

Himalayan Permaculture Centre

<http://www.himalayanpermaculture.com>

Building Household and Community Resilience

Phase 2, End of year 3

Date of this report: October 2015



Introduction and background

This report summarises activities carried out by the Himalayan Permaculture Centre (HPC) in its working areas of Surkhet and Humla districts during the period May to October 2015, and includes data from the previous 6 months to provide an annual overview of achievements. This ends the third year of HPC's 3-year "Building Household and Community Resilience" program, and activities are reported below. This project is currently being supported by KCF (82%) and misc. small donors (18%).

Highlights

- *HPC send 30kg of vegetable seed donations to earthquake-hit areas (see 4.2)*
- *Villages outside of HPC areas continue to make smokeless stoves (see 1.2).*
- *New seed-saving video made*
- *First Farmers' Festival in southern Humla*

Details of achievements over the current reporting period are provided and because this is the final report of the project cycle a summary of achievements over the past 3 years is also provided.

The earthquakes that hit central Nepal in April and May had minimum affect in the western regions. Sunrise Farm in Kathmandu, one of HPC's partner resource centres, was damaged however and needs to be rebuilt. A [crowdfunding appeal](#) has been launched to support this.

The political scene in Nepal has not been helpful to rural development projects. A series of strikes called in protest at the new constitution led to transport closure throughout Nepal over several weeks during August and September. There were violent clashes between factions and the government leading to deaths and disruption. The west of Nepal has been particularly affected, and movement around any roads was all but stopped for several weeks. This had an effect of preventing staff movement thus delaying procurement of program materials for many activities, particularly for drinking water and irrigation projects in Surkhet. It also delayed HPC's capacity building partner, Sahakari Samaj, from implementing its final training during the last reporting period. It is planned to complete this training by mid- November, directly after the Tihar festival.

Most recently in October, and embargo by India on goods entering Nepal, particularly petroleum and gas products, has led to severe fuel shortages and reduced transport options and has affected travel of staff and group members. Two members from Humla were unable to attend the second part of the PDC due to reduction of flights from Humla.

The monsoon has been particularly erratic this year – possibly another effect of climate change, and all areas have reported fierce rain storms and wind, and early cessation of the monsoon leading to severe drought that is currently (October) affecting summer crops of rice, maize and millet. In both Surkhet and Humla farmers are concerned about food shortages, and if there is no further rain then winter crops will also be affected.

Working Areas

An updated summary of groups' names, locations and demographics is given below.

		Households	Women	Men	Total
Surkhet	2 VDCs, 10 villages	171	523	596	1119
Humla	3 VDCs, 11 villages	269	798	801	1599
Total	5 VDCs, 21 villages	440	1321	1397	2718

These figures represent the demographics of the villages that have been registered with HPC as participating villages. They do not include the new villages that have requested participation, where HPC staff and barefoot consultants have started to work in the final year of this project. Details of activities in these new villages is included in the report below and in the attached annexes, but are kept separate where possible.

Details of the new villages are as follows:

		Households	Women	Men	Total
Surkhet	2 VDCs, 5 villages	124	338	365	703
Humla	1 VDC, 7 villages	306	854	877	1731
Total	5 VDCs, 21 villages	430	1192	1242	2434

Thus the total number of households involved with HPC at the end of 3 years are:

		Households	Women	Men	Total
Surkhet	2 VDCs, 15 villages	295	861	961	1822
Humla	1 VDC, 18 villages	575	1652	1678	3330
Total	5 VDCs, 33 villages	870	2513	2639	5152

Activities

1. FOOD SECURITY PROGRAM

1.1 Resource Centers

The Resource Centres (RCs) continue to be at the heart of HPC's program. They are designed as working demonstration farms with training facilities, able to host full residential courses as well as an office to support the project's administration, logistical and management functions. Both farms are equipped with solar power to aid these functions.

The RC in Humla is a rented office situated on farmland belonging to 8 different households. Currently, 3 of the households comprise a member that has completed a permaculture design course (PDC) and the aim is for all households to achieve this certificate.

The Surkhet RC is HPC's headquarters and is purpose built, on land owned by the organisation.

Production of agricultural crops at the RCs, and resources such as seed and seedlings for distribution to village groups, are closely monitored to assess productivity as a result of climate change as well as interventions in management according to permaculture principles. On-going production is matched by development of the farms with continuous planting of new systems for increased productivity. At the same time one of the goals of HPC is that every farm becomes a resource centre, providing increased food security and improved livelihood opportunities with minimum input, whilst also providing demonstration and educational resources to those wishing to achieve similar aims.

