

A DECADE OF MDI IN NEPAL 2002-2011



A DECADE OF MDI IN NEPAL 2002-2011

(A Movement Towards Sustaining Upland
Agriculture of Nepal)



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MESSAGE FROM THE EXECUTIVE DIRECTOR

IN LATE 1998, when Mr. Shree Krishna Upadhyay, Chair of SAPPROS Nepal asked me to join NGO, I was a little bit reluctant because I had better opportunity in Agricultural Development Bank of Nepal where I had passed ten years of my fabulous job there.

Of course I was interested but, as Mr. Upadhyay asked me when we were discussing my appointment, would I be happy 'Managing NGO as Project Manager in Dailekh', where the main focus was on promoting high value cash crops around Dailekh-Surkhet road corridors.

It didn't take me long to realize that, of course, there was a great deal more to the job than such a narrow focus and that managing a project of this type presents a number of exciting challenges.

We, the core groups of NGO professionals, established MDI in late 2001. It has been a busy decade, a decade of great challenges and landmark achievements yet it seems like yesterday. Now it has passed its ten years MDI has been meeting and overcoming number of challenges to revisit a number of issues related to working with people in improving their well being and is, I am pleased to report, in better shape now than at any time in my twenty-five years of long history in rural development of Nepal.

As member of MDI, I worked with community members who taught me important lessons that have shaped both my professional and personal life. Sitting in discussion in highways and byways, Chautari basements, eating in the hotels & restaurants in the community and working with people with small MDI's rented-buildings located in Hetaunda brought me to a world I had only known from a distance.

Thanks to our dedicated, hard-working team and it is my privilege to lead this group of dedicated individuals who brought absolute



transformation on the lives of more than 25000 rural households living in destitute with seemingly lesser hope for the future. Now that there is positive change it has brought to the feel and appearances among communities, have created employment opportunities through various rural infrastructure works (roads, irrigation), generated incomes through high value cash crop farming, agroforestry and livestock from marginal lands and have been able paying off the existing debts through increased incomes and have become able sending their child for better education.

But our activities have not been restricted counting the physical progress alone, it is this transformation in spirit and attitude, as much as to the physical infrastructure and economy; the shared vision, pride and collective hard work that has resulted to bring this changes. To celebrate the past decade and capture this important milestone, MDI has published this small book documenting some of the highlights of the past ten years where you can feel the differences, the enthusiasm from thousands of individuals in communities living along this route.

All of us here at MDI, we highly regard all the donor communities particularly the Embassy of Denmark, UNDP/GEF/Small Grants Programme, UN World Food Programme, Food & Agriculture Organization of the United Nations (FAO), Poverty Alleviation Fund, German International Cooperation, Local Bodies (DDCs and VDCs) for making their considerate decision in providing such a gracious support at different times through MDI which has been clearly noticed and appreciated by thousands of community members at the ground. Not least the International communities; United Nations Environment Programme (UNEP) Sasakawa Nairobi, Kenya, Asia-Pacific Forum for Environment and Development (APFED), Japan, UNEP-Eco-Peace Leadership Center (EPLC) & Kangwon National University of South Korea, Government of Nepal (GoN), District Development Committee (DDC) of Makawanpur and various local communities for honoring us at different times with cash prizes and recognitions for outstanding, groundbreaking and sustainable environmental and pro-poor initiatives taken at the grass root level involving most disadvantaged indigenous communities of Nepal.

MDI is truly blessed to have you as esteemed developmental partner in this process. We believe, you will continue to support such a local initiatives with the noblest of objective to keep our community free of hunger in intergenerational terms.

Thanks and regards from within the heart.

Khop Narayan Shrestha

Executive Director, MDI Nepal, Hetaunda



FROM SHIFTING CULTIVATION TO SUSTAINABLE FARMING IN THE SLOPING UPLANDS OF NEPAL

Amongst the vast multitude of poor in Nepal that have been hit hardest by the process of marginalization are those living in the uplands. The hills and mountains collectively called uplands constitute two third of the total land area of Nepal where 18.5 million (APO) of the total 24 million people live. The percent of sloping land above 30 percent is 66% . Cultivation is done in such slopes irrespective of any conservation measures. Generally the slope gradient above 18% is forbidden for annual cropping.

Dryland farmers are marginalized because the governments and international organizations have not, at least till recently, made a concerted attempt to extend the “green revolution technology” to rain-fed conditions. In fact, there has been very limited research on the sort of non-extractive resource conserving and employment-generating farming technologies that address the specific constraints of dry-land farmers. Yet millions of poor rely on rain-fed agriculture for their livelihood, especially in the uplands, and dry land farmers are more vulnerable and are deprived of the necessary technological support to adopt sustainable farming systems.

Having subsisted at the margins of the economic miracle for the past several years and becoming increasingly aware of their own marginalization, a silent but growing discontent is developing amongst the Nepalese upland poor. Shortages induced by rising population

pressure and environmental changes have provoked destabilizing population movements that appear, in turn, to be the main cause of many-if not most- of the on-going conflicts and wars. This is, for example, the experience of civil disturbances in Nepal that lasted for almost a decade beginning since 1996, where majority of combatants were from hill tracts.

Slash and burn or shifting cultivation is an age old rotational agro-forestry practice adopted mostly by indigenous people in many parts of the world. In Nepal also, it is a dominant farming practice in many hilly districts. Regmi et. al. (2003) report that this practice is prevalent in 20 of 55 hill and mountain districts of Nepal. These areas are typically remote, marginal in agricultural production, lacking in cash generating opportunities, and inhabited by resource-poor farming communities, mostly of indigenous ethnic origin. Under this practice, a parcel of land is cultivated for a short period and then left fallow for several years so that the soil health is sufficiently restored for next cycle of cropping.

The system in Nepal, and perhaps elsewhere also, fared reasonably well until the population pressure on the land was low. Now that there is high and growing pressure of population on land, it is rapidly becoming unsustainable.

In 2004, with support from UNDP GEF Small Grants Programme, MDI-Nepal embarked on





a small venture to improve shifting cultivation blocks following SALT in the hill slopes of Makawanpur district by involving local indigenous people. Makawanpur, a typical mid hill district occupies the land area of 242,600 ha with less than 7% cultivable land. Remaining 93% land are under serious threat and the researchers often blame deforestation, slash and burn practice, other unsustainable land use and flood and landslide as elements that threaten the livelihood of the local people. Much like the rest of Nepal, the inhabitants of this area rely on agriculture and forestry for subsistence. In Nepal, almost 90 percent of the fuel wood need for cooking energy source comes from forest which has resulted in serious in a drastic decrease in the forest cover. It is estimated that between the early 1990's and late 2005, Nepal lost 1.2 million hectares of forest representing about 25% of its total forest cover.

An expanding population and agricultural frontier has resulted in unsustainable land management practices resulting in substantial loss of productive land. The loss of this land is caused by erosion which is compounded by the areas topography and farming practices. In Nepal it is estimated that over 340 million cubic meters of top soil is lost annually. The regions where the project was implemented suffer from similar erosion problems and in an effort to arrest the source of these problems; a large agroforestry system was implemented by the participants.

This initiative provided supports to more than 2000 households to improve 429 ha of marginal lands by planting more than 600 thousand plants of different species including banana 134651; pineapple 113817; fodder species 204693; asparagus 143806 and fruits 45756. Likewise, 256 households have installed solar home system, 68 households have constructed biogas and more than 849 households have installed improved cooking stove.

In 2008, this project entitled 'Mitigation of the Effects of the Carbon dioxide and other Greenhouse Gases by Controlling Slash and- Burn Farming' funded by UNDP/GEF/ Small Grants Programme won the 'Ryutaro Hashimoto APFED Award 2008'-a GOLD (1st) prize in recognition of this initiative.

The new initiative appealed the local people but the resource was scanty enough to make considerable dent in terms of area and household coverage. In 2009 World Food programme (WFP) supported a "Protracted Relief and Recovery Operations (PRRO)". MDI implemented these projects in 2 hill districts of central Nepal. This project achieved a remarkable progress in which some 4 million plants of different species including banana 258,812; broom-grass (as hedgerow) 2,162,073; pineapple 18,155; asparagus 34,000; citrus 9,900 planted in 665 ha. covering 1897 tribal households

MDI attempted similar intervention in Udaypur and Khotang district of eastern Nepal in late 2009 through a PRRO project supported by WFP. In 10 months period, this initiative achieved a total plantation of 2.9 million plants including citrus 98,686; mango 13,000; banana 1,34,802; pineapple 56,862, broom grass 23,54,724, cardamom 3,2,395, bamboo 1,47,951, cinnamon 14,427 and fodders 31602 in 685 ha. covering 8,117 families of whom majority are tribal (64%) and dalits (14%).

In overall, 292 community organizations with approx 13,376 households have been directly benefited from the project covering 2193 ha. marginal sloping lands with improved agroforestry system. They have also been engaged in saving and credit activities and have generated \$ 122,706 equivalent of savings, which has been mobilized in various production and consumption purposes. A large proportion of the beneficiaries include



Indigenous Chepangs, Tamangs, Magar, Rai and Dalits together more than 80% are actively involved in this process.

Economic Benefits

As of August 2010, income from the sale of bananas, pineapples, broom grass, citrus, vegetables and other cash crops like ginger, turmeric (within banana crops) that were adopted after initiation of the project, totaled more than \$300,000 equivalent. Besides, the value of land has increased in real terms, the magnitude ranging from 33 to 66 percent of the base line value in constant prices.

Environmental Benefits

Global: The adoption of agroforestry in areas with steep slopes reduces erosion and the negative consequences associated with it, such as aquatic habitat alteration, coastal contamination and a loss of productive farm land. The planting of trees in an agroforestry system also takes GHG out of the atmosphere and helps to combat climate change. Largely reduced fuel wood burning through the adoption of clean energy technologies such as solar home systems, improved cooking stoves and biogas stoves reduces helps in reduced release of CO₂ in the atmosphere.

Local: It is estimated that the adoption of agroforestry in the project area has resulted in the prevention of over 4109 tones of soil being lost every year. This estimate has been deduced by using parameters generated from the studies of erosion control measures carried out in topographically similar areas of Southeast Asia (NAFRI 2002). The magnitude of top soil

loss is influenced by soil type, slope, climate and ground cover across locations but the variations are not that pronounced and hence, the reported estimates of soil loss savings from agroforestry systems are close to reality.

Energy efficiency improvements have been designed to reduce the needs associated with fuel wood consumption. Agroforestry systems that were installed are also designed to satisfy a portion of fuel wood needs, thus reducing the demand for such resources from the surrounding forests. This avoids further burning of forests that provide habitat for wildlife.

The zeal of local people having duly matched by generous support on the part of the donors and concomitant commitment on the part of the grantee institution, MDI in this case, have caused the project results to be truly stupendous. It has been a success story because the cooperation between the various participants and NGOs has created a synergistic effect to developmental and environmental management, using proven sustainable land management techniques and livelihood practices. Over all, the community has been able to achieve an increase in annual food security and ultimately an improvement in living standards.

The preliminary impact study carried out by the project showed that the income is used by the community people to pay school fees of their children, buying stationery and paying debts. The UNDP GEF Small Grants Programme and World Food Programme have jointly rated this programme as one of the most effective in bringing about desirable changes in livelihood of upland poor and conserving the environment at the same time.

S.N	District	Year	Different Species of Fruits, Fodders and NTFPs Planted											Total Area (ha)	Total Benf. HHs	
			Banana	Amriso	Citrus	Pineapple	Other Fruits	Kurilo	Fodders	Coffee	Bamboo	Cardamom	Total			
1	Makawanpur	2004-2006	806513	4359693	30030	312048	31371	84571	265925	7241	-	-	5897392	1508	5259	
		2008-2010														
		2010-2011														
2	Udaypur	2009-2010	133507	1994635	149603	56862	136435	-	-	192	147951	25183	2644368	645	7700	
		2010-2011														
3	Khotang	2010-2011	1295	360089	2231	-	-	-	-	-	-	7212	370827	40	417	
	Total		941315	6714417	181864	368910	167806	84571	265925	7433	147951	32395	8912587	2193	13376	



SPEECH NOTE DELIBERATED TO THE 26TH SESSION OF THE UNEP GOVERNING COUNCIL MEETING/GLOBAL MINISTERIAL ENVIRONMENT FORUM (23 FEBRUARY 2011) BY MR. KHOP NARAYAN SHRESTHA, EXECUTIVE DIRECTOR, MDI-NEPAL

Your Excellency
Distinguished Guests
Ladies & Gentlemen

Let me frankly confess that I owe an immense gratitude to your esteemed organization for so graciously granting our organization – MDI, a highly commemorated UNEP-Sasakawa Prize 2010-2011. This, I am sure, will provide an unprecedented impetus to our revered mission in life.

