



# Annual Report

## 2011/12 (2068/69)

**Vision**

FORWARD seeks a pleasant and self-reliant society in which all people live in dignity and prosperity.

**Mission**

FORWARD facilitates disadvantaged people to fulfill their basic needs adequately through social mobilization and best utilization of natural resources.

**Goal**

Reduce poverty of the rural communities through integrated and sustainable development interventions.



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**Design & Art**

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## Abbreviations and Acronyms

%	Percentage
@	at
ADB	Asian Development Bank
AVRDC	Asian Vegetable Research and Development Center
B	Barkhe
BARI	Bangladesh Agriculture Research Institute
BMZ	Federal Ministry for Economic Cooperation and Development
CARIAD	Centre for Advanced Research in International Agricultural Development
CAZs	Centre for Arid Zone Studies, Bangor University
CBOs	Community Based Organizations
CBSP	Community Based Seed Production
CCIC	Chamber of Commerce and Industries, Chitwan
CEAPRED	Center for Environmental and Agricultural Policy Research, Extension & Development
CESVI	Italian Cooperation and Development "cooperazione e sviluppo", Italy
CFUG	Community Forest User Group
CIMMYT	International Center for the Improvement of Maize and Wheat
COB	Client Oriented Breeding
CP	Crude Protein
CSISA	Cereal Systems Initiative for South Asia
CTEVT	Center for Technical Education and Vocational Training
CWN	Concern Worldwide Nepal
DADO	District Agriculture Development Office
DDC	District Development Committee
DFID	Department for International Development (UK)
DFO	District Forest Office
DLSO	District Livestock Service Office
DM	Dry Matter
DoA	Department of Agriculture
DPAC	District Project Advisory Committee
DWO	Dalit Welfare Organization
F to F	Farmer to Farmer
FAO	Food and Agriculture Organization
FEAST	Feed Assessment Tool
FFS	Farmer's Field School
FORWARD	Forum for Rural Welfare and Agricultural Reform for Development
FUGs	Forest Users Groups
GBP	Great Britain Pound
GOs	Government Organizations
GTZ/RPN	German Technical Cooperation/ Rural Programme Nepal
Ha	Hectare
HBDT	Himalayan Bio-Dynamic Development Trust
HES/P	Household Economic Security/Plan
HHs	Households
HICAST	Himalayan College of Agricultural Science and Technology
HMRP	Hill Maize Research Programme
HVCs	High Value Crops
INGOs	International Non-Governmental Organizations
IAAS	Institute of Agriculture and Animal Science
ICARDA	International Centre for Agricultural Research in Dry Areas
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
IGAs	Income Generation Activities
ILRI	International Livestock Research Institute
IPM	Integrated Pest Management
IRC	International Rescue Committee
IRD	Informal Research and Development
IRRI	International Rice Research Institute
JT	Junior Technician

JTA	Junior Technical Assistant
Kg	Kilogram
LANN	Linking Agriculture, Nutrition and Natural Resource Management
LAPA	Local Adaptation Plan of Action
LIBIRD	Local Initiatives for Bio-diversity Research and Development
LIG	Livelihood and Income Generation
LRPs	Local Resource Persons
MASF	Market Access for Smallholder Farmers
MDG	Millennium Development Goal
MoAC	Ministry of Agriculture and Cooperatives
mt	Metric Tons
MoU	Memorandum of Understanding
NAPA	National Adaptation Programme of Action
NARC	Nepal Agricultural Research Council
NARDF	National Agricultural Research and Development Fund
NEAT	Nepal Economic, Agriculture and Trade
NFRP	Nepal Flood Recovery Programme
NGLRP	National Grain Legumes Research Programme
NGOs	Non-governmental Organizations
NMRP	National Maize Research Programme
NRIL	Natural Resources International Limited
NRs	Nepalese Rupees
NTFPs	Non-timber Forest Products
PAC	Producer Apex Committee
PPME	Participatory Planning Monitoring and Evaluation
PPP	Public-private partnership
PVS	Participatory Varietal Selection
RbF	Riverbed Farming
RiR	Research into Results
RiUP	Research into Use Programme
RNRRS	Renewable Natural Resources Research Systems
RRC	Rainfed Rabi Cropping
RSTL	Regional Seed Testing Laboratory
SDC	Swiss Agency for Development and Cooperation
SIFS	Sustainable Integrated Farming System
SNF	Solids not Fat
SNV	Netherlands Development Organization
SUPPORT	Social Upliftment through Participatory Programme, Research and Training
t	Ton
TL	Truthfully labeled
UK	United Kingdom
USAID	United States Agency for International Development
VADC	Village Agriculture Development Committee
VAHWs	Village Animal Health Worker
VDC	Village Development Committee
WHH	Welthungerhilfe
WHP	Water Harvesting Pond

## Units

1 Kattha	=	333 square meters
1 Ropani	=	500 square meters
1 ha	=	20 Ropani
1 Lakh	=	100,000

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## Foreword

We are pleased to present FORWARD Nepal's Annual Report 2011/12. This Annual Reports sets out FORWARD's progress towards our mission and vision for the fiscal year 2068/69 (2011/12) with full audited financial statements.

FORWARD Nepal was founded in 1996 and has reached out to 333,170 direct beneficiaries' households in 42 districts through its 59 projects. Those projects focused on improving food security, household incomes and resource conservation to contribute towards sustainably improved livelihoods of rural people. Recognition of FORWARD Nepal as the pioneer organization for promoting riverbed/bank farming, for the release of new varieties of legumes and rice through partnership/collaborative approach, and technology demonstration and dissemination of high value crops were some of the remarkable achievements of FORWARD in the past.

The major activities carried out by the organization to contribute to pro-poor growth in the year included promotion of high value crops, livestock and dairy development, fodder and forage improvement, micro irrigation, community group empowerment for sustainable development and activities to increase resilience to climate change . During the reporting year, FORWARD reached out to 51,135 direct beneficiary households through 12 projects with multi-donor funding, partnership and collaboration. Among the 12 projects, four were completed this year and two were new - Commercial Promotion of Lentil Sub-sector in 11 Terai Districts of Nepal and Sustainable Integrated Farming Systems (SIFS) in Chitwan district. With regard to documentation and publication of results and lessons learned from its projects a number of booklets and articles have been published.

Since FORWARD's founding, it has gradually transformed itself from an organization accommodating primarily professionals with expertise in community development and income generating activities to one that now includes experts in high value crops, dairy and forage promotion, institutional development of cooperatives, LNGOs and seed companies, adaptive research on new crops and legumes varieties, value chains and marketing, and riverbed farming. In recent years, FORWARD has extensively extended its partnerships with government, non-government organizations and the private sector at local and national levels as well as internationally which has provided new avenues and opportunities for new programme partnership.

FORWARD has now directly employed 156 people, most of whom are professionally trained in agriculture, livestock and social sciences. Eighteen percent of them are Bachelor, Master and PhD degree holders. FORWARD has been a home and a learning platform for the career advancement of new graduates. It is a matter of happiness that a significant number of FORWARD staff was accepted by foreign universities for Master and PhD courses. Likewise, former staffs of FORWARD have been successful in getting jobs in reputed organizations and Universities both nationally and internationally.

Overall this year remains very successful in reaching out to the poor through FORWARD's various pro-poor growth project activities, in partnership with multiple donors and local government. We have broadened our focus to long term sustainable poverty reduction. It has set up good working facilities at the head office and regional offices. Purchase of land for its own building is currently underway.

The achievements made during the year were the result of hard work of staff and the collective action and support of all our partners, local government officials and farming communities. For this, we would like to thank FORWARD staff, partners, local government

officials and supporters for all you have done for FORWARD and its clients. We would like to extend our sincere thanks to the funding agencies, donors, collaborators, national and local media, and the local communities for their support and trust which provided the necessary energy for FORWARD and its team to execute its programmes and remain productive. We would like to give special thank to Dr. David Harris, the Honorary Member of FORWARD for editing this report despite short notice. FORWARD's Board Members, Honorary Members and Members are equally thankful for their continued support and guidance, for the execution of its programmes and for keeping the organization vibrant. Thanks also go to Mr. Ram Krishna Neupane, Ambika Sapkota, Krishna Bahadur Bhandari, Shree Ram Chaudhary, Manju Pathak and other staff of FORWARD who worked rigorously in compiling, structuring and proof-reading this report and bringing it physically to this shape. We also appreciate the work of the Worldwide Print Solution at Kathmandu for the timely publishing and delivery of this report. Lastly, we thank Kuber & Co. Chartered Accountants, the audit firm, for auditing the FORWARD accounts for the year 2068/69 (2011/12) and for timely publication of the audit report.

Lastly, let's continue to work together for the poor with greater effectiveness and efficiency.

Thank you,

Prof. Naba Raj Devkota, PhD  
Chairperson  
FORWARD Nepal

Netra Pratap Sen  
Executive Director  
FORWARD Nepal

September 1, 2012





## Geographical Coverage of FORWARD Nepal



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## A Brief Introduction to FORWARD Nepal

FORWARD Nepal is a non-profit, service-oriented non-governmental organization established in 1996 to help disadvantaged groups and the rural poor. It is registered at the District Administration Office, Chitwan, and affiliated to the Social Welfare Council, Nepal. The organization aims at reducing poverty of rural communities through integrated and sustainable development interventions. FORWARD's programme activities are focused towards improving food security, household incomes and resource conservation to contribute to sustainable rural livelihoods. It integrates social mobilization, agriculture, livestock, aquaculture, farm forestry, biodiversity conservation, value chain and market development in a multi-stakeholder approach in partnership with government, non-government organizations and the private sector both at national and local levels. During the course of its 16 years of professional interventions, the organization has successfully implemented 59 projects covering 333,170 direct beneficiary households in 42 districts. Currently, the organization has 15 specialists and five support staff at the centre and over one hundred thirty field staff working in different project districts.

## Major Programme Areas

FORWARD is committed to promoting sustainable livelihoods of resource-poor rural communities through better management of natural resources. Programme implementation is multi-pronged, integrating key interventions both in horizontal and vertical dimensions to produce large, positive impacts on social and economic conditions of communities. The organization has four major Programme areas with the following interventions:

### 1. Food Security and Sustainable Livelihoods

- Food crops, cash crops, fisheries, and livestock
- Farm forestry and Non Timber Forest Products (NTFPs)
- Small infrastructures (Irrigation and Resource Centers, Collection Centers)

### 2. High value Commodities and Market Development

- Enterprise development
- Value addition
- Market networking

### 3. Participatory Research and Development

- Participatory technology and innovation development
- Development studies and technology dissemination

### 4. Natural Resource Management encompassing climate

- Biodiversity conservation
- Environment and climate change
- Disaster risk reduction and emergency response
- Ecosystem health

## Working Strategies/approaches

### a) Social mobilization

FORWARD focuses on the development and strengthening of grass-root level organizations for effective implementation and sustainability of development interventions. It follows the

process of social mobilization to actively involve target communities in development activities. The rural community is facilitated for their capacity building, local institutional strengthening and linkage development with resource organizations for the sustainability of development programmes.

#### **b) Demand-driven programmes**

FORWARD envisages the target groups as the focal point of the programme. Project interventions are designed based on proven and effective participatory planning exercises which are bottom up and fully empower the farm households. The communities identify, prioritize, plan, and execute activities based on their needs, capacity and resources as well as market potential.

#### **c) Innovation in development**

Development is a process to bring about changes which generally requires innovation. FORWARD always seeks to generate and promote innovation in its interventions, approaches and policies. FORWARD adopts the LANN approach (linking agriculture, nutrition and natural resource management) to support the rural community to use locally available knowledge, skills and resources efficiently to enhance sustainable livelihoods.

#### **d) Market-led approach**

Markets open avenues for commercialization of agricultural commodities. FORWARD supports rural communities to increase household incomes by enhancing economic opportunities. It follows the value chain approach as a basis for designing appropriate market-led interventions. This approach involves all stakeholders in production, input and output marketing and policy issues in the programme. The private sector plays an active role as service providers for the promotion of agricultural business.

#### **e) Establishment and strengthening of local resource persons and community resource centers**

Sustainability of development interventions is always an important aspect of projects implemented in the rural community. The local resource persons (LRPs) are the service providers who work for the community to improve the access of farmers to technical knowledge and information in the rural areas. LRPs are registered or affiliated to local government agencies like VDCs, DADOs, DLSO and DFO. Resource centers provide a range of materials and services to the local community, which are important for the continuation of project interventions. FORWARD supports the establishment and strengthening of information- and learning centers, multi-purpose tree nurseries and seed entrepreneurs such as community based seed producer groups, agro-vets and cooperatives.

#### **f) Inclusive development**

It is well recognized that there is widespread social disparity in the rural community. The organization emphasizes the need for bringing excluded/disadvantaged groups into the mainstream of development. Therefore, programmes are focused towards the poor and socially excluded groups such as women, Dalit, Janajati, children, young people and victims of conflict and natural calamities.

#### **g) Partnership and institutional learning**

FORWARD works with GOs, I/NGOs, local organizations and the private sector for large and sustainable impacts. Working in partnership with different organizations helps in scaling

up/out of outputs, broadens experience and learning through innovation platforms/networks of different institutions, and thus promotes sustainability. The organization has signed MoUs with the IAAS, Rampur; NARC; DoA; CARIAD, Bangor University, UK and Hiroshima University, Japan for long-term partnership work.

#### **h) Farmer-to-farmer (FtoF) extension**

FORWARD recognizes that FtoF extension is a powerful tool (approach) for initiating self extension of innovations/technologies. Farmers also know the best way to talk to each other to transmit technology messages. Along with other ways of technology transfer, FORWARD promotes the FtoF approach for wider dissemination of technologies and for larger impacts of its interventions.