At both RCs there has been an overall increase in productivity over the past 3 years, mainly through diversification of crops, with increased fodder and biomass-producing species supporting an improved fertility cycle. At the same time vegetable and fruit crops have increased and diversified, and extra resources of fruit and vegetable seedlings also become available for sale, exchange and distribution.

Each 6-month report has detailed crop production on the RCs. During this final 6-month reporting period the Humla RC has produced **1575kg** of grains and vegetables from **22 crops**, plus over **3460kg** of fruit from **7 species**. It has distributed **141 fruit and vegetable seedlings** to the local community, and for its own development has planted a further **102 fruit and multi-purpose trees** and shrubs within the farm.

Similarly, at Surkhet RC maintenance of farm systems has continued along with new developments. Over the past 6 months it has produced **62.5 kg** of vegetables from **16 crops**, **100kg** of fodder grass (the tree fodder is about to be cut as this report is being compiled) and **80 kg** of firewood. It has planted 340 trees and shrubs, distributed **249 plants** to local groups, and holds **522 grafted fruit** seedlings ready for distribution this winter.

In terms of the RC's target of providing demonstration and training facilities to 1000 farmers, this has been well over-reached. The RCs have hosted Permaculture Design Courses (PDCs), Training of Trainers courses (ToTs), residential Farmers' Trainings, Technical trainings, Women's Health trainings, slide/film shows and various village group meetings. At Humla RC in Dapka village **606 men and women** attended various trainings, while at Surkhet RC in Baragaun **1120** people attended various trainings, meetings and workshops. Thus the total number of farmers/visitors benefitting from the demonstration and training facilities at the RCs totals at least **1726**. These figures do not include casual visitors when farmers "drop in" to collect a resource, ask a question or view a demonstration, nor the HPC festival held at the RC where over 350 villagers have gathered each year over the past 3 years.

1.2 Farmers' demonstrations

A clear aim of HPC is for every farm to be a demonstration. To this end over the past 3 years HPC has provided materials for farmers to create demonstrations on their own land, based on skills' training delivered at the RCs and in situ in the villages (see below 1.3). Materials such as seed and seedlings, grafting knives, secateurs, plastic for polytunnels and hot beds, drums for making liquid manure, and pipe for irrigation have been provided to groups so that they can establish their own demonstrations. Many demonstrated techniques do not need any materials other than what is available locally, such as compost, sweepings pits, waste water management and stoves. These just need the skills to build and maintain the technology.

Farmers making integrated demonstrations

Practical Activities	May-Oct 2015			Previous 6 months	Total year 3
	Surkhet	Humla	Total		
No: households implementing	171	269	440	417	440
House hygiene	168	243	411	308	411
Stove	11	219	230	205	243
Toilet	12	265	277	335	348
Grinder	168	166	334	252	334
Water pot	168	203	371	312	371
Hay box	12	0	12	2	14

Sweepings	26	152	178	190	368
Waste water management	54	174	228	215	251
Plate/pot rack	37	55	92	111	203
Compost	113	9	122	69	191
Fodder trough	5	16	21	3	24
Salt lick	45	10	55	47	102
Kitchen garden/vegetables	166	221	387	165	387
Mulching	18	2	20	3	23
Liquid manure hot bed	60	10	70	31	101
Leaf pots	2	14	16	15	31
Home nursery	57	100	157	10	167
Fruit nursery	30	203	233	41	257
Air nursery	33	125	158	120	278
Off season onions	13	0	13	13	26
Grafting	0	56	56	30	86
Budding	54	132	186	182	236
Top grafting	0	69	69	0	69
Air layering	23	57	80	24	104
Pot irrigation	56	23	79	39	118
Orchard	56	14	70	43	113
Agro-forestry	53	120	173	53	174
SRI	30	1	59	3	62
Green manures	49	32	81	24	81
No till	8	6	14	5	19
Bamboo cuttings	0	3	3	3	6
Improved plough	0	0	0	0	0
Fruit tree Pruning	170	31	201	33	201
Greenhouse	49	136	185	137	186
Biomass compost	0	14	14	15	15
Double digging	33	9	42	0	42
Urine collection & use	12	0	12	0	12
	11	0	11	0	11

Most of these activities are illustrated in the Farmers' Handbook.