Our's is a tiny organization suffocating under the rather stringent competition of other larger and more influential organizations that have freer access to resources by virtue of their sheer access. However, our vision and mission is not so tiny, we are nurturing a dream wherever we work -a vision that no people-will remain under-fed, will sleep under the sky-cover, would die of common ailments, will devoid children of the most basic nutrition and education, and will subject women to the vicissitudes of unaccounted work load burden. These are our colossal agenda and we continue to remain firm as rock, no matter whether we are given roses or thorn. The prized gift of rose that your esteemed organization has provided to us in lieu of our work in improving upland agriculture, from shifting & subsistence practices to a more sustainable one, has enormously stimulated us further to keep our dreams and vision alive as livewire. We assure you that we will not leave any stone unturned to make each penny of the award counted and spent wisely in promoting similar activities to conserve hills of Nepal.

We highly regard you and panel of judge experts for this considerate decision. This has boosted our morale immensely. We reckon that this is only the beginning. Through our works, we have won tiny battle-the real war is yet to be fought. I would like to promise on this August gathering that we will play a crucial role in waging a pro-active war against degraded environment, associated hunger, deprivation and destitution-so heavily existing in the lesser fortunate part of the globe.

I believe, UNEP will continue to support local initiatives with the noblest of objective to keep the world free of hunger in intergenerational terms.

Thanks and regards from within the heart.
Khop Narayan Shrestha
Executive Chairperson







INTRODUCTION

MDI-Nepal which stands for Manahari Development Institute-Nepal (MDI-Nepal) is a well established NGO in Nepal. The organization was established in September 19, 2001 with contemporary groups of professional staffs working in different NGO sectors.

Registered in district administration office of Makawanpur (Regd. No. 744/057/58) and affiliated with Social Welfare Council (SWC 13918), Kathmandu, MDI-Nepal has proven its strength to improve the livelihoods of rural poor primarily through interventions in agricultural and water sectors. The organization is steered by nine Board Members of whom four are women.

GOAL

The main goal of the organization is to empower poor communities in rural areas to undertake development activities at their own initiatives, with the aim of enhancing their livelihoods on a sustained basis through food and income security.

VISION

MDI believes that poor, given some outside support can create capital and use it efficiently to improve their quality of life and achieve self-reliance. Land and labor being the primary asset of poor, sustainable agriculture development should be the core intervention for their improvement in food security and

income.

THE DONORS

Number of bilateral and multilateral donors has recognized the capability of MDI as revealed from their financial support to the organization in carrying out pro-poor programs on food security, environment and water sectors. Some examples are WFP, The Embassy of Denmark (DANIDA), Poverty Alleviation Fund (PAF), UNDP/GEF/Small Grants Programme, GIZ, FAO and WWF. Since its establishment, the organization has signed more than 25 projects with different donors with a total volume of NRs. 196 million (US \$ 2.6 million) and most of them have been successfully completed. Currently, MDI is implementing 4 projects in Makawanpur, Udaypur and Dailekh on food security, nutrition and environment supported by World Food Programme (WFP), Poverty Alleviation Fund (PAF), World Wildlife Fund (WWF) and Water and Energy Commissions (WECs) of Nepal respectively.

EXPERIENCES

Productive Infrastructures

MDI has acquired substantial experience in improving crop productivity of rain-fed farm lands through technical support in farming practice and development of small scale irrigation systems. Innovative water acquisition and application technologies such as water harvesting tank, infiltration galleries, drip and sprinklers have been introduced. A number

of productive infrastructures and community assets such as rural road (54 km), irrigation (1303 ha), drinking water supply system (84 schemes) and marketing centers (5 centers) have been established to improve agricultural capacity, market access and livelihood opportunities. The organization has also built number of multi-use water systems (MUS) linking drinking water systems for irrigation purposes through water efficient drip and sprinkler systems.

Agroforestry/Energy Saving Activities

This organization is one of the champions to manage sloppy upland farm applying proven form of Sloping Agriculture Land Technology (SALT). More than 1300 hectares of marginal & degraded sloping uplands affected through shifting cultivation practices have been rehabilitated with improved agroforestry system by planting more than 9 million plants of fruits, fodders and NTFPs like broom grass and asparagus. Some 13000 households have been directly benefitted in 3 hilly districts of Nepal. In addition, a number of energy saving technologies such as Biogas (122 schemes), Improved Cooking Stoves (762), Solar Home Systems (247) have been installed at household level.

Nutrition

MDI is currently implementing 'Building Livelihood and Improving Nutrition of Women and under 5 Children in Udaypur and Dailekh district of Nepal with financial assistance of the Embassy of Denmark and UN World Food Programme. This has covered 2220 households in Udaypur and 1521 households in Dailekh.

A number of village model farms (VMFs), homestead kitchen gardens, poultry rearing and fruit plantation activities are interlinked to support nutrition of women and children. In

addition, number of micro-irrigation activities such as canal irrigation, water collection ponds integrated with drip and sprinklers have been launched to provide irrigation for vegetable and food crops.

Small Scale Upland Fishery

Small-scale fisheries make an important contribution to nutrition, food security, sustainable livelihoods and poverty alleviation. Though, fish is said to be the cheapest source of protein, it rarely reaches the tables of uplands people, because of the low advancement made in the upland fish farming technology.

MDI has successfully demonstrated fish farming in many upland areas of Makawanur and Udayapur district. Because of its successful result, more and more communities especially those from indigenous ethnic origins are gradually attracted. More than 176 small and medium sized fish ponds have been constructed and farmers have now been able to harvest more than 4.379 MT of fish which has mostly been eaten by the families and surplus is sold in the market making additional money.

Indrawati Sub-basin Project

The Indrawati river basin is a tributary of the Sunkoshi river which in turn is the major tributary of the Koshi river. It originates from the snow mountain, passes through the hills and low lying riverside plains of three districts -Sindhupalchowk, Kavrepalanchok and Kathmandu.

This is a three-year project jointly launched in 2010 by Water and Energy Commissions of Nepal (WECs) and WWF funded by Ministry for Foreign Affairs of Finland and WWF-Finland.

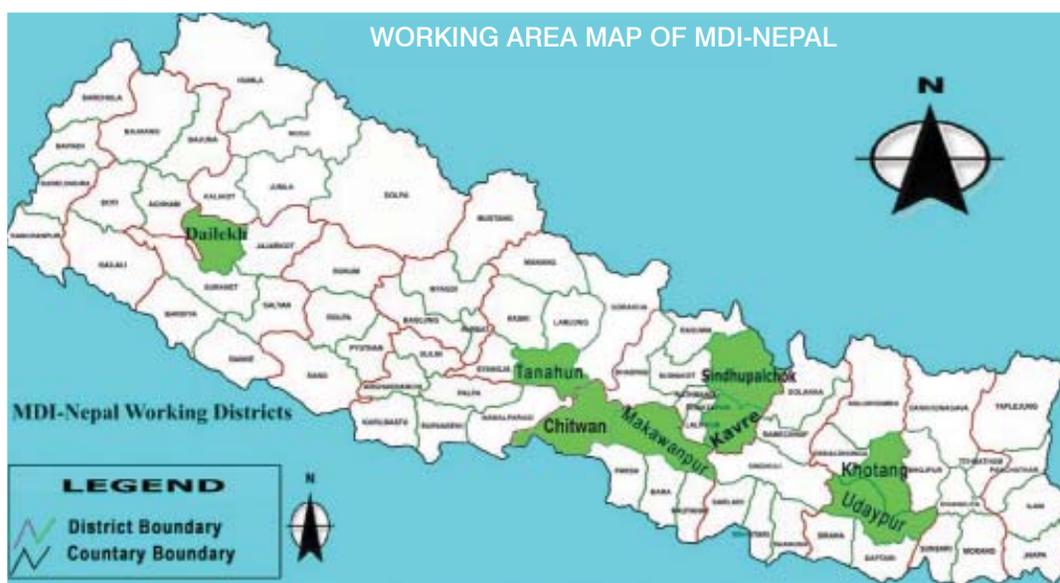
The project aims at reducing significantly the vulnerability of people, biodiversity and

economic investments in the face of climate change and growing anthropogenic activities.

In overall, it has assisted nearly 25000 rural farmers with more than 80% indigenous communities/dalit to escape out from the poverty and food insecurity by proper utilization of land and water. MDI has also facilitated in the establishment of sustainable local institutions (523) working in good governance. The organization has 80 qualified and competent staff members.

WORKING AREA

MDI is currently working in six districts of Nepal. These include Makawanpur, Udaypur, Dailekh, Kathmandu, Sindhupalchowk and Kavrepalanchowk districts. Earlier, it worked in Khotang, Tanahun and Chitwan districts.



District	Dailekh	Tahun	Makawanpur	Udaypur	Khotang	Total
Total VDC Covered	5	3	11	32	5	56
Total HHs in the VDC	2699	2853	14196	23206	2360	45314
Covered HHs by Projects	2429	787	7088	18565	1131	30000
Male	675	386	3466	14481	637	19645
Female	1754	401	3622	4084	494	10355
Dalit	499	178	448	2785	102	4012
Janjati	839	534	5508	12438	822	20141
Other	1091	75	1132	3342	207	5847
Total	2429	787	7088	18565	1131	30000
% Covered	90.0	27.6	50	80	47.9	66.2
% Women	72.21	51.0	51.0	21.9	43.67	35





INTERNATIONAL/NATIONAL AWARD TO MDI-NEPAL

MDI-Nepal has been able to receive different national and international awards at different times. In 2008, it received 'Ryutaro Hashimoto Asia Pacific Forum for Environment and Development (APFED) Award 2008'-a GOLD (1st) prize in recognition of the outstanding contribution made in promoting environmental conservation and sustainable development. The award was honored to the project entitled "Mitigation of the Effects of Carbon dioxide & other Greenhouse Gases by Controlling Slash & Burn Practices" supported by UNDP/GEF/Small Grants Programme. Mr. Masayoshi Namiki, Vice Minister of the Environment, Government of Japan awarded the prize to Mr. Khop Narayan Shrestha, Chairperson of the MDI-Nepal in the 4th Plenary Meeting (award giving ceremony) at Davao, Phillipines on 25 July 2008.

UNEP Eco-peace Leadership Center (EPLC) in partnership with Kangwon National University of South Korea has awarded US \$ 1,500 to MDI for piloting "Alley Cropping System" in the sloping hills of Makawanpur, Nepal.

MDI received UNEP-Sasakawa Prize 2010-11 with a cash prize of USD 100,000 in recognition of the most innovative, ground breaking and sustainable grassroots environmental initiatives. This initiative was done to improve the productivity of marginal sloping uplands of northwestern Makawanpur and Udaypur district affected greatly through slash and burn other

unsustainable practices. Ms. Wakako Hironaka, former minister of environment, Japan awarded the honor to Mr. Khop Narayan Shrestha, Executive Director of MDI Nepal in a UNEP 26th governing council/Ministerial meeting in Nairobi, Kenya held on 23 February 2011.

Hon. Mr. Pralhad Lamichhane, Member of Parliament honoured on behalf of local government of Makawanpur district to Mr. Khop Narayan Shrestha for his untiring contribution in overall district development endeavor and environmental conservation initiatives taken to the benefits of poor people in northwestern Makawanpur. Similarly, Mr. Buddha Sharan Lama, Chairman of NGO Federation Makawanpur provided certificate of honor to MDI Nepal for making dazzling images at different international platforms on behalf of NGO sectors of Nepal.

Recently, Prime Minister Mr. Jhala Nath Khanal honoured Mr. Khop Narayan Shrestha, Executive Director of MDI-Nepal with certificate of award and Rs. 50,000 cash in recognition of the outstanding works done in the field of environment conservation through conservation farming system disseminated among 4300 marginal upland farmers of Makawanpur, Udaypur and Khotang district. The prize was given in a award ceremony organized by Ministry of Environment, Government of Nepal on the auspicious occasion of June 5, 2011 "Environment Day" in Kathmandu, Nepal



ACHIEVEMENT



SUMMARY OF ACHIEVEMENT

(Project Based Achievement)

The Royal Embassy of Denmark (DANIDA)

Duration	S.N	Scheme	Achievement	Benf./HHs
2002-2005 & 2006-2008	1.	Drinking Water Projects.	33	915
	2.	Small Scale Irrigation.	18	520
	3.	Water Harvesting Ponds.	78	494
	4.	Lift Irrigation.	6	131
	5.	Irrigated area. (ha)	374	-
	6.	Marketing Collection Centers.	3	945
	7.	Polyhouse Development.	12	12
Total				3017

UN World Food Programme (WFP)

Duration	S.N	Scheme	Achievement	Benf./HHs
2005-2005, 2007-2010 & 2010-2011	1.	Rural Road. (Km)	40.6	2253
	2.	Irrigation infrastructures.	307	2947
	3.	Drinking Water Supply System.	29	444
	4.	Multi-use Water System.	3	57
	5.	Irrigated area. (ha)	1141	-
	6.	Water Harvesting Ponds.	52	342
	7.	Fish pound.	121	121
	8.	Polyhouse Development.	5	5
	9.	Aquaponic pond.	28	28
	10.	Drip Irrigation.	10	10
	11.	Agroforestry	4935374	9590
		Nos of plants planted		
12.	Area covered. (ha)	1027		
Total				15797