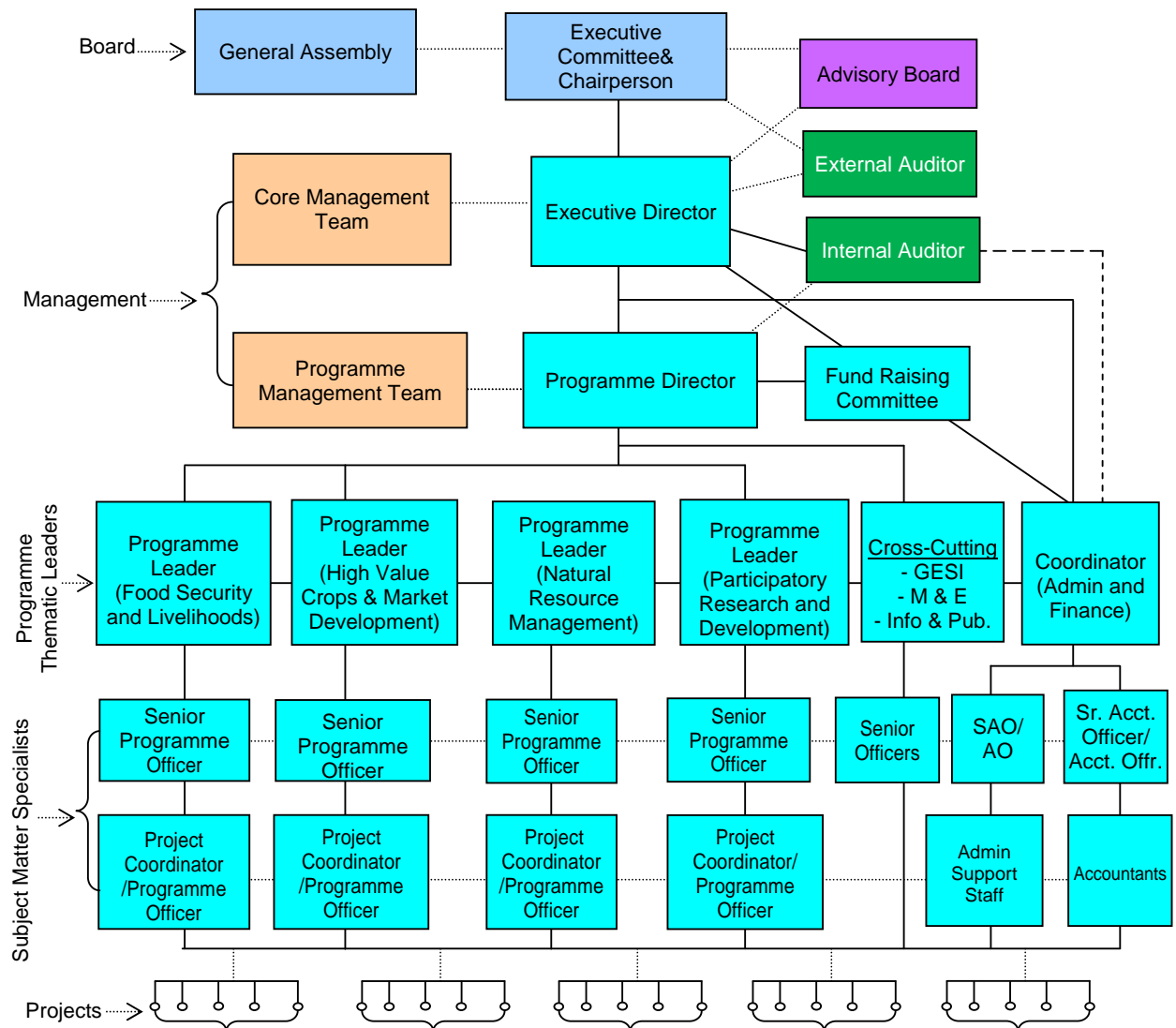
#### **i) Farming systems approach**

FORWARD puts emphasis on holistic development of rural households integrating crops, horticulture, livestock/ fisheries and relevant off-farm enterprises for optimal utilization of biophysical resources, bringing synergies in development interventions for producing positive impacts on the socioeconomic status of the beneficiaries in a sustainable way.

### **Organizational Management**

In response to the changing external environments in which the organization has to work, FORWARD has restructured its organizational management system. The Executive Committee elected by the General Assembly provides overall policy direction and guidance to the organization. The Executive Committee delegates its authority to the Executive Director to hold responsibility for implementing policy decisions and day-to-day management of the organization while the Programme Director leads the team of multidisciplinary specialists for overall execution of the Programmes run by the organization. Additionally, a Core Management Team comprising the founder members of the organization provides support in strategic Programme planning and policy management. For ensuring equity and gender balance in its interventions, Gender and Social inclusion (GESI) and for delivery of quality outputs Monitoring and Evaluation (M& E) have been included in the crosscutting themes.

## Organizational Management Structure



- Note:
1. Core Management Team consists of 2 Founder Members, the Programme Director and the team is led by the Executive Director.
  2. Programme Management Team consists of Thematic Leaders, Subject Matter Specialists, the Executive Director, the Admin and Finance Coordinator and the team is led by the Programme Director.
  3. The Focal person for specific themes can be anyone having a designation above Programme Officer as decided by PMT in consultation with respective Theme Leaders.
  4. The Fund raising committee consists of 3-5 members nominated by the board in consultation with the Executive Director.

## Programme Highlights

During the year 2011/12, FORWARD implemented 12 projects in 25 districts of the country. This section describes the projects and key activities implemented and the progress made during the reporting period.

Table 1: Summary of FORWARD implemented projects, 2011/12

S.N.	Projects	Districts	Duration	Budget (2011/12) (NRs)*	Funding source
1	Sustainable Integrated Farming Systems (SIFS)	Chitwan	2012-2014	3,315,789.00	WHH/BMZ
2	Riverbed Vegetable Farming	Banke	2011-2013	329,230.00	Helvetas
3	Promoting New Maize Varieties in the Hilly Areas of Surkhet District	Surkhet	2011-2013	300,000.00	CIMMYT/HMRP
4	Commercial Promotion of Lentil Sub-sector in 11 Terai Districts of Nepal	Siraha, Saptari, Sarlahi, Rautahat, Bara, Parsa, Nawalparasi, Banke, Kailali, Dang, Kanchanpur	2011-2013	2,33,98,934.00	USAID/ Chemonics/ NEAT
5	Sustainable Transformation of Agriculture Systems for Enhancing Economic Security of the Poor in Morang District	Morang	2007-2012	5,235,985.00	Plan Nepal
6	Poverty Reduction through Crops Intensification in Rice Fallows	Siraha, Saptari, Udayapur, Kapilvastu, Dang, Salyan, Pyuthan, Surkhet, Banke, Bardia, Kailali, Kanchanpur	2008-2012	5,650,000.00	RiU/DFID
7	Promoting New Rice and Legumes Varieties from Client-oriented Breeding	Mahottari, Dhanusha, Rupendehi	2008-2012	1,381,500.00	RiU/DFID
8	Capacity Building of Local Organizations to Implement Sustainable Agro-based Livelihood Programme in Makwanpur District	Makwanpur	2007-2012	1,960,413.00	Plan Nepal
9	Harnessing the True Potential of Grain Legumes: Economic and Knowledge Empowerment of the Poor Farmers of South Asia	Dailekh, Surkhet	2007-2012	81,000.00	IFAD/ICRISAT
10	Market Access for Smallholder Farmers (MASF)	Chitwan	2010-2012	17,397,196.00	DFID/ Practical Action, Nepal
11	Improvement of Livestock Production System through Feed Based Interventions in Chitwan District, Nepal	Chitwan	2010-2012	1,381,380.00	Gates Foundation/ ILRI
12	Kitchen Gardening and Nutrition Programme in Kailali, Kanchanpur and Dadeldhura districts	Kailali, Kanchanpur and Dadeldhura	2011-2012	6,427,908.00	NFRP/USAID/ FINTRAC

\* 1 US\$ = 85 NRs



## **Sustainable Transformation of Agriculture Systems for Enhancing Economic Security of Poor families in Morang District**

FORWARD has been implementing interventions for improving livelihoods of economically poor, landless and vulnerable families since November 1998. Livelihood improvement interventions were initiated to enhance household food security, amplify benefits to the poor through their active participation in leasehold, agro-forestry, riverbed farming, semi-commercial vegetable production and fish farming through group and community approaches. In 2011/12, FORWARD has implemented the project "Household Economic Security Programme in Morang District" with the financial support of Plan Nepal. Activities implemented by the project have delivered numerous quantitative and qualitative outputs, outcomes and impact.

Vegetable production at semi-commercial and commercial scale has supplemented nutrition and income levels of participating families. Its scale-up and spill-over effects are also visible as indicated by the recent "Vegetable Impact Study" (Plan Nepal, 2010). In addition, significant institutional development of farmers and farmers group has also been observed. Govindpur, Rangeli, Bhatigachh, Budhnagar, Banigama, Tetariya, and Hasandaha VDCs are examples of where vegetable production has brought a momentum. Similarly, riverbed farming was also internalized by the DADO and it has extended its service in Rangeli VDC. Moreover, there is a formation of National Alliance on riverbed farming in which FORWARD is affiliated.



Vegetable cultivation at semi-commercial group

Agro-forestry has also brought encouraging effects in the communities. Many communal lands including those of schools are utilized for development of agro-forestry. Government agencies are also appreciating this initiative, as they are taking ownership and initiating complementary activities e.g. Rangeli Agro-forestry Block. As well as supplying technical advice, Plan-FORWARD will continue to support established projects for the rest of the project duration.



Riverbed vegetable cultivation in Morang

Ten HES sub-committees were formed and ten household economic security plans were finalized in the project period. Similarly, 21 groups were registered with the DADO and are now working smoothly. Sixteen



leadership trainings were provided to the earlier-formed HES sub-committees and PAC members to motivate them to act as a leading body in VDC-level agricultural development. These efforts are working properly. Similarly, DPAC is also in the process of registration.

Regular coordination with line agencies at the district and local level was maintained through the organization of coordination meetings, line agency visits, workshops, trainings and regular meetings with the DADO.

## Participatory Crop Improvement in South Asia (P9002C): Poverty Reduction through Crop intensification in rice Fallows

FORWARD and coalition partners LIBIRD, SUPPORT Foundation, DOA, NARC and CARIAD, Bangor University, UK, have implemented this project in 12 districts of Nepal since May 2008. The aim of the project was to reduce poverty through scaling-out/up of validated RNRRS research outcomes. To enhance food security of poor and marginal households through promotion of rainfed rabi crops in the rice fallow areas of the mid- and central *Terai* of Nepal, the project was implemented in Siraha, Saptari, Kapilvastu, Banke, Dang, Kailali, and Kanchanpur districts across the rainfed *Terai* region of the country. The project also focused on some informal research and technology promotional activities in similar domains of Udayapur, Salyan, Pyuthan, and Bardia districts.

The project employed the multi-stakeholder approach in all stages of the project implementation. Field activities were implemented by the coalition partners in collaboration with NGLRP and the DADOs of project districts with active support from the farming communities and technical backstopping was received from CARIAD, UK. The major project implementation approaches were: Business development for strengthening CBSPs, a cropping system perspective in technology interventions, public-private-partnership (PPP), a FtoF approach in seed dissemination, and mass communication.

To increase farmers' access to improved seeds of legumes and short duration rice varieties at the local level, 17 CBSP groups across eight project districts were strengthened through organization of technical training, support to improve business plans, provision of source seeds through NARC and DADO, quality assurance through facilitating multidisciplinary monitoring of seed production plots, and market networking through improving links to local and district level line agencies, agrovets, local media and other service providers. Those CBSPs produced and marketed 1369 mt seeds of rice including 266 mt COB varieties, and 164 mt legumes (86 mt lentil, 57 mt mungbean, and 21 mt chickpea) during the period 2008-2011. In the last year (2011/12), these groups produced 412 mt seeds of rice, 35 mt of lentil, 5 mt of chickpea and 30 mt of mungbean. To diversify business, these groups produced seeds of project non-target crops such as wheat (157 mt), maize (37 mt), potato tubers (55 mt) etc.



Salhesh Fulbari preparing for the delivery of rice seeds

The project developed new varieties of rice and legumes and distributed IRD sets (comprising seeds of rice and legumes adequate for sowing in 1 kattha land, together with fact-sheets) to a large number of households in 12 districts. In addition to contributing to the varietal diversity of rice and legumes in the project districts, the IRD approach has enabled farmers to adopt newly released/identified high yielding varieties much more quickly than usual. Though this year was the project wrap up and phasing out period, the project distributed some IRD kits of rice and legume varieties (rice to 4850HHs, lentils to 1500 HHs, and mungbean to 2171HHs). Promising new rice COB lines (Agaute 0701, Barkhe 1027, Barkhe 2014, Barkhe 2024, Barkhe 3004, Barkhe 3019, Judi 582, Judi 572, Madhyam dhan

0742, Madhyam dhan 0845, PR 101, Sugandha 1, Sunaulo Sugandha and Super 3004) were included in the IRDs. Seeds of COB varieties were procured from CBSPs while those of non-COB varieties were obtained from NARC centers. Rhizobium culture along with an instruction sheet on seed inoculation was included in mungbean and lentil IRDs.

Farmers were trained through organizing demonstrations of RRC technologies in the project districts, on-farm coaching, group discussions and interactions to facilitate them to adopt those technologies. A total of 579 farmers were trained through demonstration of RRC technologies such as zero tillage garlic cultivation, nutrient loading demonstrations in mungbean, and various technical trainings. In this context, 523 members from 17 CBSPs of eight districts were re-trained in business development and marketing skills, account keeping and transparency, leadership and good governance and coordination and networking with various service providers. The services of 38 LRPs were utilized in the conduct of project interventions and dissemination of technical skills and in distribution of IRDs in the project districts. The empowerment of LRPs has ensured the continuity and sustainability of project-promoted technologies after the end of the project.



Experience sharing monitoring visit of CBSP groups

Attention was paid to gender and social inclusion in implementation of project activities. The participation of women in all events was 32%. In training and visit Programmes the involvement of women was 36%. Data disaggregated by ethnicity showed 30 % Adibashis, 10% Janajatis, 6 % Dalits, 12 % Terrains and 42 % others including Brahman, Kshetris or Thakuris as project beneficiaries.

One rice variety, B 2014, was accepted for release and another variety, B 1027, was accepted for registration in 2011 after joint efforts by FORWARD, LIBIRD, NARC and CARIAD. FORWARDs' advocacy for recognition of Truthfully Labeled (TL) system for rapid dissemination of improved varieties of crops to the farmers has resulted in seed growers now having the option to sell their seeds through TL without going to the tedious and lengthy process of seed certification. The National Seed Quality Control Center has also decided to use the TL seeds approach for rapid dissemination of varieties demanded by the farmers and to narrow the gap between demand and supply.

The outcomes of the project were measured to assess its overall performance in reducing rice fallows; to measure progress in the adoption of rainfed rabi crops, varieties and resource conserving technologies for sustainable intensification of rice-fallows. An increase in crop intensification has been one of the most important outcomes of the project. With the expansion of RRC technologies, winter legumes (lentil and chickpea) and spring mungbean were integrated into crop sequences, thereby replacing less profitable cereal-based cropping systems. About a 40% increase in area under winter legumes over the base year has been observed in project districts, in addition to the inclusion of mungbean in partially irrigated spring fallows following the harvest of wheat or other winter crops. Preliminary analysis from impact studies showed that approximately 30% of households have adopted and continued to grow new rainfed rice varieties, 78% cultivate improved mungbean varieties (Kalyan, Pratikshya and VC 3960) while 26% were growing new improved lentil varieties (Simil,

Sagun, Maheshwor Bharati, Khajura-1, Khajura-2) with consequent increases in the cropping intensity of rice fallows. Important lessons from the project have been documented.

### **Farming in Free Time Brings Changes in Malla's Family**

Ran Bahadur Malla is one of the hard working experienced farmers of the "Laligurans Seed Production Group" of Baisebichawa-8, Kanchanpur District. He has a primary education and has a wife, two sons and one daughter. Before 2061-62 B.S., his family was not self sufficient in food as their fields remained fallow after harvest of the winter crop. He used to migrate to India for seasonal labor work to try to support his family.