Demonstration farmers are divided into 3 categories. In the 1st category farmers have attained the following:

- Taken Farmers' Training
- Taken PDC
- Taken ToT
- Competent at grafting and fruit nursery management
- Able to make smokeless stove
- Have planted at least 10 fruit trees on their land, and be competent at pruning
- Have planted at least 50 multi-purpose trees and shrubs in an agro-forestry design on their land
- Are using SRI in paddy areas
- Are growing vegetables and saving vegetable seeds
- Are able to manage greenhouse production

- Are using at least 15 other techniques from the Farmers' Handbook
- Can provide training in any of the above

There are currently 19 farmers in this category, of whom 7 are HPC staff. The remainder qualify in the category of "Barefoot Consultant". In the 2nd and 3rd categories criteria are similar but to a lesser degree. All farmers need to have passed through the basic farmers' training and be implementing techniques on their own land. Some are just starting. The current distribution of the top 3 categories of demonstration farmer is as follows:

	Category 1	Category 2	Category3	Total
Humla	6	16	18	40
Surkhet	13	24	27	64
Total	19	40	45	104

Fruit and multi-purpose tree production

Over the summer **13,776 seedlings** have been planted in Surkhet and Humla, comprising **2654 fruit trees (19 species)** and **12,496 multi-purpose agroforestry trees and shrubs (42 species)**.

Over the past 3 years a summary of all seedlings planted is as follows:

	2014-2015			2013-2014			2012-2013		
	Humla	Surkhet	Total	Humla	Surkhet	Total	Humla	Surkhet	Total
Total	1869	12001	13870	318	5832	6150	112	5680	5792
Total fruit	1408	1246	2654	1378	712	2090	561	910	1471
Total seedlings	3277	13247	16524	1696	6544	8240	673	6590	7263

	Total 3 years		
	Humla	Surkhet	Total
Total	2299	23513	25812
Total fruit	2447	2394	4841
Total seedlings	4746	25907	30653

Grafting and top working of fruit trees has been a particularly popular skill to learn, with dozens of farmers becoming competent, and supplied with good quality grafting knives have achieved the following results:

Species	Total 3 years		Total Grafting
	Humla	Surkhet	
Apple	4352	0	4352
Pear	483	1028	1511
Peach	2192	358	2550
Plum	2104	478	2582
Apricot	409	393	802
Walnut	411	664	1075
Almond	133	266	399
Wild apricot	16	8	24
Wild almond	33	0	33

Crab apple	10	0	10
Cherry	0	32	32
Orange	1	4	5
Lemon	3	196	199
Lime	0	3	3
Damson	50	6	56
Total	10197	3436	13633

Smokeless Stoves

HPC staff and Barefoot Consultants have continued to expand the area of villages able to build and maintain smokeless stoves in Humla and Surkhet. In 4 new villages of Kalika VDC (Lauthi, Pamsa, Kakhe 1 & 2) of Humla, **234 stoves** have been built over the past year. A national NGO working in Humla, the Water Resources Program, have provided an incentive of NRs 1000/- to each household in their area to successfully build and use the stove. Previously the same NGO was considering importing iron stoves but thanks to lobbying by villagers they instead decided to support expansion of HPC's model.

The smokeless stoves program has been one of the most successful aspects of HPC's programs in Humla, with significant, measurable impacts achieved in terms of firewood saved and improved health as well as resulting time savings.

SRI Rice Farming

Numbers of farmers growing rice using SRI principles continue to grow steadily. At the start of this phase there were 17 farmers practicing SRI (Surkhet 11 and Humla 6), currently there are **81 farmers (Surkhet 49, Humla 32)** practicing. The past years' uncertain weather patterns, and especially this year's summer drought due to the early end of the monsoon has favoured this technique because of its reduced use of water and the fact that the rice plants' roots are able to grow deeper to where moisture can still be found.

Community Funds

Over the past 3 years HPC has supported community groups to create and operate their own micro-finance systems from community funds set up for that purpose. These funds are collected usually on a monthly basis from each member, and used to provide loans for small business initiatives and in some cases emergency relief where needed. The current audit puts the total held in community funds at **NRs 1,079,833/- (GB£ 6750, US\$10,200)** of which **NRs 823,810/-** has been provided in loans.

