1m=45 Nos.; Box size 1.5m*1m*0.50m=45 Nos. were used to construct 45m long/2m high Gabion Embankment)							
7	Implementation Process:	Co-ordination with Local Representatives, User Groups and other concerned authorities; Field Visits; Survey, Design & Cost Estimation; Provide funds for the purchase of Gabion Boxes, Skilled Labour, Hoarding Board from Program cost; Unskilled Labour cost was contributed jointly through program cost and people participation; Monitoring & Evaluation							
8	Employment:	650 md							
9	Gender/Social Consideration:	Both men and women were equally involved; More emphasis was given to the genuine participation of disadvantaged groups							
10	Effect/Impact:	Reduce the risk of dar	To some extent, river bank cutting and erosion has been controlled; Reduce the risk of damage to the irrigation canal; Approximately 12 ha of agricultural land has been conserved						
11	Benefitted HH:	Total: 40	Dalit: 7 Ja	najati: 1	.2 Othe	rs• 21			
	Darlet and Charles	No							
12	Problem/Obsta cles Faced:	No	1		·	13. 21			
	•	No 5% amount of total pawork, if some damage	•	been de	educted for the m				
13	cles Faced: Maintenance/	5% amount of total pa	ommunity are to ity implementation all external supposes constructed shadow	be addre n proces rt.	essed, villagers re s, thus greater a	aintenance adily participate chievements are			
13	cles Faced: Maintenance/ Sustainability: Lesson Learned: Others; Name	5% amount of total pa work, if some damage If real needs of the of throughout the activi- possible even with sm The physical structur	ommunity are to ommunity are to ity implementationall external supposes constructed shall estructures.	be addren proces rt. ould be	essed, villagers re s, thus greater a accompanied by	aintenance adily participate chievements are			
12 13 14	cles Faced: Maintenance/ Sustainability: Lesson Learned:	5% amount of total pa work, if some damage If real needs of the of throughout the activity possible even with sm The physical structur techniques to sustain	ommunity are to typical external supports constructed shall external supports constructed shall extructures.	be addren proces rt. ould be	essed, villagers re s, thus greater a accompanied by	aintenance adily participate chievements are			
13	cles Faced: Maintenance/ Sustainability: Lesson Learned: Others; Name	5% amount of total payork, if some damage If real needs of the of throughout the activit possible even with sm The physical structur techniques to sustain User Group: Jumri Kh	ommunity are to ity implementation all external supposes constructed shall estructures. The structures old Sanrakshan Upora Pandey	be addren proces rt. ould be	essed, villagers re s, thus greater a accompanied by	aintenance adily participate chievements are			





Figure 70: Jumri Khola Sensitive Waterhsed Area Protection

SECTION 3: IMPLEMENTED PROGRAM, LOCATIONS AND MAJOR OUTPUTS

3.1 LOCATION MAP OF THE IMPLEMENTED PROGRAM

Altogether 72 activities, alongwith activity profile & office booklet publication, under different program headings were carried out in the 70 places of three working areas (districts) of SWMO, Rolpa in this fiscal year. The location maps of the activities implemented were shown below;

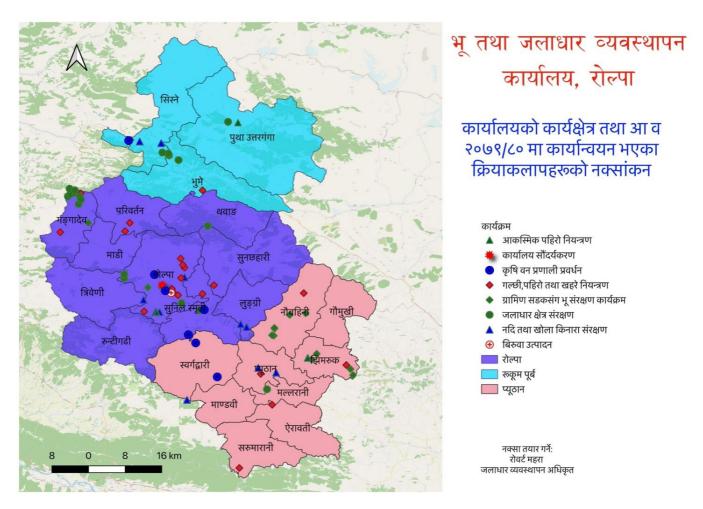
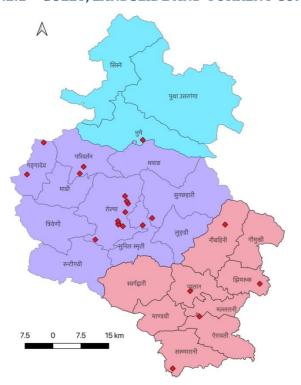


Figure 71: Location map according to working areas & implemented program

3.2 IMPLEMENTED PROGRAM AND MAJOR OUTPUTS

3.2.1 GULLY, LANDSLIDE AND TORRENT CONTROL



Total no. of Activities Executed: 29 nos.

