

# **ANNUAL REPORT**

## **2018-2019**

**Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan**  
**Almora**

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## **Introduction**

Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan (USNPSS) has been working since 1987 on environment and education in the hill areas of Uttarakhand. A registered non-government organization, USNPSS has pioneered activities in mainstreaming environmental education in government schools in the state of Uttarakhand. By developing a large programme on pre-school education, USNPSS has also pioneered programmes with communities in mountain villages. Both these programmes have brought in policy reforms in education in the state.

Currently USNPSS is running village learning centres through which children, adolescents, youth and women's groups share a common framework on education and community development. The programme is situated within a wider context of participatory development and educational discourse that USNPSS has nurtured for the last three decades. All in the community-men, women children, adolescents, youth, elderly and teachers make efforts to create an enabling environment in which educational and development activities flourish.

Work with women's groups continued with Uttarakhand Mahila Parishad (UMP or Uttarakhand women's federation) acting as a networking forum for thousands of rural women in the hills of Uttarakhand. In addition, activities under the project, the National Mission on Himalayan Studies (NMHS), were completed. Detailed analysis of the survey of villages as well as other reports on activities conducted under the NMHS were prepared and submitted.

This year has brought much progress in our thoughts and practice on women-centred non-farm livelihoods which could be viable in village settings. In addition, direct interactions with rural women and girls made it clear that development-as described in terms of meeting immediate and long-term human needs-lay at the core of community learning practices. We do visualize the purpose of community learning as a move towards achieving balance between ecological and socio-economic needs of women and their communities. Reaching up to this understanding has involved a long process because in a broader policy-domain these two strands of community learning (ecological and economic) would mean two different frameworks for addressing the problems in villages. In this connection, the USNPSS staff had to address many issues that often brought in contradictory views. For example, answering the question - community learning for what - would fetch many answers. Some are in favor of keeping ecological development and agriculture as a priority whilst others relate to the changing aspirations of youth with their preferences for non-farm activities and economic gains. Achieving equality would also mean reducing discrimination on the basis of gender and caste in society.

These are complex yet important issues in defining the aim of programmes run by USNPSS under the gamut of a broader term called community learning. Prioritizing any of these issues would immediately instill a different pathway of addressing the problems in communities. For example, imagine the very different meaning that the term ecological development for livelihoods generations would give to the programme as compared to nurturing non-farm activities in village settings. While the environmental thrust would bring in activities for protection, regeneration,

reclamation of denuded land, water and other resources, a community learning programme for income generation will strive towards exploring linkages with outside markets and so on.

The report describes various thoughts and practices that have brought together the efforts of USNPSS and its partner community-based organizations (CBOs) to facilitate community learning practices in seven districts of the state. It also helps to link local issues of community learning with the broader debate on participatory development, participatory learning and sustainability by bringing up challenges and paradoxes that have emerge in working with communities. Practically all work in community learning has bearing on education and development of villages.

### **1. Village Learning Centers**

This year a total of 62 village learning centers (VLCs) were functional in nine different clusters in six districts. In addition, twelve computer centers were run at nine different locations. The programme offers a common platform to children to learn and improve their knowledge and skills in mathematics, language, environment, general knowledge and on computers by attending the centers after school. Being home on Sunday, children come to the centers early in the afternoon and spend more time together. Monday is a holiday.

Given the tendency for school teachers and parents to view achievements of children in terms of their grades in exams, greater attention is paid in VLCs to promote skills which in schools tend to be neglected due to pressure of completing the syllabus before tests. A VLC is not a tuition center offering services to children to pass their exams. It is different. With the aim of creating an enabling environment for mental, emotional and physical development of children, each VLC carries out multiple activities such as reading and writing, painting, music and dance, origami, sports, debates etc. In addition, each center hosts a library containing children's books in Hindi. Selected from the best publishers and writers in the country, the number adds up to about 400 books. Some of these are suitable for very young children and contain lots of pictures, others are read by children in primary and upper levels of schooling. The library also contains books for adolescents and young women and men on various subjects, both fictional and non-fictional. Since young men and women need books to prepare for their competitive exams at various levels, an effort is made to fulfill this demand too, especially because such books are expensive and not even available in rural areas.