In 2008, Support Foundation reorganized the Laligurans group to produce seed commercially under the RIU Programme. Since then, the organization has provided financial and technical support to develop the group into profitable and sustainable seed entrepreneurs. At the same time, Mr. Malla started mungbean cultivation to utilize land left fallow after harvest of his winter crops. Since then, he has ceased migration and is actively engaged in mungbean seed production. He bought an electric motor with a loan of NRs 22000 for irrigation and is earning additional money by leasing



Ran Bahadur Malla with his wife harvesting mungbean



Before intervention of RIUP



After intervention of RIUP

the motor to his neighbor. He is growing short duration and high yielding rice varieties (B 3019 and B 2014) introduced by the project in the main season, lentil in the winter and mungbean in the spring season. He used to harvest 2 crops per year before the project, but now harvests 3-4 crops per year from the same piece (8 kattha) of land. His family is now food self sufficient throughout the year and he is saving at least forty to forty five thousand NRs every year, most of which comes from mungbean sales. He shares his ideas, knowledge, experiences and techniques with neighboring farmers and barren land in Baisebichuwa-8, Amravati has become green. During 2010/11, he produced 750 kg mungbean and sold around 700 kg at the rate of NRs 120 per kg. His children are getting a good education in higher secondary school and he has built a new brick house with the income from mungbean seed marketing.

He says "Before the RIU project the area remained fallow due to lack of knowledge and awareness of mungbean cultivation, but the project has changed my livelihood by providing sources for extra income using fallow land. Not only have mine, but the livelihoods of many farmers around my village improved due to mungbean cultivation". The DADO and other line agencies are also helping with irrigation facilities in this area to promote mungbean cultivation, which attracts many more farmers, and "mungbean in rice fallows" has become a good additional source of income. He again says "mungbean is good for several kinds of patients. After the consumption of mungbean, it decreased my leg joints pain". Mr Malla added with a smiling Face: "Phursad Ko kheti le Jiwan Ma Lyayo Pariwartan".



## Participatory Crop Improvement in South Asia (P9002B): Promoting New Rice and Legume Varieties Developed from Client Oriented Breeding

This project has been funded by DFID/RiUP through RiR (Research into results). This project intends to scale up/out farmers' preferred new rice and legumes varieties developed through client oriented breeding and PVS approaches, and to strengthen the capacity of CBSP groups to develop into profitable and sustainable seed entrepreneurs. This is a LIBIRD-led project with implementing roles for FORWARD in Dhanusha, Mahottari, Rupandehi and Makwanpur districts. Other project partners include LIBIRD, SUPPORT Foundation, CARIAD, DOA and NARC.

Seven CBSP groups with 290 members have been producing and marketing cereals and legume seeds in local, district and regional markets. The group members received a series of technical trainings on rice and legume seed production, quality control mechanisms, marketing, enterprise development, accounting/book-keeping, good governance and leadership. The trainings were concentrated on strengthening the technical, managerial and marketing capabilities of existing farmer's groups and was



Rouging in rice seed production block, Rupandehi

used to raise awareness concerning group mobilization, group dynamics, fund management, organizational management, varieties, quality seed, principles of seed production, seed regulation, seed processing and post-harvest aspects and planning of different crops/varieties (rice, lentil, kidney bean and mungbean). Training was facilitated by relevant technical experts from DADO, ASC and NARC. More than 150 farmers have participated in various inter/intra district experience sharing and monitoring visits during the year.

These CBSP groups produced 196 mt seeds of different rice varieties, of which 80 mt was from COB rice varieties (Sunaulo Sugandha, Sugandha 1, Madhyam dhan 0845, Madhyam dhan 0742, PR 101, B 2014, B 1027, B 3004, B 3019 etc). These groups sold more than 105 mt of rice seeds (65mt of COB rice) to local Agrovets, DADOs, seed companies, neighboring farmers and farmers' groups and NGOs/INGOs. In addition, these groups produced and marketed 4.5 mt seeds of lentil and 11 mt of mungbean during 2011/12.

Free IRD kits of rice and legume seeds were distributed (comprising 1 kg seeds for COB varieties of rice and legumes together with fact sheets containing pertinent information on the varieties) to a large number of farmers in four project districts. A total of 1500 HHs received rice kits, 900 HHs received lentil and 600 HHs received mungbean kits during the year. An innovative approach to linking CBSPs with farmers involved the inclusion of CBSP contact details in the kits so that farmers could directly access additional seeds of varieties that they liked. DADO networks were also used to strengthen partnerships with the Department of Agriculture and also to make IRD distribution more efficient.



Participatory varietal selection trial in mungbean monitored by govt. & non-govt. professionals

Farmers were facilitated to visit nearby CBSP groups during the crop seasons to acquaint them with the importance of quality seed, techniques of quality seed production, and information on new varieties of different crops (rice and legumes). As a result of these exposure visits, some of the farmers were keen to get involved in seed production.



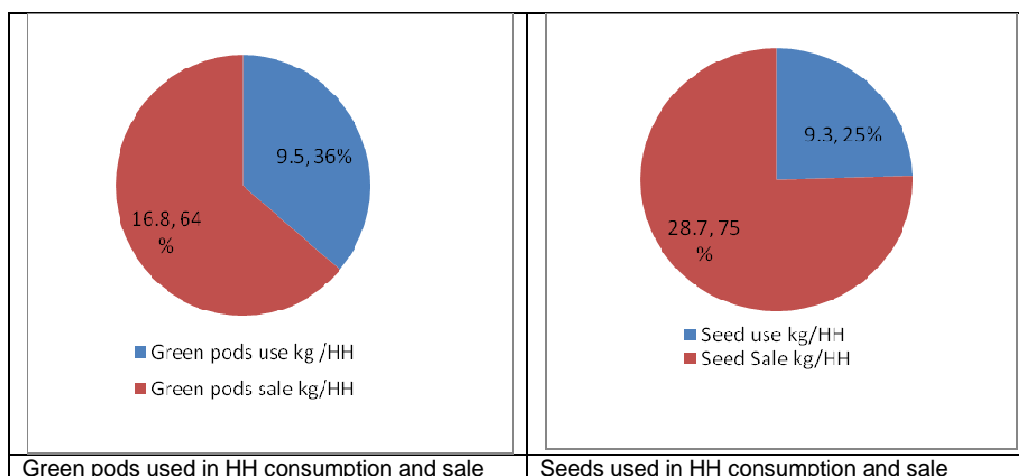
## Harnessing the true potential of grain legumes: Economic- and knowledge empowerment of the poor rainfed farmers of South Asia

Kidneybean (*Phaseolus vulgaris* L.) is an important grain legume grown as a vegetable and pulse crop in a wide range of agro-climatic conditions from the *Terai* (300 masl) to the high hills (2500 masl). It is grown as a cash crop in the hills of mid-western Nepal. To improve farmers' access to quality seeds of locally preferred bean varieties and thereby enhance production and income of rural households, a collaborative Programme between FORWARD-Nepal, ICRISAT and NARC was implemented in Dailekh district of the Mid-Western region during 2007-2011. Bean varieties were evaluated in farmers' fields at elevations ranging from 900 to 1700 masl. Results of participatory on-farm trials have shown superior performance of PB0002 and PB0048 bean varieties, both for green pods and for dry beans. According to farmers, green pods were tastier and acceptable for use as vegetable, because they had less fiber in the pods. These varieties, developed by



kidneybean Seed production in Farmers filed at Dailekh

selection of landraces in Jumla and adjoining districts, are compatible with the prevailing maize and bean intercropping system. Seed production of these varieties through a community-based approach has improved access to these varieties seeds at the local level. Seed growers were able to earn an average annual gross income of NRs 4633 per household from sale of these seeds. Additionally, the nutritional security of the people was enhanced due to increased household consumption of protein-rich green pods and dry beans. After 2 years of project intervention, mean household gross income attributable to kidneybean cultivation was increased more than two-fold, consumption of dry beans by three-fold and village level seed production by two-fold amongst the seed growers. Distribution of small quantities of seeds in the form of IRD kits, and farmer-to-farmer (FtoF) extension has resulted in dissemination of selected bean varieties to more than 400 households in the project area. The seed producer HHs was able to sale 28.7 kg seeds in additional to use of 9.3 kg dry beans per household. Additionally, they were able to sell 16.8 kg green pods in the local market after self consumption of 9.5 kg per HH.



## Capacity Building of Local Organizations to Implement Sustainable Agro-based Livelihood Programmes in Makwanpur District

Between July 2007 and Nov 2012 FORWARD Nepal, in partnership with Plan Nepal Makwanpur, has implemented agriculture-based income generation and capacity building Programmes with the goal of poverty reduction by improving household economic security .In the year 2011/12, indigenous organizations such as Producer's Apex Committee (PAC), village agriculture development committee (VADC) and local resource centers (Local Resource Person (LRP), Village Animal Health Worker (VAHW) & multipurpose tree nursery owners were promoted in 19 VDCs (Budhichaur, Ipa, Kogate, Thingan, Sukaura, Bajrabarahi, Chitlang, Basamadi, Manahari, Sarikhet, Agra, Gogane, Handikhola, Raksirang, Namtar, Palung, Daman, Makwanpurgadhi and Churiyamai of the district). The project mainly focused on preparing guidelines for VADCs and capacitating their members and integrate existing PAC to VADC so that they can, in future, maintain functional coordination with VDC, district level stakeholders and line agencies to implement the agriculture based livelihood Programmes at VDC level. The project has adopted a bi-focus approach; livelihood improvement/food security promotion and identification and capacity enhancement of VADC, PAC, LRP, VAHW and nursery owners. As a result, a number of farmers' groups, producer's apex committees and cooperatives have started service delivery to the local community.



Vegetable cultivation for nutritional security



## Improving Food Security through Community-Based Seed Production Initiatives in Surkhet District

This developmental research project was started in January 2012 with the financial support of CIMMYT/HMRP and is being implemented in four VDCs (Kunathari, Satakhani, Jarbutta and Lakegaun) of Surkhet district. Increased productivity and production of maize to increase household income and food security of resource-poor hill farmers were the main objectives. The project targeted as primary beneficiaries disadvantaged and marginal people including Dalits, Janajatis and women who were not food sufficient.

The programme has integrated seed production through CBSP groups, IRD distribution, PVS (mother and baby trials) and intercropping trials involving maize. Strengthening technical and entrepreneurship skills of CBSP groups for the production and marketing of maize varieties with improved market linkage was an important activity of the project. As of July 2012, there have been 1113 direct beneficiaries from IRD, seed production, PVS and intercropping trials. To make farmers aware of new varieties and associated technologies, 904 IRD kits of new and high yielding maize varieties (Poshilo Makai, Deuti, Arun-1, and Manakamana-3) were distributed to farmers around the CBSP groups. Three CBSP groups with 65 members in all were formed and are being supported to produce quality maize seed. These groups have planted 300 kg seeds of Manakamana 3, Arun-2 and Deuti varieties on a total of 15 ha of land. For quality assurance, CBSP groups are coordinating with the Regional Seed Testing Laboratory (RSTL) for field inspection.



Maize seed production, Surkhet



Traditional method of maize storage, Surkhet

Five farmers of Jarbutta and Lakegaun VDCs implemented mother trials and 125 farmers were engaged in baby trials. Seventeen farmers have participated in intercropping trials incorporating cowpea, cucumber and ginger as intercrops with maize. Regular monitoring and on-site technical support was provided in all the project activities by project staff.

## **Market Access for Smallholder Farmers (MASF) – Dairy Component in Chitwan District**

This is a DFID-funded dairy development project led by Practical Action Nepal and implemented by FORWARD Nepal. The project aims to reduce poverty by achieving sustainable increases in the income of smallholder dairy farmers. It was implemented in four districts namely Dhading, Gorkha, Tanahu and Chitwan. In Chitwan district, the project has been implemented by FORWARD Nepal in thirteen VDCs and one municipality. The project involved 56 cooperatives, 115 farmers' groups and 3520 households.



Forage cultivation in community leasehold land, Birendranagar, Chitwan

Project beneficiaries were trained in dairy animal production and feed- and forage management. Basic livestock management training to farmers included improved livestock management practices e.g. shed management, balanced feeding, forage cultivation, mineral blocks, urea molasses block preparation, de-worming, vaccination and artificial insemination. Interactions with Forest User's Groups (FUGs) were organized and some farmers have started cultivation of forage in community forest. Training on hazards and vulnerability assessment, safe dairy waste management, and cooperative account keeping were



undertaken. Other activities included capacity enhancement of dairy cooperatives for collection and marketing of milk, development of service providers and establishment of linkage with service providers, entrepreneurship development training and support, model farm demonstrations, dairy Chautaris for raising awareness in communities, animal health camps, farmers' exposure visits, and capacity enhancement of project staff through training and on-the-job learning. Joint activities with Sitaram Gokul and Nimbus Feed were also implemented. As an innovation, dairy animal resource centers have been established by three dairy cooperatives and a Dalit-focused revolving fund scheme was implemented to support poor families in dairy farming. Enterprise development training and material support to new entrepreneurs were also carried out.

Formation of a VAHWs network in the district and material support to the network along with seed money to run the network for sustainability was also completed. To strengthen the AI service, collaborative work with the AI mission was also carried out. Six cooperatives were supported under this activity. *Pashu Dhan*

*Surekshayan Karyakram* in thirteen dairy cooperatives has created interest in dairy farming especially for smallholder farmers.

As a result of project intervention, the area under improved forage has increased from 180 ha to more than 910 ha, and there is additional area coverage by farmers' own managed seeds and planting materials. Farmers have adopted waste management practices such as compost making and urine collection. Sixteen model farms were established for technology dissemination in the community. Dairy *Chautari* events developed linkages between farmer groups and private service providers such as Para-vets, agro-vets, AI technicians and VAHWs. New entrepreneurs selected by dairy cooperatives were trained and supported with equipment, and they have begun providing effective services to the communities. Cooperatives have improved their saving and credit schemes and account keeping systems. Milk collection and storage facilities of dairy cooperatives were increased through provision of equipment and managerial support.

Participatory market mapping workshops helped to strengthen dairy value chains with the involvement of key market actors. Forty youths selected through dairy cooperatives were trained in enterprise development and they have started to deliver effective services in the communities. Dairy cooperatives and local youths have started dairy product preparation as

#### Mineral block forma

FORWARD implemented Dairy MASF project in Chitwan district had run different trainings to its' programme beneficiaries for commercial milk production. Training on **mineral block preparation**, using local materials like Iodinated common salt, egg shell, red soil and wheat flour, was conducted for setting the blocks. Community people used to prepare mineral preparation by using different tools like Tiffin box, locally prepared wooden frame etc. but did not get the size and shape as desired to them and also the time consuming job. Ultimately, one of the Field Technician designed a metal forma, producing two mineral blocks at a time in very short time.

Entrepreneurs accepted and adopted the model of the forma and were using for producing mineral blocks in commercial scale. There was the potentiality of raising the capacity of the forma for making four or six mineral block at a time. Two entrepreneurs from Ratnanagar and Patihani area were producing mineral blocks and local dairy cooperatives were marketing in the dairy value chain. The mineral blocks were also demanded from neighboring districts.



a commercially viable business and 56 local dairy cooperatives were facilitated for efficient collection and marketing of milk.



Cattle feed chaffing in Chitwan district

The District Project Advisory Committee (DPAC) coordinated and monitored the project. Coordination and linkages have been developed between farmer groups/cooperatives, government organizations and the private sector to promote the dairy business. Awareness of natural hazards has been raised and three VDCs' Disaster Risk Management Plans have been prepared in order to mitigate hazards.