UNDP /GEF/ Small Grants Programme

Duration	S.N	Scheme	Achievement	Benf./HHs
2004-2006 & 2009-2011	1.	Agroforestry	3977213	3786
		Nos of plant planted.		
	2.	Area under agroforestry. (ha)	1166	
	3.	Aquaponic pond.	20	20
	4.	Fish pound.	13	33
	5.	Drinking Water Supply System.	1	39
	6.	Solar Home System.	247	247
	7.	Improved Cooking Stoves.	762	762
	8.	Toilet Construction.	242	242
	9.	Bio-gas.	94	94
10.	Vemicomposting. (Kg)	1760	23	
Total				5246

Poverty Alleviation Fund (PAF)

Duration	S.N	Scheme	Achievement	Benf./HHs
2005, 2008, 2009, 2010	1.	Rural Road	19.4	1786
	2.	Surface Canals	4	103
	3.	Water Harvesting Ponds	24	115
	4.	Lift Irrigation	2	39
	5.	Multi-use Water System (MUS)	16	477
	6.	Drinking Water Supply System	17	397
	7.	Small Scale Fishery Ponds	28	34
	8.	Irrigated area (ha)	56	
Total				2951

German Technical Cooperation (GTZ)

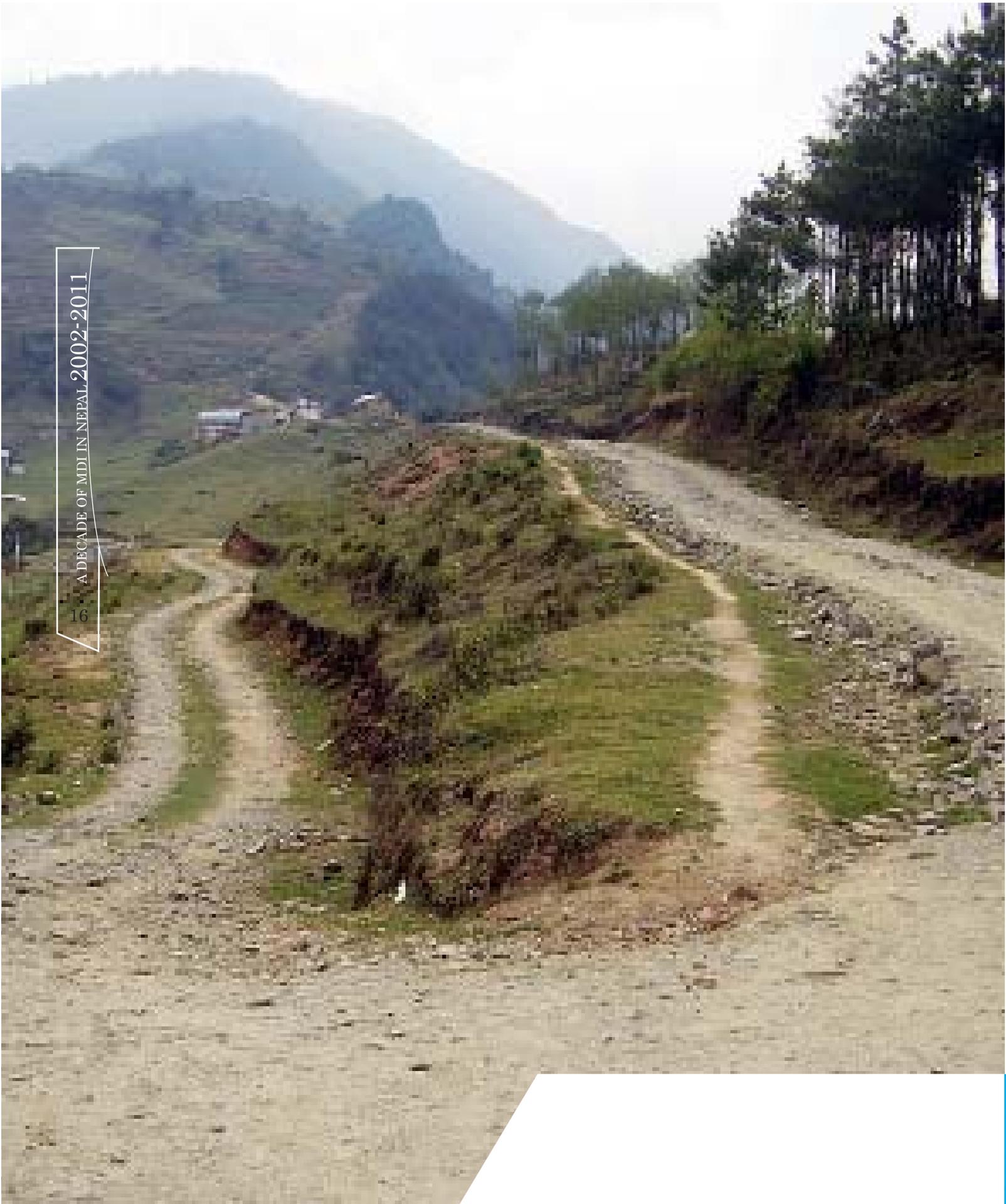
Duration	S.N	Scheme	Achievement	Benf./HHs
2005-2006	1.	Connecting Road.	4.2	255
	2.	Structural Works.	9.112	328
	3.	Agroforestry Nos of Plant planted.	325607	1155
	4.	Area covered. (ha)	306	
Total				1738

Food & Agriculture Organization

Duration	S.N	Scheme	Achievement	Benf./HHs
2006-2008	1.	Nos. of farmers received improved seeds (MT)	504	16059
	2.	Nos. of farmers received fertilizers (MT)	513	
	3.	Nos. of farmers received Goats/Pigs	8338	2691
Total				18756

SUMMARY OF PROJECT GRANTS

S.N	Donor Agency	Duration	Total Grants (In Million)		Rupees
			US \$	NRs.	NPR.
1.	UN World Food Programme	2008-2012	0.62	67.62	67,621,517
2.	The Embassy of Denmark	2002-2012	0.54	41.07	41,066,035
3.	UN Food & Agriculture Organization (FAO)	2007-2011	0.42	32.28	322,81,358
4.	UNDP GEF Small Grant Programme	2004-2011	0.08	6.00	6,000,000
5.	Poverty Alleviation Fund	2005-2011	0.91	63.57	63,566,367
6.	German Technical Cooperation (GTZ)	2005-2006	0.02	1.10	1,100,000
7.	District Development Committee, Makawanpur	2006	0.00	0.20	200,000
Total			2.59	211.83	211,835,277



A DECADE OF MDI IN NEPAL 2002-2011



THE ROAD TO HIGH VALUE CASH CROPS

Rural road undeniably a crucial and critical input in agriculture plays a catalytic role in boosting crop production and attaining sustained growth. The delivery of necessary inputs both for agricultural and non-agricultural is totally based upon the accessibility of transportation network. Dandabas village in Agra VDC of Makawanpur remained in isolation for a long time even after operation of TribhuvanRajpath in the year 1956. Located in 2200 m altitude from sea level, the area lies in just 10 km west from Palung. More than 90% Tamang people live in this area. Because of the appropriate altitude with cold climate Dandabas has adequate opportunities for cultivation of off-season vegetable similar to Palung. However, due to lack of road people were not able to reap benefits of off-season vegetable harvest for longer time. Earlier the situation was very bad in Dandabas due to lack of road, their interface with markets was extremely limited. They had to carry the potato they produce for nearly 15 kms to reach the nearest market at Ghartikhola or Palung either by themselves or hiring porters, which costs more than half the value of the product. So, there is very little incentive to produce for the market, thus compelling them to adopt traditional subsistence farming

growing only maize. Manahari-Dandabas is only the rural road corridor traversing 12 VDCs of northwestern Makawanpur. It is the number one priority road emphasized in District Transport Master Plan (DTMP) of Makawanpur. This road is under construction since 2001 under food for work programme. DDC is leading agency to implement the programme through user's committee. World Food Programme (WFP) provides food support while MDI is providing technical assistance and social mobilization services continuously since 2002 with financial assistance of Danida. It links TribhuvanRajpath in Palung to the north and east west highway in Manahari to the south. The estimated length is around 48 km of which 26 km is in operational from Dandabas. Till the end of the 2008 WFP has provided a total of 1964 MT. of rice worth of Rs. 35.35 million. Commercial vegetable production actually started in Dandabas only after initiation of this road in 2002 tells Mr. BuddhiLalGhalan, resident of Chaubas village in Dandabas. The area under vegetable farming is gradually increasing with the extension of road each year. Mr. Ghalan observes 60% area was covered with vegetables in 2003 and 90% by 2005 in Dandabas area of Agra VDC. Now, the road has traversed 26 km up to Kagatikhola of Gogane VDCs. The area



under vegetable farming in Gogane also increasing with the same trend like in Agra. It is estimated that almost 90% households out of the total 2366 from Agra and Gogane VDC have been involved in commercial vegetable farming. The productivity of land in term of cash return has increased five folds from Rs.2-3 thousand earlier from maize to Rs. 20-25 thousand per ropani after vegetables. Taking advantages of the cold climates vegetables are produced in the off-season thus fetching remunerative prices in the market. Potato is planted during February/March and is harvested in June. It receives good price from Rs. 10-15 per kilogram. Cauliflower is planted immediately after harvest of potato and is harvested during Dashain festival from August to September. It also receives good price from Rs. 15-25 per kilogram. Garden peas are sown in July/August and harvested in November/December. Agra and Gogane harvest bumper vegetable crops. There are number of seasonal collection centers throughout the road alignment. These collection centers vary from season to season depending on the number of traders and whole sellers.

However, it is estimated that the number of collection centers reach as high as 25-30 in Agra and Gogane VDC in the peak season. The information taken from 13 collection centers along road corridor from Dandabas to Bhakundewhich represents only 5 wards of Agra VDC (Ward # 1,5,6,8 & 9) produces 1449 MT. of vegetables and is sold valued at Rs. 19.3 Million annually. This gives an average income of Rs.34,301 per household per year in this area.

The preliminary impact study carried out by the project showed that the income is used by the community people to buy food stuffs, pay school fees of their children, buying stationery and paying debts. A lot of "Pukka" house has been constructed in Dandabas area. With their own income improved toilets have been constructed. Solar home systems are installed for lighting. Ambulance services are in operation for any emergency. Small children are sent in boarding school for attaining better education in Palung, Hetaunda and Kathamandu. Youths have denied going foreign country in search of job.





BUDDHI MAYA'S PAINFUL DAYS GONE AWAY

Buddhi Maya Praja-32 never thought before that her distress family would receive this type of pleasure and happiness in her village Polaghari. Her house is enlightened not only by solar panel she has installed for lighting but with her economy gradually changing to a better perspective. Polaghari where she lives is not so far from highway. One can reach there in one hour walking from the highway. Polaghari is a settlement of most deprived 20 chepang families. Possibly, there are no other poor in Manahari VDC deprived than these people say Mr. NavinSubedi, Field Supervisor of MDI. This village remained in isolation for many years from development perspectives. People say that no any development workers were seen in this village before entry of MDI-Nepal. Buddhi Maya has seven family members. Out of them five are small children. She occupies approximately 1 ha. of khoriya land which is not yet registered. Not only the Buddhi Maya, nobody in Polaghari has registered land. She has no other land except khoriya. Maize and millets are main crops grown in Khoriya following slash & burn practices. However, this production is not enough to feed her family even for 3 months. For many years she lived with hardship and utter distress. Her family had to live eating roots of wild food plants called Githha, Bhyakur and

Chuhiya during the period of food deficits. Many nights she passed with starvation. Her husbands Mr. SanchaBahadurPraja had routined work going to churiya jungle (National Park) at every fortnight, collect Amriso, Nigalo, Bamboo Shoots and sell it in local market in Manahari and buy foods. Not only the SherBahadur had this routine, but all the 20 chepang families of this village had same fate. They had to live in the jungle for many days for collecting these commodities. It was really a risky job for them due to threats of wild animals and park administration. In many events women also had to join at this risk. If they are captured by the buffer zone security they had to pay a heavy cost to get out of this trap. During 2004 MDI entered into this village with small projects from GEF/Small Grant Programme of UNDP. MDI organized a meeting in the village. All chepang families including Buddhi Maya joined the meeting. They were asked what type of projects they would prefer to improve their livelihood. They asked primarily for income generating projects and for some drinking water and irrigation projects. They formed Churiyamai Group and all 20 households joined the group.