Though not formally involved, a majority of centers maintain a close contact with government schools in villages. A few government teachers fully support the idea of having such a facility and encourage the children to regularly attend the centers in the evenings. This is in good faith as teachers feel that children waste time in the evening and do not even bother to revise the lessons taught in schools. Also, in remote areas, teachers are of the view that "at least something is happening in the village". Very often, the VLC facilitators organize the bal-mela in the school itself.

A focus on transformative education also means an emphasis on change in the community. Such a change is viewed in social terms especially in achieving gender and caste equality at multiple levels. Looking at change through transformative education involves multiple outcomes that

depend on socio-cultural and economic variables of the community. The process of bringing about such a change is holistic and non-linear. It is different from the mainstream approaches that regard education as an area of investment to cultivate citizens as future contributors in economic growth. The holistic view of transformative education entails processes that direct development of children in all spheres of life. For example, in a village, cultivating a sense of community is as important a life skill as earning a decent livelihood or employment. In this approach, developing an understanding of gender and caste-based equality and action for change is an important aspect of education.

Therefore, each center offers space for adolescent girl's groups and women's groups to hold meetings, once a month. These meetings aim at creating knowledge about the interlinked influences of patriarchy, caste, class, education etc. on women and girls as a group that invariably occupy a disadvantaged position in the community. The women's groups and the adolescent girl's groups discuss if the situation in the village is changing or continue to be static both in terms of social change and in relation to gender. They discuss issues of quality of education in schools and whether education is enabling them to progress, to be mobile and to make decisions re their lives at home and in the community.

In Uttarakhand, drop-out rates of girls and boys in schools have gradually declined to almost minimal levels in the mountain districts. However, related forms of gender discrimination continue, though there are trends of dilution over time. For example, perceived as future home-makers, girls are guided to take subjects different from boys. After school, girls are supposed to take on household activities while boys spend time in sports and leisure. Both, within-school and within home practices influence decision making especially with regard to choices and options for higher education or schooling outside home.



Figure 1. Children coming to attend the center after school.

While creating space for education in a community, the village learning centers offer opportunities to rural women and girls to not only assess the quality of education in schools but also beyond schools-at home, in the village and between villages at cluster/regional levels. This is a very important input in the field of education in Uttarakhand, particularly now that the research and data on the achievements of the state-led scheme on education for all (*sarva shiksha abhiyaan*) is pointing towards continuing decline of children in government schools and increasing migration from the rural areas to the cities and towns with education being one of the main reasons for moving out. It is important to understand and recognize the pathways to change in society and how schooling could be an enabling or disabling agency in relation to economic or socio-cultural aspirations of the young minds in rural areas.

During meetings, women-especially mothers, are appraised of their child's progress and also in general terms, regarding cognition and pedagogy in the center. Without taking the name of the child, problems such as poor hand-writing, inadequate reading skills, behavioral issues are discussed with the aim of improving his/her performance. Home visits are made to discuss individual problems. However, the VLCs also create space to solve collective problems faced by children and adolescent girls. For example, children specially girls are encouraged to ask questions, take responsibility for their decisions and to negotiate their ways to move forward, both at home and in schools.

Table 1. Number of centers during 2018-2019.

Serial number	Cluster	Number of centres
<b>Village Learning Centres</b>		
1	Binta	5
2	Danya	10
3	Maichun	6
4	Ganai-gangoli	5
5	Shama	6
6	Badhani	10
7	Gopeswar	10
8	Ukhimath	6
9	Pati	5
	Total	62
<b>Computer Centres</b>		
1	Binta	1
2	Danya	2
3	Maichun	1
4	Shama	1
5	Badhani	2
6	Gopeswar	2
7	Ukhimath	1
8	Pati	1
9	Galla	1
	Total	12

This year, a total of 1443 children, 50.86% girls, attended the village learning centers. Out of these 34.37% belong to the socially disadvantaged sections of society (Table 2). The numbers exhibited in Table 2 exclude the children who come to learn the computers because many times children who attend the village learning centers also learn computers.

The computer centers host three-four desktop computers, a printer, invertor, stationery and furniture. Invertor are supplied because the electric supply in villages is erratic and sometimes electricity does not come at all for many days. Books are kept in the center so that children waiting for their turn can utilize their time. Children learn in batches so that each learner can spend some time (at least half an hour and more every day) working on the computers. This has been a popular activity in villages and children run to the center as soon as they are back from school. Since electricity is consumed in the centers, children pay 30-50 rupees per month as fee. The amount so collected is used to pay the room rent too. Maintenance of the equipment is an issue in villages where facilities for repair are totally absent. When required, either a man goes from USNPSS to repair machines or the equipment is brought back to Almora for maintenance.