HPC provides training to all its groups in establishment and maintenance of village micro-credit funds. It also provides passbooks for group members to keep funds' records in. HPC provides an auditing service. This reporting period's audit is summarised below:

	Loans given	Expenses	Cash	Total NRs	GB£
Humla	0	17530	119330	136,860	855
Surkhet	823810	98148	21015	942,973	5900
Total	823810	115678	140345	1,079,833	6755

1.3 Farmers' Training

One of HPC's main focus areas is provision of training to farmers in decreased input, improved output sustainable agriculture techniques. Different formats of farmers' training have been developed over the years, and in the first 1-year phase of this project, infrastructure was set up to

enable training to be increased to reach a greater number of farmers. The infrastructure started with the establishment of the Resource Centres (RCs) in Surkhet and Humla, with solar power and facilities to run courses. At the same time training of trainers' courses have increased the capacity of staff and farmers to teach others. Further tools such as slide projectors and other training materials have since been added to the resource list, and trainings have continued throughout the current 3-year project period. There are 3 main formats: residential 5-day farmers training held at the Resource Centres (RCs); mobile 3-day trainings held in the villages, and short single-topic trainings of 30 minutes to a few hours, which may be held at the RC or in the villages. Topics are decided depending on season and stakeholder needs. Mobile trainings may be general or for specific topics such as livestock health (see below 1.4) or women's health (see below 2.1). In this period technical trainings have included stove making, budding, seedlings planting, jam making, air layering, leaf pots, SRI rice cultivation and beekeeping.

Surkhet	No: Trainings	Days	Participants		
			Women	Men	Total
Residential Farmers' Training	1	5	9	7	16
Organisational Capacity training	0	0	0	0	0
Mobile Farmers' Training	4	14	27	49	76
Technical Trainings	37	9	189	192	381
Total	42	28	225	248	473

Humla

Residential Farmers' Training	1	5	7	12	19
Mobile Farmers' Training	2	3	9	13	22
Mobile Livestock training	1	3	8	7	15
Technical Trainings	56	35	181	228	409
Total	60	46	205	260	465
Total All Areas	102	74	430	508	938
Last reporting period	65	96	437	352	789
Total for the year Oct 14-Oct 15	167	170	867	860	1727

Over the past 3 years the training achievements are as follows:

	No: Trainings	Days	Participants		
			Women	Men	Total
Year 1	188	249	931	955	1886
Year 2	147	189	803	841	1644
Year 3	167	170	867	860	1727
Total 3 years	502	608	2601	2656	5257

Slide and Film shows

Slide and film shows have continued in HPC working areas and have also been used in new areas requesting program participation. HPC's home-made films are also being shown widely. In Humla, slides and film shows have been shown in **15 villages to 1231 women, men and children**. One of these shows was at a traditional local festival where a new film made by HPC staff in Humla about **Seed Saving** was shown, along with the Effects of Child Marriage to over **350** festival attendees.

1.4 Livestock

HPC's Livestock program encompasses 3 main areas: farmers' training, stock treatment and provision of improved breeds. Training has been on-going as part of HPC's integrated farmers' training (5 days), as part of 3-day mobile training and as specialist 1 to 3 day courses. These courses are now largely taught by barefoot consultants that have been trained in livestock health. Over the past 3 years **551 farmers** have been trained in livestock health in Surkhet and Humlka.

For treatment of livestock, trained technicians have been providing clinics in each village. A summary is given below.

Livestock treatment: Combined summary for this reporting period

	Cow	Buffalo	Goat/sheep	Pig	Horse	Chicken	Total
Humla	282	14	121	0	1	0	418
Surkhet	14	26	618	0	0	204	862
Total	296	40	739	0	1	204	1280

Treatment	Humla	Surkhet	Total
Internal parasite	189	807	996
External parasite	142	0	142
Castration	12	55	67
wound	6	0	6
virus	9	0	9
Colic/diarroea	60	0	60
Total	418	862	1280

Over the past **12 months** the combined summary of livestock treatment is as follows (including health camps held in the previous reporting period, and village visits):

2014-2015						
Cow	Buffalo	goat/sheep	pig	Horse	Chicken	Total
561	36	217	0	1	0	815
29	40	924	0	0	204	1197
590	76	1141	0	1	204	2012

2014-2015			
Treatment	Humla	Surkhet	Total
Internal parasite	370	1120	1490
External parasite	287	0	287
Castration	28	77	105
wound	6	0	6
virus	9	0	9
Colic/diarroea	115	0	115
total	815	1197	2012

Over the entire 3-year implementation period of Phase 2 the livestock treatment records are as follows:

Total 3 Years						
Cow	Buffalo	goat/sheep	pig	Horse	Chicken	Total
1083	80	707	0	4	4	1878
85	81	2022	8	0	204	2400
1168	161	2729	8	4	208	4278

Total 3 Years			
Treatment	Humla	Surkhet	Total
Internal parasite	1081	2296	3377
External parasite	560	0	560
Castration	103	104	207
wound	6	0	6
virus	9	0	9
Colic/diarrhea	119	0	119
total	1878	2400	4278

Breed Improvement

This aspect has involved the sourcing of improved varieties of cow, buffalo, goat and pig and providing to groups to use for breeding purposes. Over 3 years, **14 improved livestock** have been supplied to groups in Humla and Surkhet.