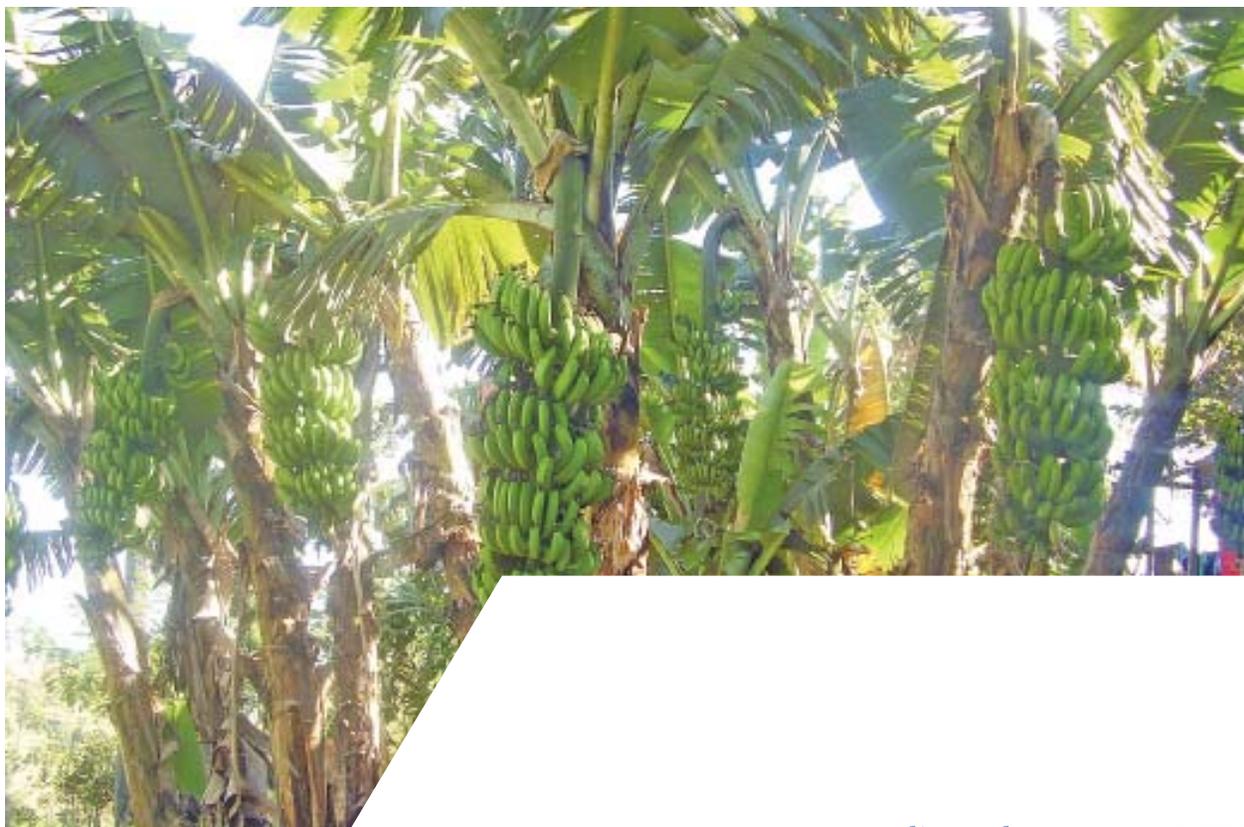
Now, Polaghari has received small drinking water and irrigation project from Danida support while they are involved in



banana and pineapple farming in Khoriya land with support from GEF/Small Grant Programmes. All households have been involved in planting banana and pineapples in sloping lands (khoriya). Buddhi Maya also planted 500 plants of banana in the beginning. Each year she is expanding banana farming. Last year she planted additional 1000 banana plants in khoriya. Now, she has more than 2000 banana plants in her 1 ha. of khoriya land giving regular income. Asked her how is life going on these days?. With smiling, Buddhi Maya tells "No problem now. It happened three years we have left eating roots of wild food plants and have stopped going in churiya jungle in search of forest products. Just yesterday I sold banana with Rs. 3,000. I have still 90-100 bunches in the farm ready for harvesting. Now, any time I can harvest my banana and sell it in Manahari Bazar. There is no market problem. Since cultivation of banana & vegetable crops my children have never faced hunger. Each month I can receive Rs.1,500 to Rs. 2,000 by selling banana. Annually I can receive Rs. 20-30 thousand by this crop". She has also paid solar installment of Rs. 5,600 to the group taken on credit. Buddhi Maya has also constructed small plastic

water harvesting tank where excess water is collected by tapping overflow water from drinking water scheme. This is used for irrigating vegetable crops. Her husband is more attentive in vegetable farming. They produce vegetable like tomato, early cauliflower and beans in the off-season, which receives good price. Each year he takes Rs. 7,000 to Rs. 8,000 from sales of vegetables. Buddhi Maya and her family are no poorer now. They have attained dignified and prosperous life. Earlier the people of Manahari Bazar had very disgrace look over them. They would have denied giving foodstuffs in credit. Now, they respect Buddhi Maya and even ask for taking goods on credit. But, Buddhi Maya denies taking on credit. With cash in hand she can choose cheaper shops in Manahari Bazar. Any time she can buy the things she wants and meet her family needs. With deep satisfaction Buddhi Maya tells "those painful and starving nights gone away. Thanks to MDI for bringing these changes in my family".

By Mr. Khop Narayan Shrestha &
Mr. Navin Subedi/MDI





A RURAL ROAD THAT HAS REPLACED MARIJUANA WITH POTATOES

Dhumsikharka, inhabited largely by ethnic Tamang community, was once rated an inaccessible village, but no more. A 4.5-km rural road that connects the village with a nearest old bazaar, Dandabas, has connected Dhumsikharka to the larger world, brining in fresh hopes in the lives of the poor farmers - thanks to "Pakanikharka Rural Road User's Committee" that the nine different community organizations of Agra, Gogane and Darakharkha Village Development Committees (VDCs) formed to expedite the construction of the lifeline two years ago. The road alignment connects three districts namely Makawanpur, Dhading and Chitwan, and injected new life to the villagers, more than 80 percent of whom are the people of ethnic origins (Tamang, Chepang, Magar and Gurung) and are living under the worse form of poverty. Because of the high poverty prevalence and equally high population of ethnic people, Makawanpur was selected for support under PAF's special window program. PAF agreed to finance Rs 3.50 million for constructing 2.5 km of the road upon the request of the community organizations and the communities extended the road to 4.5 km connecting more villages. The project is benefiting more than 8,000 populations directly. The number of people enjoying

benefits indirectly is still more. Villagers are now farming potatoes, beans and different kinds of green vegetables after the road link was constructed.

Considered as a golden triangle for farming marijuana, these remote villages had no other livelihood options before. Its remoteness had made it a perfect site for such illegal farming. Many farmers who were unable to pay 'due share' to the police often ended up in jail, serving terms for many years. And the story was repeated every year. Now the case is different. The farmers have begun farming potatoes and vegetables, and are leading a dignified life, without the fear of police intimidation. "Poverty was the sole reason why we used to grow marijuana", Sun Bahadur Lama, 40, also a member of the users committee for the road construction told us. Before farmers used to plant maize and now they have switched to many varieties of vegetables that have more commercial value. "Previously, we used to walk 4 - 5 km to reach the nearest road and it cost us more than 5 rupee per kg. Now the cost does not stand even a penny." Lama adds. "I have expanded vegetables farming in all 7 ropanis of land I own. Before it was only in 3 ropanies" says Chiring Thing, 45, a resident of Dumsikharka. This has



increased Thing's earning to more than Rs 10,000 from Rs 5,000 of the past. And this increased income is helping him to raise his 7 children. "This has contributed a lot in their education. I need not borrow loans from the local moneylenders at an exorbitant interest rate as well." Thing is a member of Namuna CO, a member of the functional group among the nine COs. The villagers say that each individual household are earning Rs 80-90 thousand a year in an average because of road connectivity. This has also enabled some villagers to send their kids in the Hetauda and Palung Bazaar to get better education. The road was inaugurated 10 months ago by the local political leaders and representatives of the Constituent Assembly. Inspired by the present benefits, the villagers said they want to connect the road to Bhandara in Chitwan district, joining more than four

additional VDCs. They are hopeful that the enhanced connectivity will open new avenues and increase prospects for further raising their living standard. The Dhumsikharka villagers enthused by the road support have recently demanded a drinking water schemes. PAF has provided Rs 1.3 million for the project that benefits 45 households. The community has contributed over Rs 0.92 million in the form of labor. The villagers are also in the process of installing biogas in their villages. They are setting up a micro hydro as well and are also seeking to raise goats.

"We want to make this village 'an ideal village'," says JitBahadurMoktan, 61.

By Mr. Sri Ram Subedi
Communication Officer, PAF





RUNCHE FINALLY ON SMILING NOTE

Runchedanda is a settlement of 42 households in Handikhola VDC of Makwanpur district. Rapti River at some 2 km distance from the Narayanghat-Hetauda section of the East West highway (Rajaiya), the place is reached by crossing temporary wooden bridge in Raptiriver. The temporary bridge is an annual gift for the first flood in Rapti during almost three and half months of the monsoon season (June to September). The place is virtually unreachable in monsoon period except for a 4 hour walk to cross the nearest bridge at Rapti in Bastipur. The road as entrance for the local inhabitants to the civilized world is so near and yet so far away during this monsoon period.

Runche in Nepali means a perennial state of moan and cry owing to deprivation of some sort. An old man from the locality explains the nomenclature recalling the information passed through several generations – a ghost would walk during the night in the periphery of the settlement producing a melancholic sound of a crying baby. The nomenclature, however it might have been coined, perfectly described the socio-economic state of the local inhabitants – always succumbing to the perpetual deprivation in terms of food and income insecurity, indebtedness and seclusion.

Runchedanda had always been waiting for a turn around in its fortune – from poverty to

at least a modest affluence, from seclusion to reasonable access, and above all, from gloom to smile.

The first hope of some degree came in the form of program intervention from a national NGO – SAPPROS Nepal. With its headquarter at Kathmandu, SAPPROS had received a three year grant support from DANIDA to implement the Makwanpur Tribal Development Program in 1997. The grant sum was a mere drop of water in the ocean considering the huge backlog of the historical deprivation of the large tribal population in the district. A Buddha Saving and Credit institution was established by the local people under the SAPPROS support. Few support activities such as vegetable farming had started. But SAPPROS had to abandon the support as DANIDA's support was terminated.

One of the major limitations, particularly of bilateral donor support structure, was the lack of continuity. It was reckoned that a sustained lifting out of household poverty of communities positioned at the state of Runchedanda would take at least 8-9 years, a normal three program cycles of a donor. Even the more benevolent donor like DANIDA was found to leave the communities in a state of longing. Learning from this reality, a different institutional model has evolved for a continually supporting national institutional





structure such as Poverty Alleviation Fund (PAF).

Because of the high level of poverty and equally high level of ethnic population, Makwanpur district was selected for support. Runchedanda was selected to restart from where SAPPROS had left. Once deserted local people had some smile back but more suspicion that they could be deserted again. But since the chairman of implementing partner selected by PAF happened to be the same person who had worked earlier for SAPPROS, he explained the local people about the difference between the bilateral donor support and the support from PAF in terms of continuity. This continuity of support was what the local people were looking for. They were assured and enthused. Besides

other petty support, major priority of the local residents was irrigation which was requested for PAF support.

The intervention starts from the search of persons within the community with mission and devotion. Sometimes, it needs nurturing the persons with the right aptitude using the powerful instrument of social mobilization. This search, in the case of Runchedanda, was rather easy. Mr. Pasang Rumba, a village patriot who could have easily gone for a remittance job to improve the lot of his family chose instead to remain in the village and work for the improvement of the whole village. He vowed publicly that he will not leave the village until the irrigation water reached the village. This makes the job of the supporting institution easy and interesting.



The irrigation work began. The nearest water source which could be brought to the village using gravity model was Baghkhola at a distance from the village of about 2 km. The water in the source was very small and hence the irrigation technology had to be the water saving one. They chose storage model where water could be collected overnight from the small source and used efficiently with the help of sprinklers. Further, the water conveyance route was unstable and porous which meant that even if there were no slides, the meager water would be fully seeped before reaching the village if normal gravity channel was used. Hence, piped conveyance with the help of HDI pipes was chosen to save the precious water. Local people's effort, knowledge and some equity contribution; PAF's financial resource; other complementing resources from local institutions, and MDI's technical support as PAF's implementing partner conjoined to produce the perfect irrigation system that could propel village development. Five water storage tanks were constructed each with water holding capacity ranging from 40,000 to 70,000 litres. Water distribution pipes were laid to reach every household's plots. The scheme was completed in December 2006. The day the water reached the village was the day of festivity which could not be described in words.

The scheme, when completed, cost Rs.1,041,820 comprising Rs.759,680 as PAF support, Rs.26,140 as local people's cash outlay, Rs.190,000 as the cash equivalent of local people's labor contribution, Rs.30,000 as contribution from local community forestry group, and Rs.36,000 as contribution from Parsa Wildlife office. The system commanded a total of 13.1 hectare giving a per hectare system cost of Rs.70,720. For a fully piped system, this must be considered

highly cost efficient because even the much simpler government gravity systems cost over Rs.100,000 per hectare. The water was given to 11 other households who had not become the original member of the community institution. They are now ready to join the institution paying all accumulated savings contributions. Each household is irrigating on an average 0.26 hectare and growing vegetables. With water, the vegetable yields have doubled – says one of the beneficiary. Before irrigation, they grew two crops of corn (summer and winter) and left the land fallow for the remaining period. Now there are vegetable crops everywhere throughout the year with some corn here and there. Using local records, the average net return per household was calculated at Rs.29,947 which is 1.69 times higher than the benchmark earning figure of Rs.10,022. This is the first year comparison. They expect that the earning efficiency will further improve over the years.