Table 2. Village learning centers with details of children.

S No.	Village	Cluster Name	Total number of children			Numbers of children from disadvantaged sections		Number of children General Caste	
			Total	Girls	Boys	Girls	Boys	Girls	Boys
1	Surna	Binta	25	13	12	0	0	13	12
2	Bhataura	Binta	22	14	8	2	2	12	6
3	Borkhola	Binta	20	12	8	1	0	11	8
4	Binta	Binta	27	10	17	7	7+2*	3	8
5	Gorgaon	Binta	20	12	8	0	0	12	8
6	Padai	Danya	26	14	12	0	0	14	12
7	Bashan	Danya	22	12	10	8	10	4	0
8	Takoli (Melgaon)	Danya	18	10	8	0	0	10	8
9	Dharagad	Danya	24	12	12	4	5	8	7
10	Kulauri	Danya	26	13	13	13	13	0	0
11	Danya	Danya	27	12	15	11	13	1	2
12	Dasili	Danya	27	14	13	0	0	14	13
13	Ruwal (Gauli)	Danya	21	13	8	0	0	13	8
14	Gauli	Danya	25	7	18	0	0	7	18
15	Munauli (Bashan)	Danya	25	15	10	0	0	15	10
16	Maniagar	Maichun	21	11	10	11	10	0	0
17	Dhan (Jogyura)	Maichun	19	11	8	11	8	0	0
18	Mauni (Nakot)	Maichun	24	12	12	7	6	5	6
19	Maniagar	Maichun	21	11	10	0	0	11	10
20	Banthok	Maichun	21	15	6	13	4	2	2
21	Palyoun	Maichun	26	13	13	13	13	0	0
22	Gwadi	Ganai	28	11	17	2	0	9	17



23	Bhaloogada	Ganai	22	11	11	0	0	11	11
24	Kakda (Nayal)	Ganai	15	5	10	0	0	5	10
25	Bhanyani	Ganai	21	9	12	9	12	0	0
26	Talli Nayal	Ganai	15	9	6	9	6	0	0
27	Malkha Dugarcha	Shama	18	10	8	10	8	0	0
28	Hinari	Shama	18	9	9	0	0	9	9
29	Dhari Gogina	Shama	14	9	5	0	0	9	5
30	Namik	Shama	25	13	12	13	12	0	0
31	Talla Namik	Shama	24	18	6	18#	6#	0	0
32	Jankande	Pati	15	5	10	2	6	3	4
33	Dhoonaghat	Pati	24	11	13	0	0	11	13
34	Malla Kamlekh	Pati	19	11	8	11	8	0	0
35	Lakhanpur	Pati	13	6	7	2	2	4	5
36	Harodi (Khuteli)	Pati	15	7	8	0	0	7	8
37	Kafloidi Nandasain	Karnprayag	20	9	11	6	4	3	7
38	Bainoli	Karnprayag	20	9	11	0	0	9	11
39	Kukdai	Karnprayag	26	7	19	0	0	7	19
40	Chhatoli	Karnprayag	25	13	12	0	0	13	12
41	Pudiyani	Karnprayag	22	18	4	0	0	18	4
42	Sundargaon	Karnprayag	24	11	13	0	0	11	13
43	Dungri	Karnprayag	22	10	12	10	8	0	4
44	Jakh	Karnprayag	27	17	10	2+ #1	#2	14	8
45	Chaundali	Karnprayag	22	8	14	1	3	7	11
46	Badhani	Karnprayag	18	8	10	1	0	7	10
47	Bamiyala (Dasoli)	Gopeshwar	31	17	14	0	0	17	14
48	Dogadi-Kandai	Gopeshwar	25	16	9	0	0	16	9
49	Gwad	Gopeshwar	29	18	11	0	0	18	11
50	Siroli	Gopeshwar	29	16	13	0	0	16	13
51	Kathood	Gopeshwar	28	16	12	4	3	12	9
52	Banadwara	Gopeshwar	28	16	12	4	3	12	9
53	Mandal	Gopeshwar	26	11	15	7	9	4	6
54	Devaldhar	Gopeshwar	30	14	16	0	0	14	16
55	Bandwara	Gopeshwar	19	6	13	3	3	3	10
56	Khalla	Gopeshwar	38	13	25	6	8	7	17
57	Kimana	Ukhimath	30	12	18	0	0	12	18
58	Huddu	Ukhimath	28	16	12	7	5	9	7
59	Ushada	Ukhimath	20	10	10	0	0	10	10
60	Dungar Semala	Ukhimath	28	11	17	11	17	0	0
61	Saari	Ukhimath	33	16	17	6	10	10	7
62	Byolda	Ukhimath	22	16	6	16	6	0	0
	Total		1443	734	709	262	234	472	475

\* Scheduled Tribes

#### # Other Backward Classes



Figure 2. Both boys and girls attend and learn together.