Total Cost: Nrs. 3,04,59,839.88

Office Contribution: Nrs. 2,78,99,996.29 User's Contribution: Nrs. 35,60,627.19

Techniques Applied: Gabion retaining Wall Construction=778m, Gabion Check-Dam Construction= 18 nos., Stone Masonary Retaining Wall=98.17m, Bamboo Wattle Fence Construction= 700 m, Bamboo Crib Wall=380m Amriso, Smart Napier, Napier, Bhujetro Plantation=1ha

Employment: 18,592 md

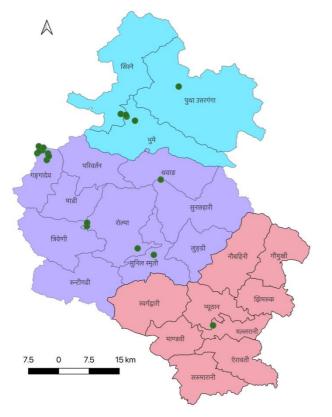
Benefitted Households: 1563 HHs

Conserved Area: 15.25 ha

Agricultural/Barren/Degraded Land

Figure 72: Location map of Gully, Landslide & Torrent Control Program with Major Outputs

3.2.2 WETLAND/POND/WATER-SOURCE PROTECTION/ POND CONSTRUCTION



Total no. of Activities Executed: 19 nos.

Total Cost: Nrs. 83,61,211.36

Office Contribution: Nrs. 71,84,898.64 User's Contribution: Nrs. 11,77,312.73

Techniques Applied: Concrete Wall Recharge Pond Construction= 2 nos., Earthern Recharge Pond Construction= 10 nos., Natural Lake Conservation=2 nos. (43.4m Stone Masonary Wall/DamConstruction), Intake Construction=4 nos., Water Storage Tank construction=4 Nos., Pipeline=6500m., Water Tap Construction=6 nos.), Fencing

Construction=60m long)
Employment: 5740 md

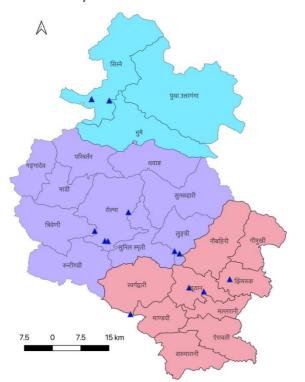
Benefitted Households: 762 HHs

Water Holding Capacity of Pond/Tank: 2510 cum. that supports irrigation facilities for 12 ha of agricultural land and drinking facilities

for 180 HHs.

Figure 73: Location map of Wetland/Pond/Watersource Protection Program with Major Outputs

3.2.3 RIVER/STREAM-BANK PROTECTION



Total no. of Activities Executed: 11 nos.

Total Cost: Nrs. 1,34,53,526.86

Office Contribution: Nrs. 1,09,66,313,35 User's Contribution: Nrs. 11,87,213.53

Techniques Applied: Gabion Embankment Construction= 397m, Gabion Spur

Construction=2 nos.

Employment: 7452 md

Benefitted Households: 463 HHs

Conserved Area: 9.4 ha Agricultural Land

Figure 74: Location map of River/Stream-Bank Protection Program with Major Outputs

3.2.4 SOIL CONSERVATION WORK ALONG RURAL ROAD



Total no. of Activities Executed: 4 nos.

Total Cost: Nrs. 33,36,516.11

Office Contribution: Nrs. 29,99,782.28 User's Contribution: Nrs. 3,36,733.84

Techniques Applied: Gabion Retaining Wall Construction= 75m, Stone Masonary Wall

Construction-9m

Employment: 1872 md

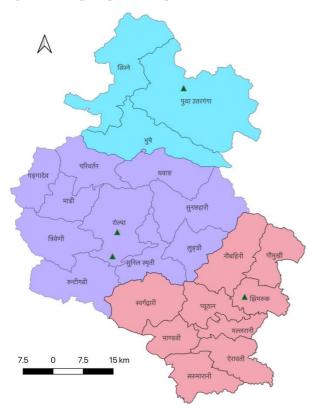
Benefitted Households: 190 HHs

Conserved Area: 0.91 ha Agricultural Land &

0.16 Km Rural Road

Figure 75: Location map of Soil Conservation Work Along Rural Road Program with Major Outputs

3.2.5 EMERGENCY LANDSLIDE TREATMENT



Total no. of Activities Executed: 5 nos.