## Improvement in Livestock Production System through Feed-based Interventions in Chitwan District

Dairy farming is an integral part of the Nepalese farming system and is also a major source of household income for smallholder households in Chitwan district. The substantial growth of the dairy sub-sector seen in recent years is due to increasing demand for milk and milk products in local and regional markets. However, smallholder farmers are not keen on commercial promotion of dairy animals because of the high cost of production and low returns. Feeding alone constitutes around 60-65% of total production costs. Most of these farmers own breeds that produce low milk yields. Traditional animal feeding practices and lack of knowledge of ruminant nutrition further reduce productivity.

FORWARD, in partnership with the International Livestock Research institute (ILRI), implemented this project from September 2010 to June, 2012. The project aimed to develop and introduce different options for residue-based feeding practices to reduce milk production costs.



Cattle feed management training in Chitwan district

At the start of the project, a baseline study of project sites and feed assessment tools (FEAST) study was carried out. The study showed that most farmers were smallholders with an average land holding of 0.56 ha. The livestock holding ranged between 2 and 5 per household and 75-80% of households keep 2-3 cross-bred (Holstein Friesian and Jersey) cows. About 20% of households keep 1-2 predominantly Murrah-cross buffaloes for milking. The key issues identified by the FEAST study were: lack of understanding of the importance



of feed quality amongst farmers; poor understanding of animal health issues; low conception rates of dairy animals using artificial insemination and the high cost of milk production.

#### **Activities carried out in the out scaling/up scaling phase**

- Orientation meetings were held with dairy cooperatives to brief them about project objectives and proposed activities
- Roles and responsibilities of FORWARD, dairy cooperatives and participating farmers in the implementation of project activities
- Training to farmers in dairy animal feeding
- Nutritional cost analyses of fodder and feeds

On-farm, participatory, adaptive research trials focused on improving the feeding efficiency of (ex. chaffed straw) utilized, non-utilized and under-utilized cereal residues along with other different types of feed were conducted with 250 members of milk cooperatives at five sites Geetanagar, Patihani, Ratnanagar, Birendranagar and Bhandara.



Teosinte grass cultivation in arable land for forage-based livestock rearing in Chitwan district

A complete package of balanced feeding was developed based on the outcome of these adaptive trials and was promoted using on-farm demonstrations organized through local resource persons (LRPs). Results from demonstrations showed average increase in milk production of 6.75% and an increase in profitability of NRs 6.77 per liter of milk per day with a slight reduction in all feed ingredients. More farming households have adopted optimized strategies of feeding after seeing the results of these farmer trials. Dairy farmers were able to realize additional income from these interventions. Improvements in feeding practices based on proper utilization of crop residues not only led to better production of milk but also improved the health of the animals. The results of these trials also highlighted the scope for better crop-livestock integration in the mixed farming system of smallholder farmers in Nepal.

## Kitchen Garden and Nutrition Programme in Kailali, Kanchanpur and Dadeldhura District of Nepal

### Food Security and Nutrition Programme

FORWARD continues to partner with USAID/Fintrac Inc. for Food Security and Nutrition activities and Livelihood and Income Generation activities since November 2008 under the USAID Nepal Flood Recovery Programme (NFRP). Following the accomplishments of Phase I and II, USAID extended the programme for 18 months in March 2011; accordingly FORWARD's association with Fintrac was also extended for this Phase III programme. The Phase III was begun on April 2011, limited to the Far Western districts of Kailali, Kanchanpur and Dadeldhura. Phase III focuses on improving food security and nutrition by enhancing farmers' technical skills in implementing improved agricultural production technologies through training, linking producers to markets and input suppliers and addressing productive infrastructure constraints. In this phase, FORWARD was involved mainly with promotion of high-value vegetable crops and market networks. The project achievements during this phase are highlighted below.

### Phase III – Food Security Component

USAID-NFRP is providing technical assistance and appropriate technologies to a total of 3,101 farmers with 750 hectares of demonstration plots in 27 VDCs. Nurseries for the first crop cycle were established by July 2011, and transplanting was completed by September 2011. Early harvests began in November although the production period extended through early February 2012. The second crop cycle training and field activities began in January 2012 and concluded in June.

A total of 134 shallow tube wells with improved motorized pumps and 74 protective sheds were installed and operational by May. A total of \$45,741 has been collected in farmers' contributions for the cost of the wells and pumps, which includes 40 percent of the installation costs, plus tools and construction of the protective shed.

Complete yield and sales data for the first crop cycle and 97 percent of the second crop cycle are now available for Phase III. Of the commodities promoted by USAID-NFRP during both cycles, on average Capsicum yielded the highest net sales per hectare (\$5,874), followed by potato (\$5,318), garlic (\$4,946), pumpkin (\$3,385), cucumber (\$3,149), and tomato (\$2,887).

Production and Sales Results - First & Second Crop Cycles							
No.	Crop	Crop Area (Ha)		Production (kg)		Net Sales Value (USD)	
		1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle	1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle	1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle
1	Bean	9.1	0.3	77,217	291	\$15,318	\$59
2	Bitter Gourd	0.0	102.6	0	1,416,187	\$0	\$253,433
3	Bottle Gourd	0.0	73.1	0	1,267,447	\$0	\$139,612
4	Eggplant	38.8	14.6	468,405	242,102	\$68,664	\$40,669
5	Broadleaf Mustard	1.2	8.0	5,699	204,788	\$1,465	\$15,860
6	Cabbage	99.3	18.7	1,553,336	529,847	\$159,375	\$60,923
7	Capsicum	1.3	5.6	2,303	53,673	\$681	\$39,260
8	Cauliflower	167.7	13.3	2,474,704	161,303	\$362,371	\$40,719
9	Chili	187.6	21.6	1,004,554	189,949	\$469,331	\$62,583
10	Coriander	0.0	2.5	0	1,780	\$0	\$985
11	Cowpea	1.9	68.9	13,011	717,058	\$4,325	\$199,257
12	Cucumber	0.0	131.4	40	2,335,747	\$25	\$413,860
13	Garlic	0.0	2.0	0	10,010	\$0	\$9,892
14	Maize	1.6	41.2	3,305	206,316	\$175	\$20,119
15	Okra	0.0	58.3	0	794,703	\$0	\$144,770
16	Onion	0.0	133.8	0	2,089,356	\$0	\$192,645

Production and Sales Results - First & Second Crop Cycles							
No.	Crop	Crop Area (Ha)		Production (kg)		Net Sales Value (USD)	
		1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle	1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle	1 <sup>st</sup> Cycle	2 <sup>nd</sup> Cycle
17	Pea	0.0	17.4	0	148,116	\$0	\$37,906
18	Potato	0.0	5.2	0	91,718	\$0	\$27,390
19	Pumpkin	0.0	5.4	0	163,619	\$0	\$18,108
20	Radish	30.5	21.8	436,569	294,939	\$29,972	\$19,652
21	Rice	145.1	0.0	605,587	0	\$102,163	\$0
22	Ridge Gourd	0.0	2.6	0	15,851	\$0	\$3,641
23	Sponge Gourd	0.0	0.1	0	35,480	\$0	\$5,666
24	Tomato	135.0	22.3	1,973,633	478,866	\$353,597	\$100,636
25	Watermelon	0.0	26.8	0	476,950	\$0	\$64,342
26	Wheat	0.0	2.0	0	9,233	\$0	\$1,543
<b>Total</b>		<b>818.9</b>	<b>799.4</b>	<b>8,618,363</b>	<b>11,935,329</b>	<b>\$1,567,461</b>	<b>\$1,913,529</b>

In the second crop cycle, the total net sales achieved for all 3,101 farmers was \$1,913,529 which is \$846,862 above the second crop cycle's target. This equates to an average net sales per farmer of \$617 in one crop cycle – income levels from agriculture that most farmers could have never imagined before working with USAID-NFRP.

The average net sales per hectare come to \$2,394 in the second crop cycle, and to \$4,302 in the first and second cycles combined. Compared to the already impressive results achieved in the first two cycles of Phase II (\$2,574 net sales per hectare), Phase III's efforts have raised productivity by an additional 67 percent. This enhancement in the programme's impact (measured in terms of income per farmer and per hectare) demonstrates USAID-NFRP's ability to adapt to new conditions and learn from past experiences in order to strengthen its overall effectiveness.

Progress in Commercial Agriculture programme - Phase III				
S.N.	Indicator/Activity	Target	Results To Date	Completion Rate
1	Long-term participants over 3 crop cycles (18-months)	2,700	3,101	115%
2	Hectares of productive land directly assisted by LIG	800	819	102%
3	Shallow tube wells and motorized pumps installed	157	134	85%
4	Net sales for participants in first crop cycle	\$1,066,667	\$1,567,461	147%
5	Net sales for participants in second crop cycle	\$1,066,667		
6	Net sales for participants in third crop cycle	\$1,066,667		
7	Total net sales over three crop cycles (i.e. income)	\$3,200,000		
8	Percentage increase in net sales per hectare of land	300%		

Source: [USAID/Fintrac Quarterly report June 2012](#)

### Productive Farm Helps Reunite Family (A Success Story)

Sushmita Chaudhary had difficulty in supporting her large family from/through her small farm. The family was only able to produce enough food to feed them for seven months. Chaudhary was forced to sharecrop on another farm to earn enough to feed her family. Several members of the family, including Chaudhary's husband and brother-in-law, were forced to migrate to India in search of low-paying jobs. In 2010, four months of work only netted them a total of \$284 (NRs. 23,000). Paired with the \$2,800 (NRs. 228,000) the family earned from agriculture, they were still more than \$1,200 (NRs. 99,000) short of earning enough to meet their basic needs.

"The income and cereal crop production from our land was inadequate to sustain our 10 family members," Chaudhary said. In April 2011, Chaudhary heard of USAID's Nepal Flood Recovery Programme (NFRP) through a community farmer group. She decided to join, allocating one-third of her 0.6 hectare farm to high-value crops such as tomato and cauliflower. She participated in the programme trainings, learning good agricultural practices



such as nursery management, nutrient application, trellising, crop rotation, and planting techniques. She also has access to the group's shallow tube well, which allowed her to irrigate her crops regularly. Chaudhary received inputs such as seeds and fertilizers through USAID-NFRP.

In November, Chaudhary's harvest earned gross sales of \$1,400 (NRs. 105,000). Once she paid off her production costs, she earned more than \$1,200, which is more than seven times the income she took home from the previous year from rice production on the same area of land. Productivity on that plot of land had increased eleven-fold. By continuing to employ good agricultural practices and with access to quality inputs, Chaudhary could earn nearly \$8,000 in one year from her entire 0.6 hectare plot. This kind of income growth is truly transformational for her family.



Ms. Shusmita Chaudhary staking tomatoes in her vegetable field

"Thanks to the training and support from the programme, I have no more worry now. I am confident this will lead to a better life for my family," she said. With increased incomes and yields, the family is able to stay together and farm their own land. Chaudhary has convinced her husband they can earn enough at home to support their family, eliminating the need for him to travel to India in search of difficult jobs with little income potential.

"My husband has already cancelled his plan to migrate to India this season," she said. "He is now working with me on our farm." With the additional income, Chaudhary and her family will purchase a motorcycle to transport their produce to bigger and better-paying markets. They are also investing in their children's education. Source: *USAID/Nepal Newsletter, July, Issue 7*.

### **Nutrition Component**

The activities conducted under Phase III represent a modified version of the original nutrition and hygiene programme of Phases I and II. There is now much greater emphasis given to measurably improving the nutritional indicators within beneficiary households such as changes in food consumption, body mass index, prevalence of breastfeeding, and diet

diversity. Programme assistance is extended exclusively to households with pregnant women or children less than 24 months of age.

A total of 2,259 households (1,620 women-led) of 15 VDCs in Kailali and Kanchanpur were trained in nutrition awareness and have managed three production cycles on their 333 square-meter home gardens, covering a collective total of 72 hectares.

Results demonstrate that farmers are already producing surplus food and selling an average of 22 percent of their total production in local markets. Therefore, any additional land that beneficiary farmers expand under production (a phenomenon already observed within the short timeframe of the programme) should serve entirely commercial purposes. Successful home gardeners have demonstrated their ability to move beyond nutritious food production and incorporate themselves into the high-value vegetable markets that are already developing within their communities.

The following table details USAID-NFRP's results of the total output achieved by the home gardeners in the three crop cycles, including the net sales achieved by farmers with surplus productions (i.e. not consumed by household).

Production, Consumption and Sales Results - Phase III Nutrition & Hygiene					
No.	Crop	Total Production in 3 Cycles (kg)	Percent Consumed	Surplus Production (kg)	Net Sales of Surplus (USD)
1	Cowpea	195,728	67	64,590	43,368
2	Okra	300,601	73	81,162	44,059
3	Cucumber	242,315	70	72,694	30,210
4	Bottle Gourd	374,404	71	108,577	28,766
5	Bitter Gourd	150,802	85	22,620	16,510
6	Sponge Gourd	301,344	68	96,430	19,286
7	Pumpkin	257,949	83	43,851	9,852
9	Amaranthus	73,937	96	2,957	1,047
10	Radish	204,575	64	73,647	11,191
12	Carrot	157,660	67	52,028	14,764
13	Cabbage	672,768	59	275,835	62,260
14	Pea	161,984	65	56,694	21,426
15	Swiss chard	176,467	75	44,117	17,950
16	Tomato	320,958	65	112,335	44,861
17	Eggplant	268,619	65	94,017	32,418
18	Chili	163,483	69	50,680	29,684
19	Mustard leaves	167,043	65	58,465	26,446
<b>Total</b>		<b>4,190,637</b>	<b>71</b>	<b>1,310,699</b>	<b>454,097</b>

Source: USAID/Fintrac Quarterly report, June 2012

## Commercial promotion of lentil sub-sector in 11 Terai districts of Nepal

Lentil is a leading pulse crop of Nepal, cultivated on 187438 hectares with an average productivity of 810 kg/ha. It is also the largest agricultural commodity exported from Nepal with a share of about 2.3 percent of total national exports and about 3.1 percentages of the total world export (ITC, 2011). Despite being a high value crop with great export potential, lentil produced in the country is not sufficient to meet its national/international demand both in terms of quality and quantity. It surely indicates constraints present in production as well as in marketing. So, with the goal of increasing production and productivity of lentil through promotion of commercial farming and improving linkages between the value chain actors, FORWARD-Nepal, has implemented this project in 11 *Terai* districts (Saptari, Siraha, Sarlahi, Rautahat, Bara, Parsa, Nawalparasi, Dang, Banke, Bardiya and Kailali) of Nepal with the financial support of USAID/NEAT (Nepal Economic Agriculture and Trade) from September 2011.

The project activities are being implemented with the objectives of capacity building of lentil growers for efficient production and marketing, strengthening value chain linkages to provide economic opportunities for producers, processors and traders and promotion of good seed production practices.