Harping on this increasing efficiency, their good bye message was – "Thanks PAF and MDI, we might need your support for another 3 years and then you can trust we will be on our own".

Dr. Govind Koirala, Free lance Consultant







MY FAMILY WILL NOT HAVE TO DIE OF HUNGER

The prince turned into a pauper away by landslide and flood in 2002. With his productive land gone, he was compelled to rely on his khoriya land— cultivation in a steep land. Usually, maize, black gram, mustard and horse gram are grown in the khoriya and the yield is really low, hardly sufficient to survive. Makawanpur, a typical mid hill district occupies the land area of 242,600 ha with less than 7% cultivable land. Remaining 93% land are under serious threat and the researchers often blame deforestation, slash and burn practice, other unsustainable land use and flood and landslide as elements that threaten the livelihood of the local people. With support from UNDP/ GEF Small Grants Programme, Manahari Development Institute-Nepal (MDI-Nepal) has since 2004 started Sloping Area Land Technique (SALT) in Makawanpur to improve the khoriya land by involving the local people, Chepangs and Tamangs. Earlier, the agriculture period was shorter followed by a long forestry period (which is known as fallow period). Whatever vegetation grew during the fallow period was slashed and burnt that provided nutrients to the agriculture crop. As the need rose for more crops, people started cultivating in the gap of 3 to 4 months followed by a shorter fallow period with

frequent slash and burn. As a result, this steep slope ranging from 30- 60 degrees started suffering from soil erosion and landslide. After terrace improvements and with active support from the community, the project decided to introduce agroforestry by planting banana, pineapple and other fodder trees in the sloping land. "Crop identification is a very challenging task while initiating the project", says Mr. Khop Narayan Shrestha, coordinator of the project. "It was really difficult to change the traditional agricultural practice of the local people as the risk factor is really high. If the selected crop failed, the farmers would not even get what they were getting from the khoriya land," adds Mr. Shrestha. Until now, 429 ha. of khoriya land has been brought under the agroforestry benefiting 938 households. Out of the 938 houses, 440 are Tamangs, 461 are Chepangs and 20 are dalits. The farmers now have the experience of earning upto Rs. 3 million by planting over 600,000 saplings of banana, pineapple and fodder trees. The income ranges from Rs. 1,000 to 45,000 per household. Thanks also to the generous support from Danish Embassy, Poverty Alleviation Fund (PAF), World Food Programme (WFP), Alternative Energy Promotion Center (AEPC), German Technical Support (GTZ)



and Rural Community Infrastructure Work (RCIW) who supported various activities of this project. The preliminary impact study carried out by the project showed that the income is used by the community people to pay school fees of their children, buying stationery and paying debts. Likewise, 230 households have installed solar home system, 28 households have constructed biogas and more than 700 households have installed improved cooking stove.

The production of pineapple and banana has provided the households especially women and children, the nutritional supplementary diet. With deep satisfaction, Mr. Man Bahadur Praja says, "My family will not have to die of hunger".

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FINALLY, LIFT IRRIGATION SYSTEMS WORKED IN RAJAIYA

Many irrigation projects failed in Rajaiya initiated by different organizations at different times. In 1981 Agricultural Development Bank of Nepal through CARE Nepal's support constructed one irrigation canal. This was washed out due to river flood and in 2043 District Agriculture Development Office, Makawanpur provided one pumpset. This was also damaged by floods.

After complete failure of these irrigation projects, one farmer Mr. Bodha Raj Shrestha brought personal pumpset and used on rent for lifting water from Raptiriver. The average charge to be paid per hour was from Rs. 55 in the beginning to Rs.150 at later days. Mr. Bhatta also used this pumpset for vegetable farming. However, this pumpset was also flooded by Raptiriver in 2060.

After the complete loss of irrigation opportunities in Rajaiya, some of the vegetable growers planned to migrate in other places to find irrigated areas for vegetable farming. At this moment MDI-Nepal had just initiated its activities in 11 VDCs of northwestern Makawanpur including this Manahari VDC under the DANIDA support. There was a group called Kedareshwor Saving & Credit Group with its 54 members working in Rajaiya. Mrs. Deep Maya Gurung, Senior Field Supervisor of MDI-Nepal came to the group contact and asked for preparing annual programmes with priority basis. Usually the group

members are advised to formulate priority programmes following the voting system. Members voted highest for irrigation through pumpsets (Electric) followed by drinking water supply and river training as part of their top priority programmes. Then, MDI included this priority in its annual plan. MDI overseer Mr. Ganesh Poudel undertook detail survey. Project then supported two pumpsets (electrically operated) each of 5 HP capacity with Rs. 133,000 which is the 67% of the total cost while the rest 33% was borne through community. District Electricity Authority (DEA) upon recommendations from Agricultural Development Office provided 50% subsidy on operational cost (unit charge). This scheme has given benefits to 71 beneficiaries with a total command area of 19 ha.

Now the people of Rajaiya are enjoying with vegetable farming with this irrigation facility. The community has now been able to add three more pumpsets using their own operation and maintenance fund which is collected from its users charging Rs. 32 per hour. Now, the Rajaiya feels the blossoms of 'Green revolution' that had taken place during the decade of 1960 in India. People harvests and sales vegetables worth of Rs. 5-6 million annually. The community also has built strong river training works in Rapti river. So, they shouldn't be much worry for their good sleep during rainy season.







PADAM GHALE CHARTS A GLIMPSE OF CHANGE BROUGHT ABOUT BY RURAL ROAD CONNECTION AT DUMSIKHARKA VILLAGE

A 19.3 km long rural road linking a remote Dumsikharka village in Dandagaon was completed with the joint effort of MDI, WFP, Poverty Alleviation Fund (PAF), Makwanpur District Development Committee (DDC) and the local people. PAF and DDC provided cash resources, WFP provided rice, local people provided their unskilled labour while MDI provided technical support in materializing the road connection. The people of Dumsikharka had not thought even in their wildest dream that their village would be connected to the rest of the world so soon. This road is a part of the planned connection from Palung valley to Bhandara in Tarai via Dandabas and Bhakundebas, the locations which were considered extremely remote. A number of people had starved to death during 1993 flood and landslides because it was difficult to rescue them due to remoteness. In this context, a team of 4 staffs from MDI including the Chairperson visited the newly connected Dumsikharka village to have a chat with the elated local people. The new access to market had motivated the local people to start vegetable farming. An influential local leader Mr. Padam Ghale provides a concise account of the changes brought about by the road in the village during an

exclusive interview with him. The exact dialogue with him is as follows:

Padamdai, In what work are you busy these days?

I am constructing poly-house for vegetable nursery. This is the right season for vegetable nursery.

Which vegetables are you planning to grow?

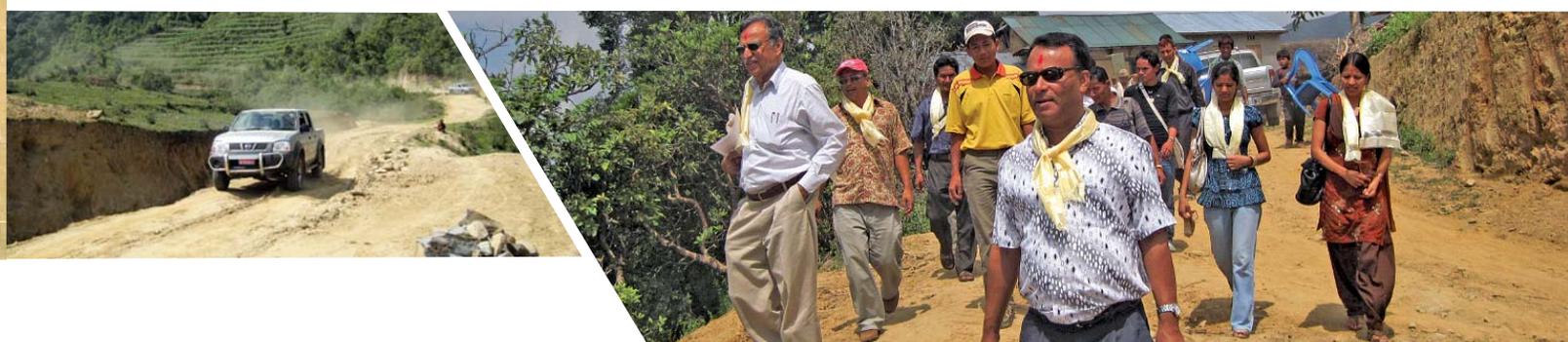
I am giving emphasis to chilly, Bell pepper and tomato because these are more profit generating.

Since when are you growing vegetables?

I am growing vegetables since last 3 years when this village was connected by road.

How was this road constructed and who supported in the construction of this road?

This road was constructed with the support from PAF, WFP, Makwanpur DDC, our labour contribution and the technical support from MDI.



Can you describe briefly as to what are the observed changes in the village status before and after the road connection?

Before the road link, this village was no less than hell because we had to spend 2 days even to go to the district headquarter. If some person fell sick, there was no treatment facility near-by. Villagers use to die due to lack of treatment. We had unirrigated sloping land where we could grow one maize crop in a year – that too not very productively. The maize crop took 10 months to yield but it was not sufficient even for 2 months. We were thus compelled to go to India and other places for doing mostly risky works. After road link, there has been enormous change – a change that we had not imagined. Those villagers who had gone outside have returned back and are doing vegetable farming. We have been able to sell vegetables in right prices which has enhanced our livelihood considerably. Now we do not have to die of sickness in want of treatment and medicines.

How many crops of vegetables do you grow in a year and how?

We take three crops of vegetables in a year – potato from December to April, Radish from May to April and nursery in poly-house in the remaining period.

How do you take your vegetables to market and how far and in which places does your vegetables reach?

We sell around 9-10 mt vegetables in a year. It is transported by vehicles to several places of the country. The major markets are Hetauda, Pokhara, Kathmandu, Narayanghat and Palung.

What is the total value of vegetables sold in a year from this village?

It is difficult to say exactly but the crude estimate is around Rs.10 million worth.

What do you consider is the main cause or factor for the transformation of this village?

The first and foremost is, of course, the road link. I consider road as a prime prerequisite for the initiation of economic and social development. Next, the 11 water taps provided by MDI for micro-irrigation have also become instrumental.

With the road link, have there been other benefits too?

Certainly. The village has now been like heaven. Our youths have now been able to buy motor-bikes. We can now reach Palung bazaar in an hour which used to take a full day before. Many villagers can now afford to educate their children in cities and quality schools. There is a boarding school right in the village. While previously we could not afford to sent children even in the cheaper government schools, we are now sending them to boarding schools.

Finally, would you like say something to any organizations or individuals?

A. Yes, first I want sincerely thank MDI which has played a vital role in mustering resources from different organizations for the construction of this road. I would also like to thank Makwanpur DDC for their generous support. Personally, I would like to appreciate the Chairperson of MDI, Mr. Khop Narayan Shrestha, for his unflinching faith upon us, and his sincere support.





SMALL SCALE FISHERY IN UPLANDS

For Nutrition and Livelihood

Background

Fish is acknowledged as a good source of protein, in many cases, the only source of animal protein; however, its contribution to vitamins and minerals, in particular, the micronutrients, vitamin A, iron, zinc and calcium is overlooked. This is of particular importance due to the very high rates of micronutrient deficiencies, especially in children and women. Nutritionists and education experts say mental development is affected as a result of the lack of protein and balance in the diet of people in the uplands. Among children, these causes lower IQs, poor school attendance and shorter attention spans. They are prone to repeat grades, drop out of school or underperform.

More than two third of the total population of Nepal, with majority of indigenous people living in the uplands, suffer from malnutrition, In fact these communities are living in destitute and extreme poverty. They have no good lands and water being the scarcest resources for them. There are no jobs available and members of the tribe barely scrap by on subsistence farming in the hill slopes.

Small-scale fisheries make an important contribution to nutrition, food security, sustainable livelihoods and poverty alleviation.

The hills and mountains are a major source of water in Nepal. The water resources appear in a diverse form and support a diverse fish fauna. Though, fish is said to be the cheapest source of protein, it rarely reaches the tables of uplands people, because of the low advancement made in the upland fish farming technology.

In order to meet the growing need of the food, nutrition and income of the upland dwellers, MDI Nepal, initiated some innovations on upland fishery in Makawanpur and Udaypur districts of Nepal and added fishery component as one of the important part of nutrition supplement under 'Building Livelihood and Improving Nutrition of Women and Children'. This two year project launched in 2010 was jointly supported by UN World Food Programme and The Embassy of Denmark with MDI as major implementing partner and HKI as Technical Assistance Partner.

Objective

The project aims at reducing significantly the vulnerability of people affected greatly through under nutrition and to build an integrated food security, livelihood and nutrition model in food-insecure households with focus to women and children under five year old. The specific objectives of this pilot/research intervention are;

1. Increase fish production in the uplands
2. Measure growth and survival rate, and
3. Identify farmer's preferences for suitable species





Geographical Area of Influence under Upland Fishery

This small-scale innovation has been piloted in seven VDCs (Aanptar, Pokhari, Bhuttar, Jante, Baraha, Nametar and Laphagaon) of Udaypur and five VDCs of Makawanpur including Raksirang, Kankada, Bharta, Handikhola and Manahari.