Figure 3. Children in a center at Kedarnath valley. The valley was severely hit by floods in 2013 and children lost their siblings and parents. The VLCs not only keep them busy but also helped come out of a traumatic experience.



Figure 4. Computer centre at Shama-Gogina village, district Bageswar.



Figure 5. Children come after school to learn computers.



Figure 6. Computer centre at Badhani, district Chamoli.

### **Educational materials**

Catering to different age-groups and needs in the community, a variety of educational materials is provided in the center. Table 3 exhibits material given to the center during the year. Besides adding new books in the library, a variety of sporting equipment, stationary, jodo gyan material to learn mathematics was provided.

Sports material is offered with the aim of providing opportunities to children to play and learn together. In many villages, it is for the first time that a child had seen a chess board or Ludo. Also, badminton racquets, volleyball etc. are not even available in villages and one can imagine the joy of a child holding a racquet or seeing a shuttle cock for the first time in his/her life.

For the first time in many villages people have got an opportunity to read newspapers on a daily basis. This is true for difficult to access villages where newspapers had never reached earlier. Now that the centers receive newspapers, adults also borrow it from the center. Earlier, either the newspapers were available in the roadside tea shops or reached the villages late and only men had access to those. Now, children, adolescent girls and boys, young educated women can read the newspapers and connect to the world outside.



Figure 7. In villages, all girls go to school and also attend the centers in the evenings.

Table 3. Educational materials given to the centers.

Serial number	Material/item	Total	Distributed	Remaining at USNPSS
1	Plastic mats	41	16	25
2	Wall clock	9	9	00
3	adhesive tape	71	56	15
4	Register	18	12	6
5	Colour pencil	18	14	4
6	Chart sheets coloured	470	390	80
7	Sketch pen sets	97	92	05
8	Water colour boxes	18	12	6
9	Chalk	10	10	0
10	Green Board	3	3	0
11	Globe	12	7	5
12	Fevicol	71	56	15
13	Steel Scale (12 inch)	8	8	0
14	A4 rim	81	56	25
15	Crayon	142	112	30
16	Carom board	18	18	0
17	Carom accessories	11	5	6
18	Football pump	21	21	0
19	Football no.5	19	19	0
20	Badminton set	27	27	0
21	Shuttle cock	346	274	72
22	Cricket bat	29	24	5
23	Cricket ball	31	28	3
24	Ludo, snake & ladder boards	20	20	0
25	Chess	17	17	0
26	Jumping rope	25	25	0
27	Rubber rings	10	10	0
28	Measuring tape (15m)	9	9	0
29	Measuring tape (1.5 m)	2	2	0
30	School mat Patti	248	200	48
31	Stamp pad	10	10	0
32	Small stapler pin boxes	6	6	0
33	White board marker	23	23	0
34	Alphabet chart	62	50	12
35	Pencil boxes	62	50	12
36	Flexi sign boards	4	4	0
37	Jodo straw	60	51	9
38	Rangometry	60	51	9
39	Maan card	60	51	9
40	Tin sign boards	7	7	0
41	11sets of 173 books each from the National Book Trust	Each set to be shared by a cluster of 5 villages		

### Training of facilitators

This year three training programmes were conducted at USNPSS for VLC facilitators. One of the training programmes involved 10 facilitators running the computer centers in villages. All sessions are interactive and each participant contributes to discussions and also learns to conduct activities during training. Young educated girls from villages are selected to run the centers but one of the main concerns among them is a sense of fear in speaking and lack of confidence. Hence during training a lot of emphasis is made to create an environment that enables girls to shed inhibitions and stimulates their thoughts in a positive direction. Interactive, participatory sessions help the girls to think and talk.



Table 4. Training of facilitators during 2018-2019.