1.5 Irrigation

The 2 irrigation systems in Pakhapani and Salgadhi villages reported as in process in the last report are now complete, with **17 households** benefitting (42 female and 61 male) and **14.0 Ha irrigated**. Meanwhile 4 new systems have been started during this reporting period, of which 2 are complete, both in and around Baragaun village and comprising **11 households** (38 female and 40 male) and **4.4Ha irrigated**. The other 2 are in process in Salgadhi and Pakhapani villages and are additions to the previous systems, extending the irrigation to an additional **12.4Ha** for a further **16 households** (38 female and 48 male).

Over the 3 year reporting period of Phase 3, a summary of irrigation achievements is as follows:

Year	No: Villages/ systems	Beneficiaries				Area irrigated (Ha)	Local contribution person/days
		House holds	female	male	Total		
2012-13	6	63	122	146	268	25.2	759
2013-14	4	95	341	416	757	24.0	1127
2014-15	6	64	118	149	267	30.8	370
Total	16	222	581	711	1292	80.0	2256

2. HEALTH PROGRAM

2.1 Women's Health Program (WHP)

HPC' Women's Health Program works around 3 main activities: training, health camps and networking. Women's Health Training (WHT) takes place through residential 5-7 day trainings at the resource centres and mobile 3-day courses run in the villages. Short half to 1 day trainings and workshops are also provided.

Women's Health Camps (WHCs) have taken place each year in both districts and involve a trained team of specialists providing diagnosis, counseling, treatment and referral services as well as educational classes to attendees of the camps.

The Women's Health Network (WHN) involves meetings between women active in the trainings and camps where they discuss issues, develop strategies and plan events including the WHTs and WHCs

Women's Health Training (WHT)

During this reporting period 1 residential WHT has been held in Humla for **21 women** and a further **123 women** were trained in **6 mobile trainings** in various villages. In Surkhet, **122 women** were trained in **5 mobile trainings**. In total this year **36 women** attended the residential WHT and **377 women** were trained in the mobile trainings.

Over the past 3 years, **59 WH trainings** have been attended by **1232 women and 18 men**.

Humla Women's Health Camp (WHC)

In Humla the residential WHT was followed by a Women's Health Camp (WHC) where **216 women** received diagnosis, treatment and counseling, and 5 women were referred to district hospitals for further diagnosis and treatment.

A similar health camp was provided in Surkhet in March and was detailed in the previous report. The table below combines results from the two Women's Health Camps

12 months Oct 14-Sept 15	Diagnosis & Treatment		Referral		total
	f	m	f	m	
Surkhet	127	0	1	0	128
Humla	211	0	5	0	216
Total	338	0	6	0	344

Over 3 years the total numbers of women benefitting from the WHCs are as follows:

Total 3 Years	Diagnosis & Treatment		Referral		total
	f	m	f	m	
Surkhet	281	9	1	0	291
Humla	538	10	13	0	561
Total	819	19	14	0	852

Herbs for Women's Health Book published

When the Farmers' Handbook (FHB) was first published in 2001 another publication, **Herbs for Women's Health**, was also published. This has recently been updated and **1000** copies re-published for distribution in HPC areas and is also distributed to other organisations from Sunrise Farm in Kathmandu (who are also acting as distributors for the FHB).

Women's Health Network (WHN)

In this reporting period 3 WHN meetings have been held in Humla and 2 in Surkhet, a total of 78 women participated. Discussion topics included preparation for WHTs and WHCs, review and evaluation of WHT and WHC activities, herb farming, training requests and ways to make WHNs more active.

2.2 Drinking Water

HPC has used its traditional method of non-cement tanks to capture springs before piping water through break tanks to tap stands in the villages. Drinking water systems usually have an irrigation component integrated through attachment of pipes to taps and through waste water use from the tap stands.

During this reporting period **4 drinking water systems** have been completed, including one for the Primary school in Baragaun. A further **3 systems** are **in progress** and will be completed within this year.