The project area where the fishery is promoted lies at an altitude range of 500 m to 1200 m within the fragile Churiya and Mahabharat range in both of the districts. The average temperature lies from 10-15 degree in winter to as high as 29 to 41 degree celsius during summer time.

Water Source

A salient feature of the project is the use of the free-flowing water that comes from mountain and hill streams, harvested in a collection pond and raise appropriate fish species. Fish ponds serve as water catchments to be reused for farm irrigation. As an innovation, the storage ponds have been utilized in making natural pond where fish are kept. Fish consume food and excrete waste. Bacteria convert the toxic ammonia in fish waste into nitrate; a nutrient for plants. The raw organic matter in the fish feces and old plants are transformed by microbes, insects and earthworms into humus; the heart of living soil. Humus is the best fertilizer to produce organic vegetables.

Unlike other fish culture technologies having high stocking density and limited space, this project does not use energy consuming aerators and water pumps to maintain water quality because of the year-round water from the nearby sources that comes from hills & mountains.

The Type of Fish Ponds

This technology allows to culture fish in constrained and marginal areas using scarcest water resources. The system is low cost and uses the local materials. This innovative fish culture project entails use of wasted lands in

fish production. In areas where water-holding capacity of the soil is low is built with cement or plastic or otherwise natural earthen ponds in most of the cases.

In some areas, to minimize the cost of structure, the ponds have been built by arranging the ponds in a cascading manner such that it rests on and follows the sloping contour of the land. This system is under testing.

Production Area

S.N	Size of the Ponds (M ²)	Nos. of Ponds			Type of Pond
		Udaypur	Makawanpur	Total	
1	3	28	20	48	Cemented
2	12	5	17	22	Earthen
3	24	-	16	16	Earthen
4	27	1	-	1	Earthen
5	40	16	-	16	Earthen
6	60	-	6	6	Earthen
7	72	48	-	48	Earthen
8	84	1	-	1	Earthen
9	400	1	-	1	Earthen
	Total	100	59	159	

The potential production area is limited from few cubic meters (3^{m3}) to as big as 400^{m3} depending on the availability of land and availability of water. The small tanks are built with cemented works while big ponds are earthen based (Table.1). In many cases, this water conservation method has been reinforced with vegetables and other cash crop production.

Type of Fish

Catfish, Tilapia, and Carp are the most commonly cultured fish species. Catfish is grown by majority of farmers followed by carp and tilapia. Some of the farmers in Makawanpur have also practiced keeping local indigenous species (SAHAR and others) collected from the rivers. It's said that the results of these local species are encouraging. Carp species are generally grown in bigger size ponds while catfishes are grown in small ponds because of its high stocking rate.

Stocking Rate

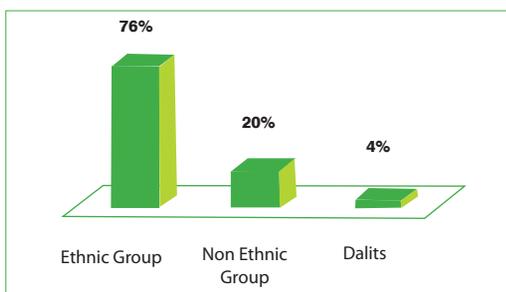
The stocking rate varies from species to species. Normally farmers have kept 20-50 fingerlings per m² for catfish, almost 80-100 for tilapia and 2-3 for carp species.

Target Group with focus to Women

This project primarily targets resource poor communities, mostly of ethnic origins who are prone to fish protein deficiency.

It looks potential for better participation by women. With fish farming, they have increased consumption and family incomes. One of the great advantage for women is that they do not require prolonged absence from household work; it can be combined with other occupations like poultry farming, duck and pig rearing which otherwise have been largely overlooked and neglected.

Ethnicity Participation



It seems that majority of the fish growers are from indigenous communities representing 76% of the total 176 households involved followed by 20% from non-ethnic groups and 4 % from dalit communities (Table.2).

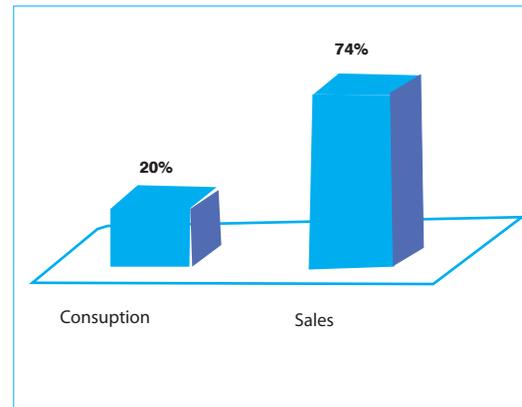
Table.2

Ethnic Groups	Nos. of Participating Families		
	Udaypur	Makawanpur	Total
Rai	47		47
Magar	27		27
Tamang	2	28	30
Gurung	1		1
Dalits	4	3	7
Chepang		28	28
Bramhin/Chhettri	36		36
Total	117	59	176

Ethnic Composition under Upland Fishery

Production, Consumption and Sales

Fish consumption has undergone major changes at the household and village level. Even at a very conservative estimates (Table.3), it is observed



that 26% of the total fish produced (4379 kilograms), 26% is consumed and 74% sold. It's interesting to note that even the fishes sold are not beyond the reach of the village communities. Because it's sold within the village and other communities are getting benefits of fish consumption. People say that there is high demand of fish within the village and can easily be sold at Rs. 200 per kilograms.

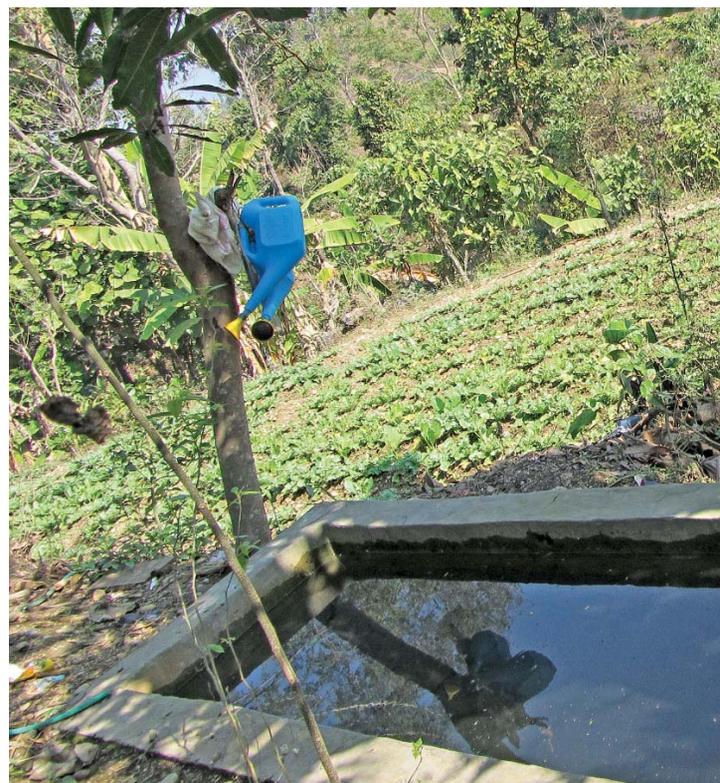
Table.3

Districts	Nos. of Participating HHs	Production (Kg)	Consumption (Kg)	Sales (Kg)
Udaypur	117	1949	612	1337
Makawanpur	59	2430	508	1922
Total	176	4379	1120	3259

Production, Consumption and Sales of Fish

Farmer's Observation

Field observation indicates that small-scale fishery piloted in different areas is highly appreciated by its growers and mostly by



women. They think that this is relatively easier enterprise and feel that such a small land plots can better address household nutrition and additional cash.

- Mr. Sajivan Praja of Niguretar VDC of Makawanpur told that he would never leave this farming. He has a small earthen pond of 60 m² where he grows different species of fish at different times. Initially, he raised catfish and harvested fish worth of Rs. 20 thousand. Later he kept carp species and successfully harvested. This time he has kept mixed species of carps and indigenous fishes collected locally from Manahaririver.
- Ms. Sita Bhujel of Bhuttar VDC in Udaypur district harvested 61 kilograms of catfish for the first time in five months period and sold in the village at Rs. 200 per kilograms. She and her husband feel that she would extend pond area next season and keep more fingerlings of catfish. This couple own only 1.5 Ropani land in Bhuttar and the size of pond they have constructed is 40 m².
- Mr. Hem BahadurRajkoti of the Bhuttar VDC in Udaypur was initially a carp grower. He didn't believe on catfish supported by the project. He didn't give them better care on its feeding and other management. Later, he noticed that it had better performance on weight even with careless feeding and management.

ACKNOWLEDGEMENT

MDI is thankful for the generous support provided by the Embassy of Denmark and World Food Programme for piloting this 'PRRO Nutrition and Livelihood Project' in five VDCs of Udaypur districts targeting 2220 pregnant and lactating women with U5 children. We also extend our sincere thanks to Dr. Sunila Rai, Coordinator, Professor Dr. Madhav Shrestha, Associate Professor Mr. DilipJha, Mr. Mahesh C. Gupta, Intern and Mr. HariPoudel from Institute of Agriculture and Animal Science (IAAS), Rampur, Nepal for arranging field visits in Majhui&Fapini in Chitwan and providing training supports to our staffs of MDI on fish farming technology. Not least, MDI is truly blessed with Dr. ShakuntalaThilsted, Senior Nutrition Advisor from CGIAR, Bangladesh and Prof. Dr. Abdul Wahab, Fishery Experts from Bangladesh University for their valuable insights of fishery in rural nutrition supplementprogrammes.

Thank you !!!

SMALL SCALE FISHERY A SOURCE OF LIVELIHOOD FOR SMALL HOLDERS

Bhuttar is one of the severely affected VDC in Udaypur district in terms of food security situation compared to others in the district. Thus it was given a high priority by the project for launching food security and nutrition activities targeting the most vulnerable communities. A series of inception meetings organized at the settlement level to identify the needs of the community. In this process, Mr. UddhavBhusel identified fishery plans. With food support of 160 Kg Rice and 20 Kg Pulse for 40 mandays, he established a 12 × 6 square feet fish pond near his home. He got 200 fingerlings from programme and started raising it using local feeds like oil cake, wheat flour and other kitchen trashes After four months the fish were ready for consumption and marketing. In eight months he sold 61 Kg of fish in the local market at the rate of Rs. 200 per kilogram earning Rs. 12000 Besides, these fish are consumed frequently in day and night meal and in serving the guests too.

Now Mr. Bhusel's family is happy enough as they have got ample opportunity for their livelihood. They are gaining a good income from the fish sales.





VEGETABLES AND POULTRY-A SOURCE OF NUTRITION FOR MOTHER AND CHILDREN

After initiation of nutrition project supported jointly by World Food Programme and the Embassy of Denmark, Mrs. SitaRajkoti in Bhuttarestablished a beautiful kitchen garden in 600 m² area near her homestead using micro-irrigation facility supported by the project. She grows vegetables like cauliflower, radish, broad leaf mustards, carrots and several other seasonal vegetables, which have higher nutrient composition. In addition, she has also small poultry coop where she keeps improved breed of poultry birds (egg laying) supported by the project. Initially, she had given 6 poultry birds from the project. In 6 months period, it started laying eggs. Encouraged with this, she added some more birds. Now, she has 25 poultry birds all egg layers with few male birds. All the birds give eggs. She has her record that each month she collects 550 eggs from these birds. Most of the eggs are consumed at home for children and some surpluses are sold in the village at Rs. 10 per egg. Thus she collects around Rs. 2,500 to Rs. 3,000 from egg sales and Rs. 1,000 from vegetable sales.



She had not thought like this before. Now she feels that it's really encouraging for such a mothers like me who have children. This has really added nutrition supplement to mothers and children. This is the simple method we didn't do because of lack of knowledge and awareness. Now, there is awareness among all mothers and families and doing their best like me. Many other members from my group come to see my systems that I have managed and they learn from this. I have now become village model farmer (VMF) in my village. I regularly attend the group meeting, which is held in my own home, and share our experiences in the meeting.





GREENER 'NAGARE HILL' IN BARAHA – A GRACIOUS EXAMPLE OF COMMUNITY EFFORTS

Situated in the northern part of Udayapur district, Nagare hill lies at the altitude of around 2000 meter from the mean sea level. Since long time, those barren hills had no use except for grazing. The members affiliated to group "MahilaMankamanaSamuha" in the Nagare of Baraha-8 VDC of the district dreamt for converting such a marginal denuded lands into greener hills with Lokta plantations which can be further used for making small industry for making clothes using 'Lokta'.

Few years ago, they were encouraged by some visitors coming from Solukhumbu and Okhaldhunga districts for planting Lokta plants, raw material used for making Nepali paper. Only a few people planted Lokta in some numbers that have no use at all. However, the interest for the plantation was still within them, however in lack of support they were in annoyance.