Total Cost: Nrs. 64,40,603.39

Office Contribution: Nrs. 53,76,929.91 User's Contribution: Nrs. 5,63,700.47

Techniques Applied: Gabion Retaining Wall Construction= 284m; Gabin Box Supply From

Office

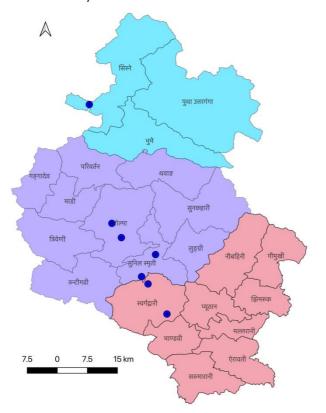
Employment: 3142 md

Benefitted Households: 410 HHs

Conserved Area: 2.85 ha Agricultural Land

Figure 76: Location map of Emergency Landslide Treatment Program with Major Outputs

3.2.6 FRUIT/FODDER SEEDLING DISTRIBUTION AND PLANTATION



Total no. of Places: 7 nos. Total Cost: Nrs. 8,00,000.00

Office Contribution: Nrs. 8,00,000.00

Techniques Applied: Fruit Seedlings Purchasing and Distribution and Plantation of Mango(Amrapali)= 2340 nos., Litchi (Shahi)= 1825 nos., Orange=1500 nos., Lemon =2100 nos.. Kimbu=700 nos. & Smart Napier=5000 sets.

Benefitted Households: 1860 HHs Plantation Area: Approx 44 ha.

Figure 77: Fruit/Fodder Seedling Distribution and Plantation with Major Outputs

3.2.7 SEEDLING PRODUCTION & OFFICE BEAUTIFICATION

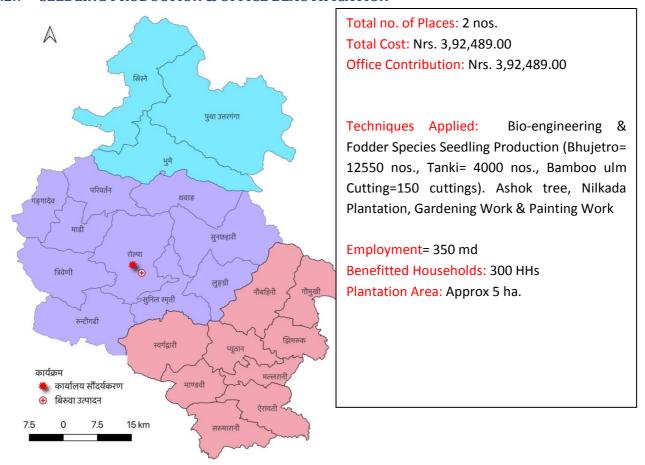


Figure 78: Seedling Production & Office Beautification

3.3 SUMMARY OF THE PROGRAMS AND MAJOR OUTPUTS

The following figure shows the total no. of activities implemented in the working areas of SWMO, Rolpa during this fiscal year.

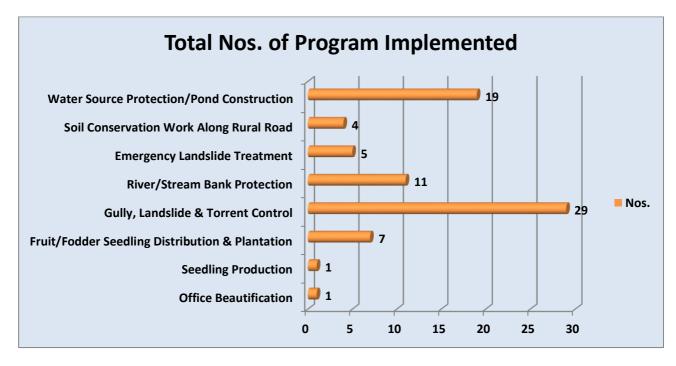


Figure 77: Nos. of Program Implemented

MAJOR OUTPUTS:

The following outputs were achieved by the execution of above mentioned soil conservation and watershed management activities;