A summary of achievements over 3 years in the drinking water program is given below:

Year	No: villages/ systems	No: taps	Beneficiaries				livestock	community contribution
			Households	female	male	total		
2012-13	6	48	53	164	198	362	657	812
2013-14	4	49	85	270	296	566	1535	1132
2014-15	9	29	128	608	614	1222	934	546
Total	19	126	266	1042	1108	2150	31 26	2490

3. EDUCATION PROGRAM

3.1 Practical Literacy Classes

This activity involves running practical literacy classes in Humla and Surkhet. The PLCs combine Freirian literacy principles with HPCs unique collection of practical activities based on the Farmers' Handbook (FHB), an easy-to-read compendium of over 40 farmer-friendly methods to increase domestic household and farm productivity. PLC participants learn letters and words, and later sentences, that form topics from the FHB such as stove, nursery, toilet, hygiene, diet, fruit tree grafting, etc. At the same time as developing their literacy skills, they also apply the methods in their own houses and fields.

This year 2 classes have run in each district. In Humla **20 women and 13 men** have completed the PLC, and in Surkhet **21 women** have completed the course, **total 54**.

Four PLCs have operated each year throughout the project. The summary is:

	women	men	total
Surkhet	100	8	108
Humla	128	16	144
Total	228	24	252

3.2 Schools' Program

In Humla during this reporting period, a students' competition was held at the high school involving students from 4 primary and secondary schools in the area. There were 3 competitions. The first involved a quiz, in which half the questions involved permaculture-related questions and the rest on general education. The second part was a facilitated debate between the values and

advantages of practical (vocational) verses conventional education. The third part was a lecture competition on the subject of climate change effects and mitigation. Over 300 students, teachers and parents attended.

This school activity has given students, teachers and parents, the opportunity to learn about HPC's program in relation to its vocational training principles, permaculture, and its awareness-raising program on climate change that has been running since the start of the project in 2012.

Also in Humla, HPC has provided financial support to make furniture for **Banadev Primary School** in Maspur. Five benches were made.

In Surkhet classes have continued to be provided at **Sidheswori Primary School** in Baragaun, Subbatol and Khaltakura schools. Details are below:

Topic	Hours	Girls	Boys	Total	Outputs
Fruit nursery	1	5	6	11	1 fruit nursery made
Benefits of vegetables	1	10	15	25	Students learn the nutritional benefits
Sweepings pit	0.3	11	9	20	2 pits made for compostable and non-compostable waste
Hygiene	1	13	12	25	Benefits & methods of house/kitchen hygiene
Weeding	2	15	17	32	Fruit nursery weeded
Pruning	1	8	10	18	4 pear trees pruned
Classroom hygiene	2	20	20	40	Classes cleaned
Plastic waste	1	9	8	17	Recycling of plastic into useful items
Personal hygiene	2.3	15	17	32	Benefits & methods of personal hygiene
Green manures	2	4	5	9	Mustard green manure sown
Total	13.6	110	119	229	
Total last year	17	53	55	108	
Total children taught	30.6 hrs	163	174	337	

Over the 3 years, **6 schools** have received support in Surkhet and 3 in Humla. Support has included furniture, roofing, drinking water systems, toilets, grafted fruit seedlings, white/black boards, carpet and prizes (books, pens, etc.) to students for achievements in learning and school maintenance.

3.3 Education materials

In this reporting period a further **50 Farmers' Handbooks** have been purchased and 1000 copies of the Herbs for Women's Health book published and brought to HPC for distribution in its areas (the latter has been completed under the Women's Health program. Over 3 years HPC has distributed **200 farmers handbooks**, **500** booklets on **Livestock Health Management** and now the **Herbs for Women's Health** booklet. In addition it has produced **4 videos** about smokeless stoves, nutrition, the importance of local seeds and biodiversity, and seed saving.

4. LIVELIHOODS PROGRAM

4.1 Beekeeping

As this year's Autumn honey season gets under way unseasonal drought followed by rain is threatening to reduce the crop, while bee numbers continue to appear to be falling. HPC is proactively working to provide better training for beekeepers and planting trees that will increase

bee forage. Over the past 2 years nearly **400 seedlings** of the important **Chiuri** tree have been planted by HPC groups in Surkhet, though it will take 5-6 years until they start to flower. HPC plans to research propagation methods such as air layering, in order to try and speed up the flowering process.