Their worries seems to be gone away when MDI-Nepal in partnership with PESOC Udayapur implemented the Nutrition and Livelihood programme supported jointly from WFP and The Embassy of Denmark. The project facilitated them to utilize the barren

and marginal hills through agroforestry methods. All the 21 members of the group agreed for planting Lokta in the sloppy marginal land of Nagare.

"Their motivation towards plantation works increased as programme supported them food for their work. Everyone worked with great enthusiasm, as they understood the possibility of future expansion as an enterprise. Now they are moving ahead with dream to extend this work in large scale and establish a Lokta industry in this place", said Tasi Sherpa the vice chairperson of the group. More than 5200 plants are already planted which is 23% more plants than targeted 4200 plants.

Besides Lokta, they also planted multi use Allo in shady areas in lower belts, which is basically a fiber plant used for making cloths also used as medicine and nutritious fodder. Group secretary RanaBahadurMagar says, "Planting Lokta in the upper parts and Allo in the lower belts utilized the all kinds of land properly and also made easier in caring".

This year, they have planted Lokta and Allo approximately in 80 Ropanies of lands but still there remain several marginal and barren lands, which they have aimed to extend gradually making all greenery. In fact in the coming year also, if this work continued the sloping marginal hills of Nagare can be a place for agro-tourism where one can see the beautiful fascinated view of Himalayas surrounding Solukhumbu, Khotang and Okhaldhunga districts.





BANANA FARMING – A WAY TO TRANSFORM LIVELIHOOD

My name is **Ramhari Chepang**. I am a resident of Chapal village of a remote Kankada VDC, ward number 1 in Makwanpur district, a 3 hours walk following a stream course from Lothar bazaar along the east-west highway. We are of family of eight persons. We possess, as our sole property, 3 kattha (0.1 hectare) of upland khoriya, a pair of oxen and two cows. Until a year ago, our farm production of maize, mustard and buckwheat was barely enough for our family the quarter of a year. For food needs alone, the adult members of our family had to roam around the village and beyond - often up to Bharatpur, a district headquarter of Chitwan district for wage job. The schooling of the children was a very distant dream.

I had never imagined that there could be a turn-around in our destiny. It eventually came about unexpectedly when the officials of MDI came to our house and said that we can earn significant amount of money through banana farming in the 3 katthas of land. My ancestors had been toiling hard to earn a living for about half the year in the same land. The new proposition was difficult to digest for me.

I had profound doubts in my mind as to whether the banana farming will lead our family to further starvation. Knowing my reservation on the new proposition, the MDI people suggested me to continue with the traditional crops but try the new option in a limited area. I consulted with my family and upon their consent; I decided to try the new proposition in a small sloppy plot initially.

With the help of some financial support from Small Grants Programme of UNDP and the technical backing from MDI, I planted 100 banana saplings. A little later, World Food Programme (WFP) provided a further support of 140 kg rice and 17.5 kg pulse to extend banana planting to 3,000 more suckers. This time, I accepted the offer not only because of the new support in kind but also because I sensed our family's future well-being from banana farming as I had already glimpsed the earlier plantings doing fairly well. My livelihood worries are now over with the income from banana sales and I am now feeling a sense of content. The banana suckers planted in 2008 started bearing one year later and I was able to sell the fruits worth Rs. 7,000 (500 bananas at the rate of Rs.1.40 per fruit) during the teej festival and further sales worth Rs. 4,000 during Dashain festival. Few months later, I exchanged 8,000 bananas with 600 kg of rice. Although we are not keeping exact track of our earnings, I estimate that it should be around Rs.40,000 in a year. I am now selling not only the fruits but also the fibres from the older banana trees. The market is not a problem because the buyers come to our doorstep. A Cooperative run by our community with support from MDI is also helping to transport banana to Lothar bazaar for even better price deal. Our family's lifestyle has now transformed for the better to an unimaginable extent. We no longer work for wage. All our children are doing well in school and once suspect banana is fully financing their studies. Besides, I am depositing the remainder earnings in the Juntara Community Cooperatives for an even better future life. I owe a great deal to MDI, Small Grants Programme of GEF and the World Food Programme (WFP) for their generous support and encouragement, particularly in wiping out my initial suspicion in the new undertaking that has now transformed our life.





DEEP BAHADUR CHEPANG BUYS LAND IN CHITWAN BY SELLING BROOM GRASS

Deep Bahadur Chepang

It could look amazing for anyone to believe that a poor Chepang family like ours could buy land in fertile Chitwan valley by selling amrisko (broom grass) grown in a 3 kattha sloppy terrain. But I, Deep Bahadur Chepang, have made it possible with the a little wisdom, a little sense, a thorough consultation and support, mixed with a great deal of hard work. I am now a pride owner of 3 kattha land in Chitwan valley bought from my accumulated annual savings of about Rs.80,000 from the sale of broom grass. This has abruptly lifted my social status to a pinnacle. My respected ancestors used to tell me that "a genuine effort will always pay the handsome dividend". I did not pay heed to this fact then, but do it now. Until 3 years before, I had, as my sole property, only 3 kattha of very sloppy upland with no source of irrigation. With hard efforts, the land produced food enough for only about half the year when harvests were good and lesser when the almighty was not so merciful. Sending children to school was a rather distant dream, and so was the craving for a decent meal during the festival. I used to go to Kathmandu and Pokhara to weave and sell bags and does the wood chopping work – yet we barely had enough to eat throughout the year. We seldom knew what enough for us was.

One day, the staffs of MDI came to our village told us about the income that can be gained from the amrisko (broomgrass) from our slope bare land. A ray of hope came in my mind.

Later on seeing the banana cultivation and amrisko farming in Kankada-1, Dhusrang with GEF SGP's financial support and technical support of MDI Nepal, I also felt of doing something. With financial help of GEF and technical support of MDI Nepal, I cultivated 40 amrisko in my 3 ropani khoriya land. With the initiation of that 40 amrisko, it had become more than 14000 amrisko and getting thousands of broom.

It has been 3 year I started selling broom and with that I made 70/80 thousand profits per year. The household expenditure, children's education, clothing and all are managed easily with the money made from selling broom. There is no need to work in others home for the delicious food in the festival like Dashain and Tihar. No need to weave bag and cut wood in Kathmandu and pokhara. I utilize that time caring amrisko in my farm. The money earned from sold amrisko and a loan of Rs 170,000, I bought 3 kattha land in Dubichaur, Chitwan district. Thinking to pay back my loan selling amrisko this year and I am sure that I can because from one amrisko plant 40 – 50 rupees can be earned. There is no problem with selling of amrisko (broom) produced from khoriya land. We can sell that amrisko in the local market Lothar and Chitwan. The money Rs. 6,500 from PAF, spend as a share on community organization.

I am very happy with my hard work and its payback. Now there is no food problem in my home and no need to go for the work in Kathmandu and Pokhara. So I would like to thank the staff from MDI Nepal for their valuable suggestion which brings drastic change in my economic status.





GETTING RID OF HAVING TO WORK FOR WAGE IN A LANDLORD'S HOUSE

Man Bahadur Praja

During my over six decades of existence in this earth, I had never realized that banana and amriso could be successfully grown in a sloppy land. Neither my ancestors nor me had this idea. What we stuck to was the cultivation of traditional crops like maize, millet and black gram. This we practiced and gave food to us for about 6 months in a year. Our coping strategy was to go in Narayanghat for a wage job for me and my son as a coping strategy that provided some livelihood solace to our family of 7 persons. I did not send my sons to school simply because I needed a helping hand to sustain the family. Due to famine, my family survived for several days eating wild fruits from the forest. The days were complexly passing this way until I had a chance to visit an agro-forestry farm of Man Bahadur Praja in Niguretar VDC where he had grown amriso, banana, pineapple and other fodder trees in his very sloppy khoriya land. I asked Man Bahadur – do you really benefit more from these new crops compared to our age-old traditional crops. He replied – I do not know what answer you are looking for but my experience is that I have realized about Rs. 4,000 form this khoriya land where only about 60 kg maize and about 10 kg blackgram was what I really harvested. This is thrice as much as what I could get from those traditional crops. The additional advantage is that I am getting sufficient fodder for my

animals. The khoriya land hitherto producing just the dust has turned green. Now I am no longer scared of famine.

I was taken aback when he said that whenever the food at home is finished, I take bananas to the market and bring the rice. Asked how did you all this, he said that we have started an agro-forestry expansion and environment conservation committee in Niguretar. I further asked who taught you this prized knowledge. He said that it is the MDI who is providing technical support and PAF who is providing the resources. I then went searching the MDI office at Manahari and told them that we have also khoriya land and how can you help me to be like the Man Bahadur Praja? They said we are looking for people exactly like you who takes proactive stance to reach us. Next day, they came to our place and organized the agro-forestry group to initiate activities as I demanded. Soon we planted amriso, banana and other fodder trees in our khoriya land as advised by MDI staffs with their technical support and fund support from PAF.

Months later, I look back and review the past with the present. It reveals an astonishing change. The famine situation is suddenly disappeared. The banana has turned out to be a boon in relieving us from the frequent famine. We craved for occasional rice based meal before but this has become a routine consumption now. Pineapple is yet to be harvested and I expect that this, I believe, will add another fortune. Amriso is next in the pipeline. It is a stream of fortune as if the God is providing in one lot. Now I do not work for wages as I used to do before. Now I have sufficiently understood the importance of community organization for self-development and as a result, we have established a Rabang Community Cooperative where we are saving money as well as borrowing for forward development where needed.



BANANA WON THE BATTLE AGAINST NASTY FAMINE

Bishnu Maya Chepang

In a two hour walking distance along the Lothar Khola towards the north lies a village called Chapal where poverty and illiteracy abounds. Famine is a frequent feature of this village of which I, Bishnu Maya Chepang, have been living with my husband and two young sons. We had a strenuous life with less than 3 months of food availability, boys away from school, a poor mud-built house and destitution everywhere.

As if the luck suddenly had a turnaround, the staffs from MDI approached our village and began tutoring us on agro-forestry practices for livelihood transformation. The idea being new, we were not much optimistic to start with, but when we heard that for every 3 banana planted, we will get one kg of rice, we were lured. We had not much faith on banana but we had lot of faith on rice – villagers' much adored commodity. We worked on banana for rice. I myself planted banana in most parts of my tiny holding.

After a year, I found myself a different person. I had gained a lot in a year when I compared with my previous situation. While I was completely dependent on my husband for the petty household needs, I am now proudly assisting

him in the family livelihood matters. From the income from banana sales, I have been able to not only finance children's education and basic kitchen needs on my own but also buy two pairs of dresses for myself.

By virtue of being born in a poor and ignorant family in a remote area, I had never thought that I could stand on my own feet economically. But thanks to MDI support, I now stand taller on my own feet. I have planted 2,500 banana trees from which I get an average monthly income worth Rs.2,500. I have started to think about the future for which I am depositing as savings Rs.25 every month in Janachetana Agricultural Cooperative opened some months ago by ourselves. I took a loan of Rs.8,000 to buy more land and I am regularly repaying the loan installment of Rs.500 per month with the income from banana. Now famine is a distant phenomenon not only for me but also the whole village. I would like to express our token of appreciation, on behalf of the whole village, to MDI and its staffs for their empathy towards the poor like us and wish them further success in their noble mission.





A STORY OF OWNER OF TEN THOUSAND BANANA PLANTS

Sajiwan Praja

Last year, Bhedi Praja came to me and asked money for treatment of his son. I had no money but I suggested him to borrow the money from local cooperative. Then, he did accordingly what I said and took two thousand from there and treated his ill son.

This is happy thing for us. We did not have to go landlord for the money now. We have our own cooperative established by ourselves in guidance of MDI in 2004. The landlord takes as high as sixty percent interest rate annually on the loan they provide. Then we had to be hanged around, as slave until the loan taken are repaid. But we have got rid of such problem now in our village, Niguretar because of our own cooperative, which is able to provide loan up to Rs. 10,000 per member.

Since very beginning, MDI-Nepal has been continuously guiding us how environment of the area can be improved. 'Khoriya' farming is one which is damaging the local environment accelerating erosion due to its intensive farming practices. It's dominant farming practice in our area and livelihood of the people revolves around it. Under this practice, a parcel of land is cultivated for a short period and then left fallow

for several years. The system fared reasonably well until the population pressure on the land was low. Now that there is high and growing pressure of population on land, the cycle of this rotation gradually reduced from 3-5 years to just 1 year thus becoming the system more unsustainable inviting not only the serious soil erosion problems but we have also felt changes in temperature, floods and other microclimate effects.

In 2004, MDI came up with the SGP supports and asked us for planting banana, pineapples and other NTFPs in such areas. In that time, we had a practice of growing only maize, millet, rice beans, horse grams in such land. It was hard for all of us to change our mindset and transform to new sets of arrangements with agroforestry systems as advised by MDI. However, we organized a lot of discussions with our cooperative members and decided to plant banana, pineapples and amrisho.