- 18 **nos. of Gabion Check-Dam** has been constructed to check, plug and prevent the further degradation of the gully.
- **0.40 km of Gabion Embankment and 2 nos. of Spur** has been constructed to prevent River/Stream Bank cutting.
- 1.14 km of Gabion Retaining wall and 107 m of Stone Masonary Retaining Wall has been constructed to control torrent & landlsides.
- **0.16 km of rural road** has been conserved from erosion, gully & landslides.
- 2 nos. of Recharge Pond with Stone Masonary Wall & 10 nos. of Earthern Recharge Pond has been constructed to increase the ground water table & support irrigation facilities for 12 ha arable land by supplying about 2510 m3 of water stored in the pond.
- 2 nos. of wetland has been conserved through dam & wall construction.
- 4 nos. of Intake, 4 nos. of Reservoir Tank, 6500m Pipeline & 6 nos. of Water Tap has been constructed to support drinking water facilities for 180 HHs.
- 700m Bamboo Wattle Fence & 380m of Bamboo Crib-wallConstruction with 1 ha of Bhujetr, Smart Napier, Super Napier, Amriso Plantation Work has been done to prevent and control landslides (Bio-engineering Works).
- 4000 nos. of Tanki Seedlings, 12550 nos. of Bhujetro Seedlings & 150 nos. of Bamboo Culm Cuttings has been produced in the Nursery.
- A total of 7765 nos. of different fruit seedlings (Mango=2340 nos., Litchi=1825 nos., Lemon=2100 nos., Orange=1500 nos.) & 5700 nos. of grass & fodder seedlings/sets (700 nos. of Kimbu & 5000 nos. of Smart Napier) has been distributed to different user groups to promote agro-forestry and ensure income-generation activities.
- A total no. of about **5548 households** were directly mobilized and benefitted from the program.
- **26 ha.** of agricultural land, barren land, degraded land, etc. has been conserved through the program execution.
- About **37148 man-days** temporary employment has been generated during the execution of the program.
- Necessary furnitures and machinery equipments has been purchased to facilitate the program executions.

3.4 LESSON LEARNED

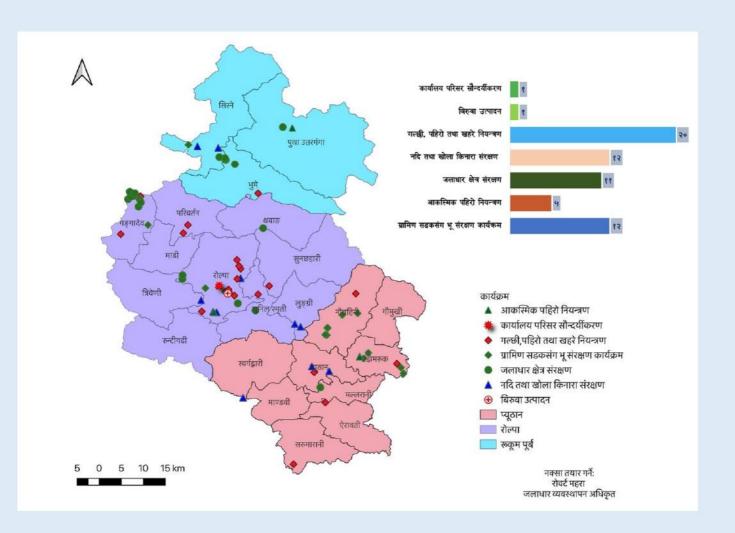
Some lessons gained through programs/activities execution mentioned below would be the guiding materials for the betterment of the programs in the years to come.

- Execution of the programs during leisure time of the local communities proved to be very effective.
- Realization of the three things (Problem, Interest, Need)-PIN of the local community together make the program effective and successful.
- Partnership Soil Conservation Programs is important for the conservation of large degraded land.
- Locally available materials should be made ready by the community in advance before the delivery of construction materials (Gabion Boxes, Cement, Reinforcement Steel, etc.).
- Bio-engineering in combination with engineering structures is effective for the program's sustainability.
- Regular Monitoring and follow-up is the backbone for quantity as well as quality assurance of the implemented activities.
- Training, advocacy, coordination workshop, and networking must be done to create upstream and downstream linkages.
- Basic information collection on the executed activity before its implementation is very helpful for Activity Profile Publication.

3.5 SUGGESTIONS AND RECOMMENDATIONS

- Monitoring and evaluation from the related Ministry and other line agencies need to be intensified.
- Integration of vegetative parts should be considered as far as possible.
- IGA for pro-poor people should be emphasized.
- There should be provision to address emergency soil conservation works.
- Partnership programs should be emphasized for the conservation of large degraded areas.
- Allocation of the budget should be based on the Problem, Interests, and Needs of the communities.







भू तथा जलाधार व्यवस्थापन कार्यालय, रोल्पा

फोन नं.: ०८६५९४००२

मोबाइल नं.: ९८५७८४६००२

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