Over the past 3 years training in beekeeping and hive construction has been provided to **109 famers**; **115 hives** have been constructed; **NRs 210,000/-** earned from sales of **10 kg beeswax** and **453kg honey**

4.2 Vegetable seed production

Seed production training has been provided over the 3 year period and to date 183 farmers have been trained. In the first 2 years just over **10kg** of seed was produced of 6 varieties of vegetable. This year production has jumped to a massive **141.5kg** of vegetable seed from 24 species, comprising from Humla **82.54kg (17 varieties)** and from Surkhet **58.95kg (12 varieties)**.

Surkhet seed donated to earthquake-hit regions

In response to the devastating earthquakes that hit central Nepal in April/May of this year, HPC farmers from Surkhet pooled resources to send half of their seed output to farmers in earthquake-hit areas of Sindhupalchowk, Kavre and Nuwakot districts. Here catastrophic loss of seed has been recorded in many communities. **Thirty kg** of vegetable seed was sent in time for summer planting, made of radish, broadleaf mustard, coriander, fenugreek, pea, broad (fava) bean, lentil, fennel, chick pea and beans. All are open-pollinated seed thus farmers are able to continue to save them for expansion of future crops. This effort was facilitated by the **Kamala Foundation (KF)** who have been assisting in relief and reconstruction programs and have been sourcing seed from other organisations within and outside of Nepal. Members of KF have also received the Permaculture Design Course from HPC.

4.3 Sewing

Although this activity was completed last year HPC has been monitoring the activities of the 7 farmers that took the sewing training and were provided with sewing machines, 2 in Surkhet and 5 in Humla. They have found that the tailors' current income averages between 6000/- per month (Humla) to 12000/- per month (Surkhet).

4.4 Herbs development

HPC has recognised the value of local biodiversity in all its uses. One of these is the value of local medicinal herbs, both as a health service and as an income earner. The focus is on locally produced for local need and sustainably harvested and processed to increase value at source.

Humla is a rich source of nationally and internationally traded herbal products, but many are over-exploited and prone to local extinction, or are sold at very low prices for the collector. By consciously cultivating the plants their harvestable quantity can be assured. This year the following plants have been cultivated, harvested and marketed by HPC groups in Humla:

Herb		kg production	rate NRs/kg	total NRs
Tito		5	500	2500
Atis	<i>Aconitum</i> <i>Heterothyllum</i>	50	450	22500
Satuwa		10	4000	40000
total		65		65000

The following herbs have also been cultivated and harvested for local use though there is no current economic value or market

Herb	kg production	English name
Bojo	3.9	Sweet flag
Padamchalnu	19.5	wild rhubarb
Kurillo	1.5	wild asparagus
Ghiu kumari	0.5	aloe vera
Mairaune	0.5	
Sunakhadi	1	
Tel paro	1	
Badegano	10	
Total	37.9	

In Surkhet **4 farmers** have taken responsibility for growing herbs that are useful medicinally and/or have a potential commercial value. Together they have raised nearly **300 plants** of **28** different varieties in trials to assess ease of cultivation and propagation. Species include wild asparagus, sweet flag, aloe vera, *melia azadirach* and different mints (*menthus*).

4.5 Cardamom

Following training provided by the district agriculture office in 2014, farmers are continuing to propagate and plant cardamom as part of agro-forestry development on their farms, and early established plants have started to be harvested and marketed. To date nearly **6700** cardamom plants have been established in agro-forestry plots, from which some **150kg** of cardamom seed has already been harvested and marketed, so far earning farmers **NRs 211,400/- (about £1320)**.

4.6 Mills

In this reporting period the multi-purpose mill built between Chaurgaun and Pakhapani villages in Rajena VDC has been completed and its production evaluated. The mill now provides flour milling, rice hulling and oil extraction services for around **436 households (750 women and 800 men)** from **4 VDCs**. It can grind 50kg of maize flour or 25kg wheat flour per hour, hull 70kg rice an hour, and press 25 litres of mustard oil per hour. Half of the cost of the mill was met by village groups providing both cash and community labour contribution.

Over the 3 year period HPC has provided **3 mills** to communities in its working areas benefitting some **611 households** and **2578 people**. Although the original target was for 9 mills, the Pakhapani Mill described above is larger and has a large capacity, and was considered important enough as a project to warrant the extra investment as matched funding for what the beneficiary groups were already putting up. These groups have been using loans from their micro-credit funds as well as labour contributions to build the mill. As described above, the mill alone has benefitted 436 of the 611 households so it seems to have been a good investment.