Now, one can see plenty of bananas, pineapples, broomgrass and other fodders trees in denuded areas. The hills are all green. We have 103 cooperative share members and all have grown fruits, fodders and NTFPs in their 'Khoriya' lands. Our members have planted around fifty thousand banana suckers, two lacs broom grass plants and thirty thousand pineapples in overall until last year. The UN World Food Programme (WFP) also provided us adequate support for this expansion. Each member now receives Rs. 15-20 thousand annually by selling these agroforestry products

which other wise they had to be satisfied with five to ten bucket of corn in the same land earning only Rs. 1-2 thousand. We have also felt that effects of soil erosion and landslides are gradually diminishing. There are now plenty of fodders for our goats and cattle too. In 2007, FAO telefood project also supported us Rs. 486, 000 to keep three goats per family because of adequate fodders coming through agroforestry plantations.

We did a lot to improve our khoriya lands. We have now got rid of loan from landlords too. We can provide loan from our own cooperatives. We have our own cooperative building in the village supported by GEF/Small Grants programme and Local Forestry User's Group. We have adequately conserved our area by planting fruits and fodder trees. But, we are not yet happy because the land where we thrive doesn't belong to us. Government never recognized our claims and our customary tenure arrangements never understood. As a result, much of our traditional land has turned into government forest, leaving us in a very confined track for our livelihood needs.

One day, Dr. Dinesh Chandra Devkota, Member of Planning Commission visited our site and observed the greenery. He inaugurated our cooperative and assured us for further support especially on our land issue. He also invited us in central level NPC interaction programme where I had an opportunity to further talk around the land issue and agroforestry programmes. I hope they will hear us.







BANANA & BROOM GRASS FARMING CHANGED MY LIVING PATTERN

Aita Shing Praja

After two-hour walk towards the northern from Manahari Bazar, one can reach to my village, which is known as 'Incharang' in Raksirang VDC. I have a small house among thirteen others which all belong to of 'Chepangs'. We are seven members in my family. Though we are big family we did not have enough property except barren sloppy and marginal land before five years. The production from this tiny sloping lands were hardly to feed my family even for 3 months. For earning we had to move several places such as Kathmandu, Pokhara and Chitwan for wages. Even though it was difficult for passing days feeding children.

While fighting against my poverty, starvation and famine, one day the people of MDI- Nepal came to our village. They called us and told to grow fruits like banana and pineapples in 'khoriya' lands and also suggested us to see the similar intervention done by others in the village. We were yet skeptical whether we would have success with it or not. Anyway, I had a bit a ray of hope and decided to follow with the advice. The MDI team told that we could support for fruit saplings through Small Grants fund. With this support, I planted 500 plants of banana this year. Next year, MDI team again came and asked for planting broomgrass. They suggested that even if banana plants get fail you could have another opportunity to have income with broomgrass. We all agreed and planted broomgrass in khoriya lands. I planted ten thousands sets of broomgrass. On behalf of this, MDI also provided 140 kilograms of rice and 17.5 kilograms of lentil through World Food Programme. By this time, banana plants were vigorously growing and have started fruiting. I received some income from its sale.

Now, I am happy. I cover my expenses by selling banana in the market. There is no market problem. Whenever, we bring banana in local market of Manahari, it's immediately sold. I have also now income from sales of broomgrass. Our life is now passing easily. I don't have to be much worry for feeding my children now.





NOW I SHOULD NOT GO FOR FOREIGN JOB FOR EARNING MONEY

My name is **Mangal Bahadur Tamang**. I have a dreadful story in my life. I was born in November 8, 1972 in Narayani zone of Makawanpur district in Hadikhola VDC-7. I have 12 members in my family. I have been working as a social worker and a farmer. I am just a literate person and I have read up to grade 2. There were no schools in our village at that time and parents were also illiterate. I was admitted in school in 1983. I became first in grade one but ended when I was studying in grade 2 when I fell down from a tree and broke my hand. Due to this I could not attend the class for three months. Then I left study. Then after, I had to face painful days. My whole property had collapsed by fire on my house. Everything including home, grains, wearing, and domestic appliances were damaged by fire. Our misery life had begun since that day. We had little land, yet not registered. We did not have enough food for feeding our families. I had to earn money by knitting buckets and selling kurilo (asparagus) collected from the forest.

In 2001, MDI-Nepal officers came in the village and asked for training. I took first training in vegetable farming methods. MDI also organized an exposure trip in Baglung and Pokhara. I had opportunity to participate in this exposure visit. I was excited when I saw vegetable farming in Baglung and determined to do something in my village. I did so later when I returned back from the trip. There was scarcity of drinking water in the village. Villagers

had to go miles away just for fetching water. Later SAPPROS Nepal, a NGO supported a drinking water project with support from Fund Board, Nepal. This gave me a little hope to irrigate my vegetable crops.

In 2004, MDI Nepal came with some projects from UNDP GEF Small Grant Programme. MDI facilitators asked for having plantation works in areas greatly affected through chure crisis. We also established one small group of few persons for taking these services. Later this group has been upgraded as registered cooperative called as 'Churia Agricultural Cooperative Ltd.. We have 216 share members now collecting adequate funds as saving.

As per advice of MDI, our group decided to plant banana and pineapples in areas with marginal slope lands. Earlier we had no more expectations. I myself planted one thousand banana suckers, two hundred lemon plants, one thousand broom grasses and five hundred turmeric plants. Now, my farm has full of banana, pineapples, broomgrass and other cash crops. In 2005, I also received nursery training in citrus in Dhankuta supported by the project. After the training, I have established nursery of lime and produces 6-10 thousand saplings annually. Now, I receive forty two thousand rupees by selling lemon saplings, twelve thousand from raw lemon, and thirty thousand from banana. In average, my income is eighty four thousand per year.



I am now satisfied. All my family members involve actively in developing agroforestry. What I would like to tell others like me that we do not have to go foreign just for money. We have lot of opportunity here, which we have to be able to see. We could not see it earlier but when MDI people advised us we did it and escaped from such a dreadful life. It's not only the income that we are getting, we are also protecting our environment. The churiya range which is in a very destructive shocks, we have shown an alternative that a simple tool can protect it and enhance livelihood of locals dependent with churiya biodiversity. I would like to thank MDI-Nepal, GEF Small Grant Programme for showing me this path and publish my story.

Once again greeting!



A DECADE OF MDI IN NEPAL 2002-2011



THE FATE OF MR. BHEDI PRAJA AND HIS WISDOM ON SUSTAINABLE AGRICULTURE

Bhedi Praja lives in a Laibang village in Raksirang VDC-8 of Makawanpur district, Nepal. This place is not so far from the highway. One can reach hardly at one hour of walking distance from the highway.

Though the area is accessible, Bhedi Praja is living with hardship and distress for the last 50 years in this village. Earlier, he had 13 family members, six sons, three daughters and their couple. Two daughters already gone to the dreamland due to fever. Now he lives with 9 family members in this village.

His small cottage built with thatch roof and few wooden logs is located in a steep slope. He owns just approximately 3 ropanis (0.15 ha) of land where he produces maize and blackgram. This tiny land holding provide him food sufficiency for no more than 3 months period. For rest of the months he has to work for others.

He remembers that his ancestors were rich. They had enough land in Chainpur, the next village from this settlement. Once the government officials came to his forefather and asked for land to construct an office building. His forefather could not ignore and gave up the land just in Rs. 3,000. Then, his forefather migrated to this place. Bhedi was very little at that time.

He grew in this village with many difficulties. The crops were hard to see. Their family lived

with wild food plants like Gittha, Bhyakur and Chuiya. Bhedi remembers that they had to survive with these edible wild foods for almost ten months in a year. His parents advised him to go to school for study. But he could not attend the school because it was far from his house and many of his counterparts assaulted him because of his poverty. He also thought that what happens even if we read. There were no any good people other than his parents to advise him on importance of education. He played with the Laibang hills during his childhood by walking ups and downs.

His parents faced acute illness. He further remained in crisis. Bhedi remembers his father always had suggested him that do not theft even if you have food crisis, do not cheat others, rather take wages working for others and work hard for your farm. Bhedi works for his farm too but his production from this farm doesn't provide enough foods. So, he is compelled to work for others on wages.

One day a brother from the village told him that Bhedi ! You are alone. Get marry with some girl and live together. Then he went in Maisirang village for the girl. He asked for the girl. But the girl parents entirely refused him. Instead the parents of girl insulted him you have no any property, no house, no good land and no education. How can you keep on my daughter happily? He realized that it's true for me. He was very upset. Bhedi requested them a lot and





promised them to keep their daughter happily throughout the life with better care. At last girl parents agreed his proposal and married their daughter. When he married his wife came to his house. Seeing all the situation of Bhedi's house his wife was not happy and told Bhedi that she would return to her parent's home rather staying in his house. Bhedi promised to give her better love and happy throughout her life. Then her wife agreed to live together. Bhedi remembers that Love is greater than wealth. I won the battle with my wife.

He has now six sons and one daughter at present. The two daughters died because of fever. He felt guilty that he could not make his daughter live due to lack of money. Nobody helped him to treat his beloved 2 daughters. He has only 3 ropani of land (0.15 ha) and all Khoriya (sloping uplands). He added, how much I can do with these two hands in such limited land? But, anyway I am giving good education to my children with my hard labour. The children sometimes refuse to go to school if they won't have enough food to eat in the morning.

He doesn't remember the actual date. Some 2 -3 years back few officers came to his home and told him to plant banana, amrisko and pineapples in his khoriya land instead of maize and millets only. For this these officers committed him to give saplings of these fruits. They also told him that he will receive some rice for digging pits for these fruit plants. He became very happy listening this plan. He thought it's really like the "rice pudding for such a hungry man". He didn't know about the organization telling him this plan. Later, he understood that this was MDI-Nepal with food support from World Food Programme. With the help of this institution and corresponding plans he planted 500 banana plant, little amrisko and some pineapple plant in his Khoriya land. He thought that he will sell banana and buy more rice in few years. He was more hopeful counting like chicks before hatching. But his dream went on the blink when newly constructed "Tamsaling" road connected his farm. This road destroyed 200 banana saplings planted in his 2 ropani of lands. Maize and millet grown in the same piece of land also shattered. He cried for 7 days. He had nothing to feed his family. He collected the entire unripe banana from the destroyed plants, boiled it and feed his family for all 7 days. With this hue and cry the road plan provided him small quantities of rice later.

His house lies on the top of Liabang village near the landslide area. There are no any trees. Bhedi says because of lack of trees in such hill slopes there is an always greater chance of landslides and people around this zone live with greater trouble scared with landslides. Bhedi remembers the disastrous landslides in the year 2002 which damaged all hill slopes with many human casualties. We cried whole night scared of death due to the landslides. Luckily they survived. Bhedi tells if the situation remains similar we may be in victims any times during the rainy season in future too.

This time again Bhedi survives with few banana plants saved from the road slides. He said that he could only see money when he sells these bananas. He adds that he buys rice from that money which makes his children and wife happy. The remaining time he carries manure in the village. In return, he gets maize and millet. No one provide him money for his labor. Some villagers love him but many hate because he is poor, he added. Some villagers accused him as a thief. There is no one to speak for him. I don't reply to anybody whoever lay blame on me. Instead I shed tears by living in separate place, Bhedi says. But Sajiwan and Ramesh brother who live near his house love and give sympathy to him. Bhedi says "I will stay hungry all the day but I will never robber others property in my life. God is there to see all. I have not done anything wrong in my life. Among my six sons, one is studying in grade five, another in grade 4 and three respectively. I have yet a great desire to educate my children even if I have to eat with my half of my stomach.

Remembering his lovable wife he added he could not provide new clothes for his wife even in such a long period of his wedding. He buys at least one saree and a blouse in a year for his wife but of second hand. He feels guilty he never could buy new clothes for his wife because he has no money for buying new clothes.

Last year he became ill seriously. He had pain on heart and back. He had no money for his treatment. He thought that he will die because of lack of treatment. He was worried about his sons that if he died his sons will be in trouble and will face the same problem like him. But no one in my family thought like me. Nobody took care of him. Even his two sons and wife

refused to come closure to him. Bhedi was totally disappointed seeing all these events. Thanks god. Later, the staff from MDI-Nepal took me to hospital and treated me and I become well. After 2-4 days I was able to work in my own field again.

With long gulp of breath, Bhedi says this is the fate of my life. I have to work always for others for feeding my families. Now sons are also growing and getting education. I sometimes hear from the intellectuals that even the educated persons in our country don't get good job. I get worried hearing this. Anyway I have made their arms stronger even with these difficulties. I hope they will survive their better future.

He is still more hopeful with his khoriya land. With some fruit plants like banana and pineapple grown earlier, he received some income. He has realized that banana and pineapples are better crops in such khoriya more than maize and millet. He is hopeful that if these types of plants are well covered, there would be no any difficulties for our survival.

Asked with some rice again for support Bhedi says that No...No. Only rice is not solution for us. It only can help for our works. Once the rice is taken we eat them and no longer remains. But if you support for saplings of banana, pineapples, amriso and other fruit crops it saves us for our generations. It also protects land from erosion and landslides. Growing fodders in between of fruit crops also saves our goats by providing good fodders.

We thought perhaps this is good wisdom of Mr. Bhedi Praja to bring sustainable changes in agriculture in such a denuded lands, protect environment and improve livelihood of locals suffering from insensitive farming practices.



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