Technology demonstration in lentil



Local lentil collection center

During the period a total of 15,177 farmers were organized into 625 groups consisting of 34.4% women and 87% DAGs. Capacity enhancement through different trainings, workshops and other interactions resulted in 100% of the participating farmers adopting improved cultivation practices i.e. growing improved lentil varieties using seed priming, treating the seed with *Rhizobium* and the recommended dose of fertilizers.

1326 demonstrations of new improved varieties of lentil with good agriculture practices (GAP) were conducted in selected farm households. For this, quality seeds of improved lentil varieties along with fact-sheets, phosphatic fertilizers and *rhizobium* inocula were provided to the farmers on a 33% cost-share basis. Of the 1326 demos, 63 were also managed using IPM practices. IRD kits consisting of 1 kg seeds, *rhizobium* inocula (5gm) and instruction sheets were provided to 10957 farmers, thus offering them the opportunity to try, and perhaps to adopt, new varieties. Farmers reported that the new varieties were more productive than their own.

Due to these project interventions the average lentil productivity increased by 53 percent over the base year. Productivity increased from 21.97kg/kattha to 33.61kg/kattha with total production of 4082.61mt from 4049 hectares. Due to adoption of quality upgrading activities such as sieving and market facilitation, farmers were getting higher prices for their lentils.



The average sale price of lentil was NRs 56.29/kg as compared to the 41.08 NRs/kg in the base year. In total, volume sale of lentils from beneficiary households was 2625 mt compared with 1547 mt in the base year and they realized gross income of USD 1668598 from the sale of lentils.

Vegetable production was a supporting activity in the project designed to create part-time employment for free labor after lentil harvest and it was also good to generate extra income for lentil growers. To demonstrate methods of commercial vegetable farming, those farmers who already had some experience of growing vegetables kitchen gardens were selected and trained. A total of 45 trainings involving 1036 farmers were conducted. After the training, farmers were supported with vegetable seeds of bottle gourd, bitter gourd, chilly and cowpea and they conducted demonstrations on their own land.

Most farmers do not have irrigation which is one of the necessities for improved crop production. Therefore installation of 75 micro-irrigation schemes was facilitated on the basis of 33% of cost sharing by the farmers.



Lentil quality standard orientation workshop

Lentil market mapping workshops were conducted in the 11 project districts, involving key market actors and other stakeholders. The workshop became a platform to develop linkages between service providers, producers and market actors and it also guided the project team to determine the demand and supply gap, market channels and major constraints and opportunities for production, processing and marketing. The major highlights of the market mapping workshops were: the market was not problem for sale of lentils but frequent price fluctuation in the market was sometimes a barrier to farmers' entry; there was little or no knowledge of quality issues; lack of access to technical knowledge, quality seed and inputs; there was no organized channel of marketing due to too many collectors; there was a lack of market information available to the producers.

	<p>In addition to the market mapping workshop, two value chain actors' tours were organized, which resulted in the realization of demand and market scope for lentil at all levels from producers to exporters. This also helped to increase understanding of existing facilities, problems, and leverage points and strengthen functional linkages among key actors in the lentil value chain.</p>
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It was also realized that quality is also a major problem in the lentil market and millers were spending lots of money for it. So, we supported farmers groups with 428 sets of sieves (each set comprises oval and angular holed sieves) to grade lentils to fetch higher market prices. In general, farmers got an additional NRs. 5-6/kg after grading.



For the promotion of collective marketing and storage facilities, 13 CBSPs were supported with a total of 208 storage metal bins each with a capacity of 250kg each, and the construction of 4 new storage and or collection centers were partially supported. The impacts of these newly constructed storage houses will be assessed in the forthcoming season, and CBSPs have stored 11000kg seeds in seed bins.

Most lentil growers and their groups did not have effective platforms through which to share their issues with public and private service providers and there was no system of collective marketing of lentil so traders were taking advantage of individual farmers. Therefore, 62 lentil *Krishi Chautaris* were conducted at cluster level to facilitate discussion of farmers' problems and the services required from the public and private sectors to support collective marketing of the produce.

For the production and supply of quality lentil seeds, a total of 15 seed production groups were formed and mobilized after training them in production, processing, marketing and business planning. A total of 34733 kg of improved quality seed was produced by those CBSPs from 55 hectares of land in 2011/12.

Based on lessons learned and feedback received during review meetings, an implementation plan for the next season was prepared in coordination with the NEAT team, and project activities are being implemented to meet the expected targets.

## Riverbed Vegetable Farming (RbF) in Banke District

FORWARD is the pioneer of Riverbed farming in Nepal with long experience in commercial vegetable production on riverbeds and flood-affected areas in Morang, Sunsari, Banke, Bardiya, Kailali and Kanchanpur districts. In partnership with Elam Plus Helvetas, FORWARD has implemented this project in Banke district starting in January 2012. The project objective was to enable landless and land-poor families to cultivate dry riverbeds effectively for growing off-season vegetables and sell the produce profitably in markets through localized support system. Six hundred landless and land-poor families under 8 project VDCs along the sides of the Rapti River and Maan Khola were the direct beneficiaries. VDCs and the DDC were closely coordinated for leasehold contract and supporting riverbed farming families at the local level.

All participants were organized into 20 groups and, 10 youths were selected and trained by Elam Plus/Helvetas. After a series of modular trainings, they were mobilized as LRPs in their respective VDCs to provide intensive technical support to farmers' groups for the production of off-season vegetables on riverbeds.

During the reporting period (2011/12) farmers produced 4722 tons of different vegetable crops such as cucumber, zucchini, bottle gourd, bitter gourd and Water melon from 65 hectares of land. About 330 mt of graded vegetables with a sales value of NRs. 760, 8220 were marketed and the remainder was consumed directly. To explore possible diversification of crops for river bed



Cucurbits planted on riverbed, Banke, in side of Mankhola river



A farmer picking watermelon in his field

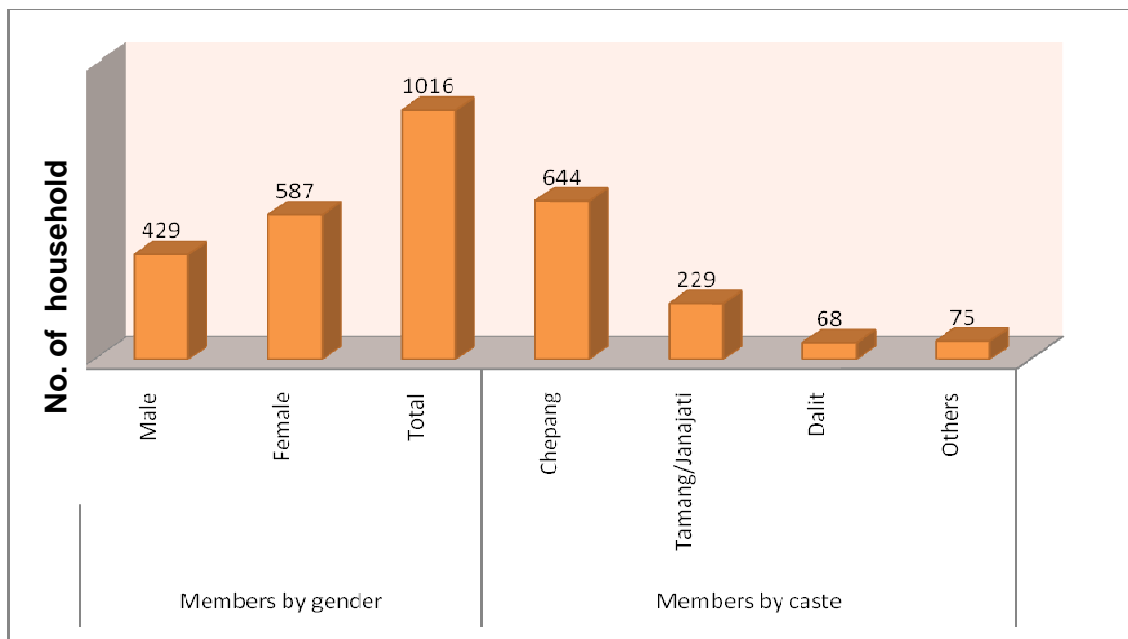
production, sweet potato, chilli and pointed gourd were tested. Farmer's positive feedback after harvesting 21.85 mt of sweet potato from 20 Kattha of land with a total income of NRs. 43700 has demonstrated the tremendous potential of these crops in the RbF system. The learning and experiences of the first crop cycle is being used in the preparation of the next one.

## Sustainable Integrated Farming System (SIFS) in South Asia

This is a project funded by the Federal Ministry for Economic Cooperation and Development (BMZ) and co-funded by Welthungerhilfe (WHH) Germany. It is being implemented by six partners in three South Asian countries, i.e. Nepal, India and Bangladesh. FORWARD Nepal began implementation of the three-year project from 2012 in partnership with the Himalayan Bio-Dynamic Development Trust (HBDT) in Shaktikhor and Siddhi VDCs of Chitwan district. The target is to positively impact 1,500 beneficiary households belonging to ethnic minorities and marginal communities such as Chepangs, Tamangs and other poor groups. The beneficiaries are associated with one or more groups e.g. producers' groups, farmers' groups, Community Forest Users' Group (CFUG), Leasehold Forest Users' Groups, seed producers' groups, farmers' cooperatives, etc.

The overall objective of the project is poverty reduction and enhanced food security among the most vulnerable groups of the targeted area so as to contribute to MDG1 and to the development of a model for avoiding future food crises. The project aims to support farms to move to a Sustainable Integrated Farming Systems (SIFS) approach, to initiate and strengthen community institutions and to address issues along the value chain, including marketing problems of certain products.

In the beginning, a baseline survey of the project area was conducted. The project is being implemented by adopting different approaches such as community planning and implementation, linking agriculture, natural resource management and nutrition (LANN), group management and capacity building, organic and bio-dynamic farm promotion, strengthening local resource centers, development and institutionalization of local resource persons, public private partnerships for sustainability and intensive implementation of project activities using a cluster approach. Additionally, farmers will be empowered to adopt a self-sustained SIFS model by continuous interaction, trainings, demonstrations, market support and visits, and project interventions that are supported on an 'action and reflection' basis.



SIFS Project Beneficiaries in Chitwan

Project beneficiaries were selected in an interactive workshop during the stakeholders' orientation at the VDC level, after which farmers' groups were formed in the selected clusters. So far, the project has covered 47 groups consisting of 587 female and 429 male members. Caste-disaggregated data shows 644 Chepangs, 229 Tamangs and other ethnical minorities, 68 Dalit households and 75 other households in the groups.

The project has conducted 13 community micro-planning sessions that identified locally available natural resources and constraints on the farming and product marketing. Farm design and monitoring indicators were also mutually agreed. Similarly, 60 SIFS training events were conducted. So far, more than 80 households have established compost pits and adopted foliar fertilizer use on their homesteads.

The project has provided around 54,000 saplings of high yielding multipurpose trees, fruits, medicinal plants and aromatic plants, for farmers to plant on homesteads, private land, leasehold forest and community forest lands. The species include mango, litchi, lemon, sour lemon, jackfruit, pineapple, *neem*, *Sugandha kokila*, *Sarpagandha*, hug plum, coffee, *kaulo*, *timur*, butter nut tree, *seto-koiralo*, *sikakai*, sandal wood, *harro*, *barro*, *khayar*, emblica etc.

FORWARD conducted one training session on improved fruit farming to the leader farmers of each group in each VDC, including how to plan the layout of an orchard, pit digging, refilling of the pit, planting of fruit saplings and crop protection measures. Farmers also learnt propagation techniques of fruits. In addition to the distribution of fruit sapling, sesame was also grown as a high value crop 15 ha with guaranteed marketing from One World on premium price.



Fruit Farming Training: Demonstration of plant propagation

Six model farmers have designed their homestead and farmland according to the SIFS model on Farmers Field School (FFS) approach. Likewise, some farmers initiated tomato production in rainy season for nutrition and income generation, which was not common to the area. One slot of kitchen fishery training increased interest of more than 15 farmers to raise fish in their homestead for augmenting household nutrition and income generation from waste recycling technology.

To promote biodynamic farming, training on internal control system consisting of record keeping of farm products, group monitoring of production activities and farm planning was conducted. The additional trainings like one slot of each i) nursery management, ii) post harvest and value addition has increased awareness of the private land and forest producers towards organic farming and value addition for the sale of product on premium price in the competitive market. Meanwhile, project supported to purchase 35 kg conversion material



(Bio-Dynamic Preparation 500 - 507) for bio-dynamic farming adequate to spray on 104 hectares of leasehold forest and private land holders. Project completed one slot of cooperative management training, organized one event of participatory market mapping workshop and a tour to European market to identify the best products to be promoted in the area and its channelization to the European market through local cooperatives and international trader – One World ALC.

Six local resource persons (LRPs) are working to actualize the SIFS model in their own farms and to deliver/act as a point of extension of self sustained resource management SIFS technology to their localities. The project has capacitated staffs on SIFS farming method and techniques, organic farming technology, permaculture and farm design part. In addition, seed production blocks of Four-Season bean are identified to promote community based seed production (CBSP) in the area.



Fruit saplings for home gardening support in SIFS project area, Chitwan

It is the challenge for the project to further systematize the production system with stress management, enhanced farm production and market promotion in a sustainable manner in the target area where farmers' were already adopting the integrated farming models.



## Collaboration and Linkage

FORWARD works with GOs, I/NGOs, local organizations and private sectors for wider and sustainable impacts. Working in partnership with different organizations helps for the scaling up/out of outputs, experience and learning through innovation platforms/networks of different institutions, and thus promotes sustainability. FORWARD is partnering (financial or technical matters or both) with the following institutions.