5. CAPACITY BUILDING PROGRAM

5.1 Permaculture Design Course (PDC)

In October HPC held the second part of its PDC at the Resource Centre in Baragaun, Surkhet. This section of the course focussed on design, with participants being led through a design process with the following elements:

Stage	Elements
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Survey	Observation of land (soil, water, climate, slope, aspect, biodiversity, erosion, etc.) and client (vision/aims, resources, constraints, etc.)
Analysis	Assessment of functions needed; systems and elements to fulfil functions
Design	Placement of systems and elements to fulfil functions
Implementation	Plan of how the design is implemented including inputs, priorities and sequence of work over time
Maintenance	After implementation, how the design is maintained over time including inputs and outputs
Evaluation	On-going monitoring and evaluation of whether design is achieving goals
Tweak	Changes and modifications to the design and implementation as required

Participants came from local HPC groups, Humla, Dang and Kathmandu, and have returned home with commitments to continue design application. In a few months' time a follow-up workshop will be held to review progress.

5.2 Trainers' Training

No activities in this reporting period. Over the 3 year period 2 Trainers' trainings have been held, 1 in Surkhet and 1 in Humla. A total of 40 group representatives and staff have attended this training.

5.3 Organisational development

SahakarmiSamaj has played a key role in the organisational development of HPC over the past 3 years and continues to provide bespoke support both formally and informally. In this reporting period they were due to provide an integrated, staged review and evaluation training in Surkhet for HPC staff, executive board and village group committees, but this has had to be postponed due to the months of strikes (especially along the Western Tarai) and the more recent fuel shortage. It is now planned for early November. Therefore the budget for this activity is remaining unspent at the time of reporting.

Video production

As part of the skills improvement, staff and farmers have been continuing to develop short videos for training and awareness-raising purposes. In Humla staff have produced a 45 minute training video about **Seed Saving** that has been shown to groups and at a local festival (see above) in the project area.

HPC have now produced **4 videos** on smokeless stoves, nutrition, the importance of local seeds and biodiversity, and seed saving.

The stoves' video produced by HPC staff as described in previous reports is available on YouTube, for the Nepali version see <https://www.youtube.com/watch?v=lhzOK5GjqIA>. To see the video with English subtitles, click on the subtitles icon in the bottom right hand corner and select English.

5.4 Farmers Field trips

There have been no field trips during this reporting period. Over the 3-year project each winter there has been a field trip of Humla famers' leaders and staff to visit HPC villages in Surkhet. These have been valuable in showing farmers the activities of the Centre in Baragaun as well as in the villages of the 10 groups participating in Surkhet. In total **31 farmers (11 women and 20 men)** and 3 staff from Humla have participated on the field trips. The experience has without exception had the effect of increasing the motivation, activity and participation of the participants in their own groups and with the overall program in Humla.

5.5 Farmer-Farmer extension

HPC continues to facilitate on-going gatherings of farmers in both working areas (aside from all the farmers' trainings, see above 1.3) where they have an opportunity to review activities, sharing their experiences and discussing successes and challenges as well as giving their hopes and expectations of the overall program and planned activities.

In Surkhet, Farmers representing 10 groups meet every 3 months. In the 4 meetings over the year **22 women and 92 men total 114 farmers** have met. This sector includes the HPC farmers' festival, held in March and detailed in the previous report.

Humla's first Farmers' Festival

Meanwhile in Humla the first Farmers' Festival was held in September, on a 2800m plain high above Dapka Village. About 1000 men, women and children from surrounding villages attended. Based on the model of HPC's festival in Surkhet, they participated in local song and dance, theatre and a farm produce exhibition comprising **194 exhibits** of livestock, fruit and crop produce, and handicrafts. Prizes were awarded in each sector.

Community contributions

Community contributions to activities in Surkhet and Humla show a total contribution in this reporting period of **895 person days** with a monetary value of **NRs 268,500/- (GB£1680)**. Activities include maintaining community infrastructure (paths, bridges, water courses, mills, schools and community learning centres), and direct contributions to HPC programs such as portorage of equipment, and construction of irrigation tanks. A summary of community contributions over the past 3 years is given below and shows that a total of nearly **£20,000 (US\$30,000)** has been invested by the communities in their own projects:

	total year 3	2012-13	2013-4	Total
pp days	1416.0	5694	3199	10,309
value NRs	444,350	1,705,200	1,048,950	3,198,500
value GB£	2,777	10,658	6,556	19,991

HPC Website

HPC's website, www.himalayanpermaculture.com was created February 2009. By March 2012, **27000** hits were recorded. Up to the time of this report (Oct 2015), over **95,000** hits have been recorded.