### National

- Institute of Agriculture and Animal Science (IAAS), Rampur, Chitwan, Nepal
- Department of Agriculture (DoA) and District Agricultural Development Offices (DADOs)
- Nepal Agricultural Research Council (NARC) and its Commodity Programmes and Research Stations
- Several international organizations and INGOs working in Nepal: Asian Development Bank (ADB), German Technical Cooperation (GTZ, Nepal), Netherlands Development Organization (SNV Nepal), Concern Worldwide Nepal (CWN), Plan Nepal, Helvetas Nepal, Swiss Development Cooperation (SDC), International Rescue Committee (IRC, Nepal), CESVI Italy, and CCS Italy), USAID/NFRP-Fintrac Inc., Welthungerhilfe (WHH), Practical Action Nepal
- USAID/Chemonics/NEAT
- Several NGOs and Community Based Organizations (CBOs)
- Chamber of commerce and industry (CCI), agro-vets and seed companies
- Farmer groups and cooperatives

### International

- Department for International Development (DFID), UK
- CARIAD, Bangor University, UK
- Federal Ministry for Economic Cooperation and Development (BMZ)
- Consultative Group Centres: IRRI, ICRISAT, CIMMYT, ICARDA, AVRDC, ILRI
- Hiroshima University, Japan

## Workshops, Seminars, Trainings and Visits

### a) Workshops /Meetings Attended by FORWARD's Staff

S.N.	Name of Seminar/Workshop	Organized by	Date/duration	Participant
1	National Conference for Seed System Development: Seed Visioning Workshop	SQCC/CEAPRED	01 Aug, 2011	RK Neupane
2	RbF Workshop- Dhangadi	RbF Alliance	07-09 Aug, 2011	DP Pande
3	Value Chain Development Workshop- Dhangadi	Fintrac Inc.	10 Aug, 2011	DP Pande
4	Review Meeting	Regional Agricultural Directorate	23 Aug, 2011	Pankaj Koirala
5	Regional Pulse Workshop	SAARC/NARC	24-25 Oct, 2011	RK Neupane
6	Regional Dialogue on Conservation Agriculture	APAARI	1-2 Nov, 2011	GB Gurung
7	Annual Review and Planning Meeting of IFAD 954-ICRISAT	ICRISAT	14-16 Nov, 2011	RK Neupane
8	Workshop on Organic Agriculture, Livelihood and Climate Change	IAAS/Hirosima University	23-24 Nov, 2011	Deep N. Sapkota
9	Symposium on Climate Change, Organic Agriculture and Food Security	IAAS/NARC	23-25 Nov, 2011	GB Gurung
10	Partner's consultative meeting of general development of USAID Nepal	USAID Nepal	2 Dec, 2011	NP P Sen
11	AI Mission Workshop - Damauli	Practical Action NLBC	08 Dec, 2011	DP Pande
12	Addressing Nutrition Security from Right Based Approach	WHH	12-15 Dec, 2011	Rishikesh Dhakal
13	SEEDNET Workshop	IRRI/NARC	23 Dec, 2011	RK Neupane
14	Progress Review and Planning Workshop-Delhi	ILRI	27-28 Dec, 2011	GB Gurung+ DP Pande
15	Commercialization of Dairy Sector -Opportunities and Challenge	CCI-Ratnanagar	12 Jan, 2012	Deep N. Sapkota
16	Dairy Related Policy Debate Workshop	Practical Action	16 Jan, 2012	Deep N. Sapkota
17	SIFS Inception and Planning Workshop	WHH, RO, India	18-21 Jan, 2012	Rishikesh Dhakal, Mita Shrestha
18	NABIC (Network On Agro Biodiversity Conservation) Workshop	USC Canada	9 May, 2012	Ambika Sapkota
19	MIS Workshop at NEAT	NEAT	3 Feb, 2012	RK Neupane
20	Stakeholders workshop	SQCC	19 Mar, 2012	RK Neupane
21	Fast Track Loan Workshop	Citizen Bank Ltd	15 Mar, 2012	Tanka Achayra
22	Nutrition CRSP Asia Scientific Symposium, Agriculture, Food Security and Nutrition in Nepal	T U/Tufts University (N/CRSP)	21-22 Mar, 2012	RK Neupane
23	Fourth SAS-N Convention	Society of Agricultural Scientists-Nepal (SASN)	5-6 Apr, 2012	RK Neupane
24	International Workshop on Agribusiness Promotion	PACT	8-10 Apr, 2012	RK Neupane
25	Right Based Approach (RBA) Workshop	Bhopal Madhya Pradesh	11-13 Apr, 2012	Anjana Sharma
26	GO's & NGO's Interaction Workshop	DADO	22 Apr, 2012	Pankaj Koirala
27	Capacity Building Workshop on Sustainable Integrated Farming Systems	WHH, RO, India	23-27 Apr, 2012	Rishikesh Dhakal
28	21 <sup>st</sup> NARC day	NARC	7 May, 2012	RK Neupane, Ambika Sapkota

29	The National Civil Society Consultation Conference on Sustainable Development	UN	3 June, 2012	NP P Sen
30	Research Proposal Writing - Department of Medicine TU Teaching Hospital Ktm	Tufts University	25 -27 June, 2012	DP Pande
31	Progress Review and Planning Workshop- Delhi	ILRI	28 -29 June, 2012	GB Gurung, DP Pande, DN Sapkota
32	District Food Security Workshop	DADO	03 July, 2012	Durga Bdr. Basnet
33	Strategic Planning Workshop, WHH Country Office, Nepal	WHH	9-10 July, 2012	NP Sen, R Dhakal

**b) Seminar/ Workshops/Meeting Conducted by FORWARD**

S.N.	Name of Seminar/Workshop	Name of Seminar/Workshop	Date/duration	Participants
1	Annual Programme Review Meeting FORWARD		18-19 Sept, 2011	PCs, ED, PD, Programme & Management Officers
2	District Coordination Meeting		22 Nov, 2011	13
3	SIFS Planning Workshop		8-9 Jan, 2012	ED, PD, POs
4	Half-Yearly Progress Review Meeting FORWARD Office Chitwan.		28-29 Feb, 2012	PCs and Programme Officers
5	HESP Workshop (VDC Level)		2 Days Per VDC	398 (16 VDCs)
6	Workshop on Spider Web Analysis of CBSP Groups		12 June, 2012	18
7	Review and Planning Meeting		29 June, 2012	35

**c) Trainings Attended by FORWARD Staffs**

S.N.	Name of the Training	Organized by	Date/duration	Participant
1	Group Communication Skills	CSISA	16 Aug, 2011	Deep N. Sapkota
2	Data Management Training	WHH	13 Oct, 2011	KP Gupta, Rama Paudel
3	Disaster Management Training	Practical Action	22-24 Oct, 2011	Tanka Acharya
4	GESI Training	Practical Action	31 Oct-02 Nov, 2011	MASF staff
5	Haat Bazar Study	Nawalparasi/Chitwan	15 Dec, 2011	DP Pande, Deep N. Sapkota
6	Social Research Design and Research Methodology	BMC	4-5 Feb, 2012	Deep N. Sapkota
7	Training on Survey Data Analysis	ISER-N Office, Fulbari, Chitwan	4-8 June, 2012	Anjana Sharma
8	Training on Organic and Permaculture Farm Design Course	HASERA Agriculture Research and Training Center	15-24 July, 2012	Prabina Shrestha, Om Bikram Praja
9	Data Management Training	CSISA	2012	Rama Paudel

**d) Trainings/Visit conducted by FORWARD Nepal**

S.N.	Name of the Training	Date/duration	Participant
1	Project Orientation Training to FTs	12-14 Oct, 2011	33 FTs of NEAT Lentil Project
2	Report Writing Training.	26-27 Feb, 2012	Project Coordinators and Programme Officers
3	Leadership Training (VDC Level)	3 Days Per VDC	355 (16 VDCs)
4	Cooperative Management Training	16-18 Feb, 2011	28 (16 VDCs)
5	Climate Change & Cooperative Management Training	16-20 April, 2012	13 Project Staff
6	Cooperative Account Keeping Training	14-16 May, 2012	17 (7 Cooperatives)
7	Account Management Training	Oct, 2012	17 CBSP Group's Key Members

**e) Visits Made by Different Individuals/Organizations to FORWARD Office and Project Sites**

S.N.	Name of the individual	Position	Organization	Date/duration
1	Bindu Acharya	Grant Specialist	USAID/NEAT	8 Aug, 2011
2	Nicole Noel	Operations, Finance & Grant Director	USAID/NEAT	8 Aug, 2011
3	Prof. John R Witcombe	Professor	CARIAD, UK	23 Oct, 2011
4	K. D. Joshi, PhD	Research Fellow	CARIAD, Bangor University, UK	23 Oct, 2011
5	Sichan Shrestha	Enterprise Dev. Consultant	NARC	26 Oct, 2011
6	Devendra Gauchan, PhD	Chief, SARPOD, NARC	NARC	26 Oct, 2011
7	Sunil Regmi, PhD	Consultant	NARC	26 Oct, 2011
8	Prof. K. L. Maharjan	Professor	Hiroshima University, Japan	26 Nov, 2011
9	Ed Yarrow	Consultant	DFID	28 Nov, 2011
10	MJ Abeden	Coordinator	Practical Action, Bangladesh	28 Nov, 2011
11	Tirtha Bhatta	Finance Manager	Practical Action Nepal	28 Nov, 2011
12	Sankar Pathak	GIS Specialist	USAID/NEAT	10 Dec, 2011
13	Jennifer Marcy	Manager	International Health Group; Chemonics	11 Dec, 2011
14	Thomas R. Fattori, PhD	Director, Asia Region	Chemonics	11 Dec, 2011
15	Arindam Samaddar	Project Leader	ILRI, New Delhi, India	15 Dec, 2011
16	Ram Baran Yadav	Senior Scientist	NRRP, Hardinath	29 Dec, 2011
17	Jagadish Timsina	Senior Scientist	IRRI, Bangladesh	29 Dec, 2011
18	Dibya Timsina	CSFSA Coordinator,	Bangladesh	29 Dec, 2011
19	E. Sailendra Dhakal	Engineer	SS Engineer Center	08 Jan, 2012
20	Media Trip Visit	USAID/NEAT	USAID/NEAT	8-10 Jan, 2012
21	Peter J Effenberger	Director	One World	08 Jan, 2012
22	Philippe Dresosse	Country Director	Welthungerhilfe	08 Jan, 2012
23	Rebati Man Shrestha, PhD	Project Manager	CLDP	08 Jan, 2012
24	Udaya Raj Dhakal		CLDP, Hariharbhan	08 Jan, 2012
25	Susan Macmillan	Head of Public Awareness	ILRI	16 Feb, 2012
26	Stevie Mamn	Photographer	ILRI	16 Feb, 2012
27	Anantajivi ghimire	Manager, Component 2	USAID/NEAT	22 Feb, 2012
28	Bindu Shrestha	Grants Accountant	USAID/NEAT, Ktm	22 Feb, 2012
29	Edwin De Korte	Horticulturist	USAID/NEAT	22 Feb, 2012

S.N.	Name of the individual	Position	Organization	Date/duration
30	Francisco Fihye Gama	Sr. Officer	Ministry of Agriculture & Fisheries, Timor LESTE	22 Feb, 2012
31	Kanchan Gurung	Grants Specialist	USAID/NEAT, Ktm	22 Feb, 2012
32	Lava Thapa	M&E officer	USAID/NEAT, Ktm	22 Feb, 2012
33	Aleixo Lay	-	Ministry of Agriculture and Fisheries, Timor, LESTE	27 Mar, 2012
34	Amavo Ximenesn and Baucan Vila	Dept. Head	Map. District Baucau	27 Mar, 2012
35	Budhi Kunwar	Team Leader, CARE International, Canada	East Timor	27 Mar, 2012
36	Durga Prasad Adhikari	General Secretary	SEAN	27 Mar, 2012
37	Gil Rangel Da Cruz	Director	Ministry of Agriculture & Fisheries, Timor LESTE	27 Mar, 2012
38	John Dalton MAF	Chief	SOL; TIMOR	27 Mar, 2012
39	Jose Maria Alves Ornai	Coordinator	Formal Seed Production in Seed of Life Programme	27 Mar, 2012
40	Journalist Visit	Journalist, Photographer and WHH Germany	Journalist, Photographer and WHH Germany	17Mar, 2012
41	Komar Mundanca	Agriculturist	District Agriculture Development Office, Timor	27 Mar, 2012
42	Maheshwor P Bharati, PhD	Consultant	Freelancer, Kathmandu	27 Mar, 2012
43	Rui A Pereira	Sr. Officer	Ministry of Agriculture & Fisheries, Timor LESTE	27 Mar, 2012
44	Soares Fernando	Dist. Agrl. Devt. Officer	District Agriculture Development Office; Timor	27 Mar, 2012
45	Nabin S Dhakal, PhD	USAID, Consultant	USAID/NEAT	21 Mar, 2012
46	USAID Asia Director, Mission Director (USAID) and NEAT Officials Visit at Banke Project site	USAID Asia Director, Mission Director, Country Director, Specialists	USAID/NEAT	10 Mar, 2012
47	Dr. Nabin S. Dhakal	Consultant, Economist	USAID/NEAT	3-4 Apr, 2012
48	Ellen Diermayer	WHH Intern	WHH Country Office	20 Apr, 2012
49	Katharina Behmes	Intern	WHH Country Office	20 Apr, 2012
50	Santosh Shrestha	Regional Agronomist	NEAT, Butwal	24 Apr, 2012
51	Surendra Gautam	Programme Coordinator	WHH Country Office	20 Apr, 2012
52	Yamuna Ghale	Team Leader	Swiss Embassy	15 Apr, 2012
53	Brian Holcroft	Sr. Investment Manager	H2O Venture Partners; UK	10 Apr, 2012
54	Birendra Adhikari	Programme Director	RRN	11 July, 2012
55	Joechim Schwave	South Asian Regional Director	Welthungerhilfe, new Delhi	11Jul, 2012
56	Saraswoti Rao	Project Manager	Welthungerhilfe; India	11 Jul, 2012
57	Sneha Bhattarai	Admin Officer	USAID/NEAT, Ktm	06 Jul, 2012



S.N.	Name of the individual	Position	Organization	Date/duration
58	BB Mathema, PhD	Deputy Chief of Party	DCoP & Team , USAID/NEAT	06 Jul, 2012
59	Internal Control Officer, Ktm		Plan Nepal	
60	External Audit		Plan Nepal	

**f) Interns at FORWARD**

S.N.	Name of the Students	Institution	Date / duration
1.	Mr. Dhan Prasad Paudel; M.SC. Student (Department of Livestock)	IAAS, Rampur, Chitwan	20 Mar 2012 to 30 June 2012
2.	Mr. Rupendra Chaulagain; BVSC&AH student	HICAST, Bhaktapur, Kathmandu	15 Nov 2010 to 14 Mar 2011

**g) Staffs/Professionals on Study Leave**

S.N.	Name	Position	Country
2	Mr. Narayan Prasad Khanal	Senior Programme Manager	Japan
3	Mr. Ujjal Tiwari	Senior Programme Officer	Germany
4	Ms. Luni Piya	Agricultural Economics	Japan
5	Mr. Bishnu Poudel	Project Coordinator	Germany
6	Mr. Khagendra Baral	Project Coordinator	The Netherlands
7	Mr. Praseed Thapa	NRM Officer	Germany
8	Mr. Ganesh Dhakal	NRM Officer	Germany
9	Mr. Narayan Bhusal	Project Coordinator	South Korea

**h) FORWARD's Auditor (2011/12)**

S.N.	Name	Engagement Partner	Address	Phone and email
1	Mr. Jagadish Bhattacharai, FCA, FCCA	Kuber & Company	Kathmandu P.O. Box 890	Tel: 01-4416547 <a href="mailto:kuber@wlink.com.np">kuber@wlink.com.np</a>

**i) FORWARD's Honorary Members**

S.N.	Name	Address	Contact email
1	Prof. Dr. John R. Witcombe	Centre for Advanced Research in International Agriculture Development (CARIAD), Bangor University, UK	<a href="mailto:j.r.witcombe@bangor.ac.uk">j.r.witcombe@bangor.ac.uk</a> <a href="mailto:jrwitcombe@yahoo.com">jrwitcombe@yahoo.com</a>
2	Dr. Dave Harris	Principal Scientist (Agro-ecosystems / Climate Change), ICRISAT -Nairobi (Regional hub ESA) PO Box 39063, Nairobi, Kenya	<a href="mailto:daveh548@gmail.com">daveh548@gmail.com</a>
3	Dr. Krishna Dev Joshi	Research Fellow and South Asia Regional Coordinator, CARIAD, Bangor University, UK C/O CIMMYT- South Asia PO Box 5186, Kathmandu, Nepal	<a href="mailto:kdjoshi@mos.com.np">kdjoshi@mos.com.np</a>

## FORWARD's Executive Board 2066/67-2068/69 (2009/10-2011/12)

S.N.	Name	Position	Address	Email address
1	Prof. Naba Raj Devkota, PhD	Chairman	Chhoprak-8, Gorkha	<a href="mailto:dnaba.iaas@gmail.com">dnaba.iaas@gmail.com</a>
2	Mr. Ram Kumar Neupane	Vice-chairman	Bharatpur-11, Chitwan	<a href="mailto:ramkumarneupane@hotmail.com">ramkumarneupane@hotmail.com</a>
3	Mr. Krishna Prasad Gupta	Secretary	Kalaiya-7, Ghosukpur, Bara	<a href="mailto:krishna_g3.osho@yahoo.com">krishna_g3.osho@yahoo.com</a>
4	Ms. Ram Prasad Dhungana	Treasurer	Bharatpur-12, Chitwan	<a href="mailto:ramdhungana1@yahoo.com">ramdhungana1@yahoo.com</a>
5	Bijaya Bajracharya, PhD	Joint Secretary	304/50 Radhe Marg, Gyaneshwor, Kathmandu	<a href="mailto:bijaya_bajracharya123@yahoo.com">bijaya_bajracharya123@yahoo.com</a>
6	Mr. Yam Bahadur Thapa	Board Member	Bharatpur-14, Torikhet, Chitwan	<a href="mailto:acosce@wlink.com.np">acosce@wlink.com.np</a>
7	Mr. Uddhav Prasad Rai	Board Member	Chhinamakhu VDC-2, Bhojpur	<a href="mailto:uddhav_rai@yahoo.com">uddhav_rai@yahoo.com</a>
8	Ms. Mana Kumari Rana	Board Member	Bharatpur-2, Kshetrapur, Chitwan	
9	Ms. Maya Kandel	Board Member, (Farmers Representative)	Bhainse-2, Makwanpur	

## FORWARD Staff 2011/12

S.N.	Name	Position
1	Mr. Netra Pratap Sen	Executive Director
2	Mr. Gam Bahadur Gurung	Programme Director
3	Mr. Ram Krishna Neupane	Sr. Programme Manager (Programme Director from Jan 2012)
4	Mr. Yam Bahadur Thapa	NRM Specialist (Part-time)
5	Mr. Santosh Poudel	Programme Coordinator
6	Mr. Krishna Bahadur Bhandari	Sr. Admin Officer
7	Mr. Rishikesh Dhakal	Sr. Programme Officer
8	Mr. Deepak Aryal	Sr. Programme Officer
9	Mr. Dharma Prasad Pande	Sr. Programme Officer
10	Ms. Ambika Sapkota	Sr. Programme Officer
11	Mr. Pankaj Koirala	Project Coordinator
12	Mr. Khem Raj Oli	Project Coordinator
13	Dr. Deep Narayan Sapkota	Livestock Officer
14	Ms. Mita Shrestha	Account Officer
15	Ms. Anjana Sharma	Data Manager
16	Mr. Anjan Neupane	Project Coordinator
17	Ms. Rama Paudel	Information & Publication Officer
18	Mr. Rakesh Kumar Sah	Field Officer
19	Mr. Krishna Psd Gupta	Field Officer
20	Mr. Manoj Majgaiya	Act. Account Officer
21	Mr. Durga Bahadur Basnet	Field Officer
22	Mr. Shovaram Devkota	Senior Technician
23	Mr. Bhuwan Raj Chapagain	Senior Technician
24	Mr. Lakpa Tenzing Sherpa	Senior Technician
25	Mr. Rana Bahadur Ranabhat	Senior Technician
26	Mr. Omkar Raj Kafle	Senior Field Technician
27	Ms. Maiya Giri	Senior Field Technician

S.N.	Name	Position
28	Mr. Tanka Acharya	Field Monitor
29	Mr. Krishna Bahadur Karki	Overseer
30	Mr. Deepak Poudel	Project Accountant
31	Mr. Ganesh Katuwal	Project Accountant
32	Ms. Sunita Shrestha	Project Accountant
33	Mr. Dinesh Pokharel	Field Technician
34	Ms. Shaharsh Ojha	Project Accountant
35	Mr. Ram Dayal Tharu	Project Accountant
36	Mr. Shree Ram Chaudhary	Admin Assistant
37	Mr. Kosh Raj Adhikari	Field Monitor
38	Ms. Rashu Thakali	Receptionist
39	Ms. Sarswota Kumari Oli	Field Technician
40	Mr. Promod Kumar Saha	Field Technician
41	Mr. Ram Bahadur Katuwal	Field Technician
42	Mr. Niranjana Kumar Mandal	Field Technician
43	Ms. Niru Malla	Field Technician
44	Mr. Achyut Upreti	Field Technician
45	Mr. Hari Prasad Shah	Field Technician
46	Ms. Nirmala Devkota	Field Technician
47	Ms. Pabitra Rai	Field Technician
48	Mr. Gopal Lamsal	Field Technician
49	Mr. Chhallu Prasad Chaudhary	Field Technician
50	Mr. Anjan Pathak	Field Technician
51	Mr. Kishor Luitel	Field Technician
52	Ms. Chandra Kumari Rai	Field Technician
53	Mr. Raj Kumar Dhaulakoti	Field Technician
54	Mr. Jhapta Bahadur Basnet	Field Technician
55	Mr. Prem Bahadur Oli	Field Technician
56	Mr. Ram Babu Shah	Field Technician
57	Mr. Kshitiz Raj Sharma	Field Technician
58	Ms. Rita Jaishi	Field Technician
59	Mr. Pradip Kumar Chaudhary	Field Technician
60	Mr. Jagdish Mandal	Field Technician
61	Ms. Sabita Bishwas	Field Technician
62	Mr. Ram Dayal Chaudhary	Field Technician
63	Mr. Dilli Raj Chaudhary	Field Technician
64	Mr. Dipesh Chaudhary	Field Technician
65	Ms. Shyamkali Chaudhary	Field Technician
66	Mr. Kebal Singh Chaudhary	Field Technician
67	Mr. Rajendra Chaudhary	Field Technician
68	Mr. Parshu Narayan Chaudhary	Field Technician
69	Mr. Mohan Bahadur Chaudhary	Field Technician
70	Mr. Dharendra Bahadur Bhandari	Field Technician
71	Mr. Suresh Bahadur Chaudhary	Field Technician
72	Mr. Ram Bahadur Chaudhary	Field Technician
73	Ms. Yawati Chaudhary	Field Technician
74	Mr. Shankar Datta Bhatta	Field Technician
75	Mr. Ram Naresh Rana	Field Technician
76	Mr. Kamal Prasad Chaudhary	Field Technician
77	Mr. Birendra Chaudhary	Field Technician

S.N.	Name	Position
78	Ms. Amrita Shrestha	Field Technician
79	Mr. Kamal Prasad Rajbanshi	Field Technician
80	Mr. Rajendra Bahadur Raika	Field Technician
81	Ms. Sunita Chaudhary	Field Technician
82	Mr. Rekha Chaudhary	Field Technician
83	Ms. Basanti Rana	Field Technician
84	Mr. Madan Chaudhary	Field Technician
85	Mr. Krishna Rana	Field Technician
86	Ms. Gita Dangaura	Field Technician
87	Ms. Karam Beti Rana	Field Technician
88	Mr. Shiba Kumar Rana	Field Technician
89	Mr. Nara Bahadur Aaujee	Field Technician
90	Ms. Raj Rani Rana	Field Technician
91	Mr. Dipak Bhatta	Field Technician
92	Ms. Shomati Chaudhary	Field Technician
93	Mr. Hawaldar Chaudhary	Field Technician
94	Mr. Ammar Bahadur Bhandari	Field Technician
95	Mr. Rabindra Bilash Marahatha	Field Technician
96	Mr. Chhon Bahadur Praja	Field Technician
97	Mr. Bam Bahadur Chepang	Field Technician
98	Mr. Jhamka Bahadur Thapa Magar	Field Technician
99	Mr. Dharmendra Kumar Yadav	Field Technician
100	Mr. Sunil Kumar Kushwaha	Field Technician
101	Mr. Mangal Shah	Field Technician
102	Mr. Badri Bahadur Karki	Field Technician
103	Mr. Bet Raj B.K	Field Technician
104	Mr. Man Bdr Gayak	Field Technician
105	Ms. Nirmala Rayamajhi	Field Technician
106	Mr. Umesh Kumar Kattel	Field Technician
107	Ms. Prabina Shrestha	Field Technician
108	Mr. Buddhi Bahadur Magar	Field Technician
109	Mr. Shiva Raj Bhatta	Field Technician
110	Ms. Rima Kumari Bhandari	Field Technician
111	Mr. Arjun Kumar Chettri	Field Technician
112	Ms. Pushpa Kumari Chaudhary	Field Technician
113	Mr. Kameshwar Yadav	Field Technician
114	Mr. Jagat Prasad Upadhaya	Field Technician
115	Mr. Roheni Raj Rijal	Field Technician
116	Ms. Kalika Chaudhary	Field Technician
117	Ms. Rita Kumari Chaudhary	Field Technician
118	Mr. Liladhar Panta	Field Technician
119	Ms. Kalawati Thaguna	Field Technician
120	Mr. Mohan Bahadur Karki	Field Technician
121	Mr. Dinesh Kumar Yadav	Field Technician
122	Mr. Birendra Sah	Field Technician
123	Ms. Kshamata Gurung	Field Technician
124	Ms. Uma Thapa Magar	Field Technician
125	Ms. Dipa Banshi	Field Technician
126	Mr. Suman Prasad Panta	Field Technician
127	Mr. Ram Dhyan Yadav	Field Technician



S.N.	Name	Position
128	Ms. Sunita Kumari Shah	Field Technician
129	Mr. Tanka Bahadur Thapa	Field Technician
130	Mr. Gopal Prasad Shah	Field Technician
131	Ms. Indira Mishra	Field Technician
132	Mr. Bhim Bdr Thapa Magar	Driver
133	Mr. Kapil Poudel	Social Mobilizer
134	Mr. Yadu Prasad Shrestha	Social Mobilizer
135	Mr. Keshab Prasad Bhusal	Social Mobilizer
136	Ms. Laxmi Poudel	Social Mobilizer
137	Ms. Kamala Dawadi	Social Mobilizer
138	Ms. Sakuntala Devkota	Social Mobilizer
139	Ms. Laxmi Swoti	Social Mobilizer
140	Mr. Indra Bahadur Praja	Social Mobilizer
141	Mr. Om Bikram Praja	Social Mobilizer
142	Ms. Sabita Praja	Social Mobilizer
143	Mr. Madan Praja	Social Mobilizer
144	Ms. Sujana Chepang	Social Mobilizer
145	Ms. Shanti Praja (Chepang)	Social Mobilizer
146	Mr. Ram Hari Rai	Social Mobilizer
147	Ms. Gita Rai	Social Mobilizer
148	Ms. Ram Kumari Rai	Technical Assistant
149	Mr. Dambar Prasad Mandal	Technical Assistant
150	Ms. Tara Rai (Chaudhary)	Technical Assistant
151	Mr. Ashok Bdr Thapa Magar	Technical Assistant
152	Mr. Badri Narayan Biswas	Community Facilitator
153	Mr. Bharat L. Shrestha	Office Boy
154	Ms. Jevana Adhikari	Office Helper
155	Mr. Jeeban Chhettri	Security Guard
156	Mr. Prasuram Chepang	Office Helper

## Publications

### Recent publications

1. Joshi, KD, KP Devkota, D Harris, NP Khanal, B Paudyal, A Sapkota, JR Witcombe. 2012. Participatory Research approaches rapidly improve household food security in Nepal and identify policy changes required for institutionalization. *Field Crops Research* 131 (2012). Volume 125. PP 40-48.
2. Poudel, S, and Kotani, K (2012). Climatic impacts on crop yield and its variability in Nepal: Do they vary across seasons and altitudes? *Climate Change Journal*. <http://dx.doi.org/10.1007/s10584-012-0491-8>
3. Gurung, GB, Koirala, P, Pande DP, Basnet DB, and Kafle, O (2012). Promoting Rural Livelihoods through Riverbed Vegetable Farming in the Terai Region of Nepal. *Journal of International Development and Cooperation* (Hiroshima University), 18(4):113-121.
4. Neupane, RK, Sapkota, A, Darai R, and Nigam, SN (2012). Promotion of Kidney Bean through Farmer Participatory Research at Dailekh District. Paper presented to the Sixth National Conference on Science and Technology. NAST Kathmandu Nepal.
5. Baral, KR (2012). Weed management in organic farming through conservation agriculture practices. *The Jour of Agriculture and Environment*. Vol: 13
6. Gurung, GB, Koirala, P, Pande, DP, Basnet, DB, Kafle, O (2012). Promoting Rural Livelihoods through Riverbed Vegetable Farming in the Tarai Region of Nepal.
7. Neupane RK , Sapkota A, Gurung, GB (2012). The effect of molybdenum loading through seed priming on the growth and yield of spring mungbean in the terai of Nepal. Paper presented to the fourth SAS Conference. Society of Agricultural Scientists Kathamndu Nepal.
8. Sapkota, A., Khanal, N. (2012). Community Based Seed Production Groups: An Approach for Sustainable Seed Supply System.
9. Neupane RK, Mahato BP, Darai R, and Hamal, B (2011). Participatory evaluation and promotion of cereals and grain legumes for enhancing food security at Bajura district, Nepal. *Agron Jour Vol 2*: 75-87. Agronomy Society of Nepal
10. Khanal NP and Maharjan KL (2010). Sustainability of community based seed enterprises in Nepal. *Nepal Agric. Res. J. Vol: 10*

### Other publications

1. Sapkota, A, Khanal, N P and Tiwari, U (2010). Baseline Study of the Project "Poverty Reduction through Crops Intensification in Rice Fallow". Baseline Study Report, FORWARD.
2. Gurung, G B, Khanal, N P, Sapkota, A, Bhandari B R and Uprety, A (2010). Value chain Analysis of Rice in Rupandehi District. FORWARD Nepal, Chitwan.
3. Tiwari, U., M. Aryal, D. P. Acharya, B. Pathak. D. B. Thapa and D. P. Pandey. 2009. Baseline Study of Reinforcing Resilience Risk Reduction (4R) Project in Kalikot and Jajarkot Districts. CWN and FORWARD.
4. Tiwari, U. and D. B. Thapa. 2009. Identification and Analysis of Potential Sub Sectors in Kalikot District. CWN and FORWARD.
5. Acharya, D.P., U. Tiwari, D. P. Pandey and P. Subedi. 2009. Identification and Analysis of Potential Sub Sectors in Jajarkot District. CWN and FORWARD.
6. Thapa, D.B., U. Tiwari, D.P. Acharya and D. P. Pandey. 2009. Participatory Rural Appraisal (PRA) in Kalikot District. Study Report. CWN and FORWARD.
7. Thapa, D.B, D.P. Acharya, U. Tiwari and D. P. Pandey. 2009. Participatory Rural Appraisal (PRA) in Jajarkot District. Study Report. CWN and FORWARD.
8. Ojha, E R. 2009. Social Cum Policy Constraints for Land Remaining Fallows after Rice in Nepal Terai, Research into Use Programme, DFID, UK.
9. Khatiwada, P., D. P. Acharya and U. Tiwari. 2009. Integration of Kitchen Gardening Programme in Water and Sanitation Component. Study Report of Jumla and Jajarkot. CWN and FORWARD.
10. Acharya, D. P., U. Tiwari, R. Dhungana and B. Poudel. 2009. Participatory Market Chain Analysis (PMCA) of Vegetables and NTFPs in Banke, Bardiya, and Kailali Districts. USAID-NFRP/FINTRAC Inc. and FORWARD.
11. Yadav, N. K, N. P. Khanal, R. K. Neupane, S. Joshi, S.P. Srivastava, D.B. Gharti, P. Thakur, R.R. Sah, C.R. Yadav, P.C.P Caurasia, R.B. Chaudhary, P. Gautam, P. Jha, D.N. Pokherel, R.P. Sah, K.D. Joshi

- and D. Harris. 2008. A proposal for the release of chickpea variety Tara. National Seed Board. Department of Agriculture, Nepal.
12. Khanal, N P, P. Poudel, D. Acharya, Y N Tiwari and J B Basnet. 2008. Eco-friendly approaches for the management of fruit worm and yellow leaf curl virus of tomato in mid-western region of Nepal. Proceedings of the 5th National Horticulture Conference. Nepal Academy of Science. Kathmandu. Nepal.
  13. Acharya D and N P Khanal. 2008. Integrated plant nutrient system in maize. CIMMYT, Kathmandu, Nepal.
  14. Acharya D, D Pande and N P Khanal. Leasehold vegetable farming: an innovative approach for improving livelihoods of landless in the Terai region of Nepal. Proceedings of the 5th National Horticulture Conference. Nepal Academy of Science. Kathmandu. Nepal.
  15. Harris, D, A. Rashid, A. M. Musa, JVDK Kumar Rao, M. Kankal and N P Khanal. 2007. PSP Dossier 30. [www.researchintouse.com](http://www.researchintouse.com)
  16. Harris, D, C.Riches, A.M Musa, JVDK Kumar Rao, M. Kankal, V.K Vij and N. P. Khanal. 2007. Double cropping in rice-fallows system of South Asia. PSP Dossier 35. [www.researchintouse.com](http://www.researchintouse.com)
  17. Harris, D, S.Azam Ali, B.S Raguwashi, V.K. Vij, NP Khanal and PK Shrestha. 2007. PSP Dossier 27. [www.researchintouse.com](http://www.researchintouse.com)
  18. Harris, D, B.S, Raguwashi, V.K. Vij, NN Khanal and PK Shrestha. 2007. PSP Dossier 26. [www.researchintouse.com](http://www.researchintouse.com)
  19. Khanal, N P and KD Joshi. 2007. Dry season crops for replacing rice-fallows in Nepal. PSP Dossier 1. [www.researchintouse.com](http://www.researchintouse.com)
  20. Village level recycling of Helicoverpa Nuclear Polyhedrovirus for the management of pod borer in chickpea, pigeon pea and tomato
  21. Integrated crop management approach for the resumption of rapeseed in Mid-western region of Nepal.
  22. Production and opportunities associated with rapeseed decline in mid-western region of Nepal. 2005. Baseline study report, January 2007.
  23. Integrated plant nutrient system in rapeseed in mid-western region of Nepal. Technical Paper No 35 January 2007.
  24. Participatory variety selection in rapeseed in mid western region of Nepal. Technical Paper No. 34 January 2007.
  25. Integrated management of aphids in rapeseed in mid-western region of Nepal. Technical Paper No. 33 January 2007.
  26. Integrated management of Alternaria blight of rapeseed in mid-western region of Nepal. Technical Paper No. 32 January 2007.
  27. An assessment of outcome of Plan-FORWARD on-farm livelihood partnership Project in Banke District - FORWARD Consultancy Report - July 2006.
  28. An assessment of the outcome of rice-fallow rainfed rabi cropping (RRC) Project in Terai Districts of Nepal - FORWARD Consultancy Report - June 2006.
  29. Proposal for the release of Mungbean varieties NM94 and VC6372 (45-8-1): Jointly Submitted by Forum for Rural Welfare and Agricultural Reform for Development (FORWARD), National Grain Legumes Research Programme (NGLRP), and CAZS-Natural Resources (CAZS-NR), University of Wales, Bangor. FORWARD Working Paper No. 5 February 2006.
  30. Potential of Helicoverpa Nucleopolydrosis virus for the management of chickpea pod borer in Nepal. Paper presented in national workshop on food security and sustainable agriculture, 13-15 December 2005, Kathmandu, Nepal (In press). Technical Paper No. 31 April 2005.
  31. Alternative pest control approaches: NPV for pod borer control and its uptake in Nepal. Policy and strategies for increasing income and food security through improved crop management of chickpea in rice fallows in Asia. Summary of a NARC-ICRISAT-NRI workshop, 17-18 November 2004, Kathmandu, Nepal. Technical Paper No. 30 March 2005.
  32. Mungbean (*Vigna radiata* (L.) Wilczek) in cereal fallows: Experience of farmers' participatory research and development activities in foothills and terai of Nepal. Proceedings of 4th International Food Legumes Research Conference (Abst.), 18-22 October 2005, New Delhi. Technical Paper No. 29 February 2005.
  33. Role responsibilities and approaches to scaling-up IPM of chickpea in Nepal. Policy and strategies for increasing income and food security through improved crop management of chickpea in rice fallows in Asia. Summary of a NARC-ICRISAT-NRI workshop, 17-18 November 2004, Kathmandu, Nepal. Technical Paper No. 28 December 2004.

34. An assessment of outcome of Plan-FORWARD partnership project in Morang District of Nepal. FORWARD Consultancy Report - June 2004.
35. Rabi cropping and promoting winter legumes in rice fallows in Nepal. Paper presented in the workshop on Policy and strategy for poor farmers in Nepal and South Asia through Improved Crop Management of High Yielding Chickpea in Rice Fallows, from 17-18 November 2004 at Kathmandu. FORWARD Technical Paper No. 27 November 2004.
36. Participatory varietal selection in rice: FORWARD's experience in rainfed bunded and intermediate deep-water regimes in the Terai of Nepal. Paper presented in the 24th Summer Crops Workshop, 28-30 June 2004. NARC, Lumle, Nepal. FORWARD Working Paper No. 4. June 2004.
37. Potentiality of integrating mungbean in cereal fallows in the low hills and terai of Nepal. Paper presented in the 24th Summer Crops Workshop, 28-30 June 2004. NARC, Nepal. FORWARD Working Paper No. 3. June 2004.
38. Promotion of Rainfed Rabi Cropping in Rice Fallows of Nepal: Review of achievements from July 2002-June 2003. FORWARD Working Paper No. 2. June 2003.
39. Intensifying Rice fallows through rainfed winter cropping: Results of chickpea, field pea and buckwheat trials in the Eastern Terai of Nepal. FORWARD Working Paper No. 1. June 2002.
40. Effect of micronutrient loading, soil application and foliar sprays of organic extracts on grain legumes and vegetable crops in marginal farmers' condition in Nepal. FORWARD Technical Paper No. 26. September 2004.
41. Promotion of mungbean in cereal fallows in the low hills and terai agroecosystem of Nepal. Paper presented in the Final Workshop and Planning Meeting for DFID-Mungbean Project, 27-31 May 2004, Punjab Agriculture University, India. FORWARD Technical Paper No. 25. May 2004.
42. Greening for gains: An experience of off-season vegetable farming in flood-prone riverbeds in the eastern Terai of Nepal. FORWARD Technical Paper No. 24. April 2004. Paper presented in the 4th National Workshop on Horticulture, 2-4 March 2004 at NARC, Khumaltar. FORWARD Technical Paper No. 24. June 2003.
43. Insecticidal bioassay of the organic solvent- extracted chemical fractions of stinging nettle (*Urtica dioica*) by using aphid (*Brevicorinae brassicae*) as the test organism. FORWARD Technical Paper No. 23. June 2003.
44. Insecticidal bioassay of the organic solvent- extracted chemical fractions of stinging nettle (*Urtica dioica*) by using soybean hairy caterpillar (*Spilarctia casigneta* kollar) as the test organism. FORWARD Technical Paper No. 22. June 2003.
45. Fungicidal bioassay of the organic solvent- extracted chemical fractions of stinging nettle (*Urtica dioica*) by using alternaria spp as the test pathogen. FORWARD Technical Paper No. 21. June 2003.
46. Morphological characterization of onion varieties under farmers' field condition in Myagdi District. FORWARD Technical Paper No. 20. February 2003.
47. Morphological characterization of tomato varieties under farmers' field condition in Myagdi District. FORWARD Technical Paper No. 19. February 2003.
48. Diversity of nettle species in the hills of Nepal. FORWARD Technical Paper No. 18. November 2002.
49. Potentiality of nettle (*Urtica Dioica* L.) extracts for the management of soybean hairy caterpillar and red pumpkin beetle. FORWARD Technical Paper No. 17, November 2002.
50. Potentiality of nettle (*Urtica dioica* L) extract for the management of powdery mildew of pea in Western and Far-Western Hills of Nepal. FORWARD Technical Paper No. 16. November 2002.
51. Efficacy of nettle (*Urtica dioica* L.) extracts in controlling seed-borne Alternaria of Radish. FORWARD Technical Paper No. 15. November 2002.
52. Management of powdery mildew of cucumber with nettle (*Urtica dioica* L.) extracts. FORWARD Technical Paper No. 14. November 2002.
53. Potentiality of nettle (*Urtica dioica* L) extract for the management of powdery mildew of pea in Western and Far-Western Hills of Nepal. FORWARD Technical Paper No. 13. November 2002.
54. Potentiality of nettle (*Urtica dioica* L) extract for the management of Alternaria blight of radish in Western and Far-western Hills of Nepal. FORWARD Technical Paper No. 12. November 2002.
55. Potentiality of nettle (*Urtica dioica* L) extract for the management of Alternaria blight of broadleaf mustard. FORWARD Technical Paper No. 11. November 2002.
56. Potentiality of nettle (*Urtica dioica* L) extract for the management of alternaria blight of radish. FORWARD Technical Paper No. 10. November 2002.
57. Disposal Mechanisms and price behaviour of mandarin orange along Dumre-Besishahar road corridors. FORWARD Technical Paper No. 9. June 2002.



58. Production practices and profitability of mandarin orange along Dumre-Besishahar road corridors. FORWARD Technical Paper No. 8. June 2002.
59. Gender division of labour in vegetable farming and marketing systems along the Dumre-Besishahar road heads. FORWARD Technical Paper No. 7. June 2002.
60. Marketing systems and spatio-temporal price behaviour of selected vegetables at different market points linked to Dumre-Besishahar road corridors. FORWARD Technical Paper No. 6. June 2002.
61. Profitability analysis of vegetable production along Dumre-Besishahar road corridors. FORWARD Technical Paper No. 5. June 2002.
62. Production system and productivity of the selected vegetable crops along the Dumre-Besishahar Road-heads. FORWARD Technical Paper No. 4. June 2002.
63. Cultural Research on samayo (*Valeriana jatamansi*) for its domestication on terrace risers and in community forest areas in Dailekh District. FORWARD Technical Paper No. 3. March 2002.
64. Identification of resource management options to enhance food security in Achham, Bajhang and Dolpa Districts. FORWARD Technical Paper No. 2. June 2001.
65. Biophysical and socio-economic context pertaining to food security in mid and far western regions of Nepal. FORWARD Technical Paper No. 1. June 2001.

### फरवार्डद्वारा प्रकाशित प्रविधि बुलेटिन तथा पुस्तिकाहरु

■ घाँसे हाते पुस्तिका		माघ २०६८
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■ सार्वजनिक परीक्षण सहयोगी पुस्तिका		माघ २०६६
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■ बगर खेती (प्रविधि र पहल)		वैशाख २०६४
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■ अन्न तथा दलहन बालीका जातहरु	अंक २६	कात्तिक २०६३
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■ प्रविधि र पहल १		२०६२
■ घर परिसरदेखि बगरसम्म विपन्न वर्गका कृषकहरुका सफलताका कथाहरु (पुस्तिका)		फागुन २०६१
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■ नेपालमा मुड खेतीको सम्भाव्यता तथा प्रविधि चिनारी (पुस्तिका)		फागुन २०६०
■ तोरीखेत बाखा पालन अध्ययन, विकास तथा स्रोत केन्द्र, चितवन उद्देश्य तथा कार्यक्रमहरु	अंक १८	कात्तिक २०६०
■ तोरीखेत बाखा पालन अनुसन्धान, विकास तथा स्रोत केन्द्र, चितवन बन्देज प्रणाली अपनाई व्यवसायिक स्तरमा गरिएको उन्नत बाखा पालनको अवधारणा सम्बन्धी साधारण जानकारी	अंक १७	कात्तिक २०६०
■ माटोको उर्वराशक्ति कायम राख्न गोबरम्याँसको उपयोगिता	अंक: १६	कात्तिक २०६०
■ धानवाली पछि खालीरहने तराईका असिंचित खेतमा चना-खेतीका उपयुक्त प्रविधिहरु	अंक: १५	कात्तिक २०६०
■ केरा खेती	अंक: १४	कात्तिक २०६०
■ धान खेतमा नाइट्रोजन तत्वको विनाश प्रक्रिया तथा मलखादको कुशल उपयोगिताका उपायहरु	अंक: १३	कात्तिक २०६०
■ बेसी क्षेत्रमा केरा र भूईँकटहरको मिश्रित खेती प्रविधि र बजार सम्भाव्यताहरु	अंक: १२	कात्तिक २०६०
■ बगर खेती आकर्षक आमदानीको स्रोत	अंक: ११	कात्तिक २०६०
■ तराई र बेसीको लागि सम्भाव्य दालवाली : मुड	अंक: १०	साउन २०६०
■ सहभागितामूलक कृषि अनुसन्धान र विकास: कार्यक्रमको प्रक्रिया र सफलता	अंक: ९	साउन २०६०
■ आयमूलक जडीबुटी समायो र खेती प्रविधि	अंक: ८	साउन २०६०
■ बाली उत्पादन बढाउन वस्तुभाउको गहुँतको प्रयोग	अंक: ७	साउन २०६०
■ बालीनालीको पोषणको लागि सिस्नो र शीतलचिनीको रसको प्रयोग	अंक: ६	साउन २०६०
■ असिंचित खेती प्रविधिको गहकिलो खुटकिला : ढड्याएर बीउ रोप्ने विधि	अंक: ५	साउन २०६०
■ ओल खेती	अंक: ४	साउन २०६०
■ बेमौसमी-नर्सरी व्यवस्थापन	अंक: ३	साउन २०६०
■ सुख्खा पहाडी क्षेत्रमा उपयुक्त सिंचाई प्रविधि: प्लाष्टिकको पोखरी	अंक: २	साउन २०६०
■ घरेलु च्याउ खेती	अंक: १	साउन २०६०

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