Serial number	Duration	Number of days	Type of training	Number of participants
1	11.6.18-15.6.18	5	VLC facilitators	32
2	22.11.18-26.11.18	5	CBO main workers and computer facilitators + VLC facilitators	25+ 10
3	11.3.19-16.3.19	6	VLC facilitators	33

The other issue of concern among the facilitators is difficulties in taking sessions on mathematics with children in the centers. Since, the facilitators themselves have low confidence in conducting a mathematical exercise with children either they tend to avoid such activities or take up simple problems that they themselves can explain. Therefore, during training a lot of emphasis was paid in building up mathematical exercises from simple to complex.

Maintaining a diary to record her planning of daily activities is an important part of the facilitators work in the center. She is also responsible for maintaining a register for the library of books. During training the facilitators are exposed to the methods of maintaining records in the center. A standard format is followed in all the centers to make comparisons possible; and to compute the data by the end of the year.



Figure 8. Training at USNPSS office.

Connecting with the community is an integral part of the work carried out in the centers. Each center hosts the meetings of the women's groups on a monthly basis. Adolescent girls attend the center every day. The supervisors and the facilitators attend these meetings and appraise women of the progress of their children in the center. The training programmes cover such issues and also encourage facilitators to visit people at home. For example, if all women are not coming to

attend the meetings or in case there is a quarrel or any problem in the community, the supervisor and the facilitator are required to take cognizance of such matters. Often, village meetings are called to resolve such issues.



Figure 9. The facilitators learn about measurement units during training at USNPSS.



Figure 10. Skills learnt during training equip the facilitators to conduct similar activities in the center.



Figure 11. Training programmes are highly interactive and participatory so that the facilitators can conduct such activities with children back at home.

### **Visits to the centers/monitoring**

Monitoring of progress in centers is carried out at multiple levels both by the partner CBOs and USNPSS staff, all through the year. Briefly, The CBOs take care of daily operational matters whilst the USNPSS staff offers hands-on assistance to the CBOs as well as the facilitators in carrying out administrative and managerial work; and also helps them resolve problems in the center and the communities. Primarily, an attempt is made to assess the progress of the children attending centers. Table exhibits details of the visits to VLCs by USNPSS staff during the year. The following observations were made:

- Almost all centers have recorded an improvement in reading and writing Hindi language. Children well below their expected levels of comprehension were given special attention in the centers and the hard work of the facilitators was reflected during the visits. It is worth noting that despite attending schools, many children could not even write their names
- Performance of children in mathematics has improved in centers where the facilitators themselves are competent in solving mathematical problems
- All centers run in a room/place offered for free by communities. No rent is paid by USNPSS and communities own the centers. In some villages, centers are run in a vacant house/room whilst in others, community centers such as *panchayat ghar*, *jan milan kendra*, *baraat ghar* are used



Table 5. Visits made by the USNPSS staff to village learning centers.

Serial number	Name of the centre	District	Date of visit	Number of children present on the day of visit		Impressions on progress of children (Based on activities)		
				Boys	Girls	Good	Very good	Satisfactory
1	Gouli	Almora	19.4.2018	10	9	-	*	-
2	Maniagar	Almora	19.4.2018	13	12	-	*	-
3	Harodi	Champawat	25.4.2018	7	8	*	-	-
4	Jankandey	Champawat	25.4.2018	11	7	*	-	-
5	Kamlekh	Champawat	25.4.2018	8	6	-	-	*
6	Dhunaghat	Champawat	24.4.2018	6	19	-	-	*
7	Bainoli	Chamoli	1.7.2018	6	8	*	-	-
8	Chaatoli	Chamoli	2.7.2018	6	13	-	*	-
9	Dhungari	Chamoli	2.7.2018	3	4	-	*	-
10	Byulda	Rudraprayag	3.7.2018	6	9	*	-	-
11	Dungar	Rudraprayag	3.7.2018	15	13	-	*	-
12	Usara	Rudraprayag	4.7.2018	6	4	-	*	-
13	Kimana	Rudraprayag	4.7.2018	8	12	*	-	-
14	Huddu	Rudraprayag	4.7.2018	3	6	-	-	*
15	Koteswer	Chamoli	5.7.2018	8	6	-	*	-
16	Mandal	Chamoli	5.7.2018	9	11	-	*	-
17	Bandwara	Chamoli	5.7.2018	9	10	-	-	*
18	Khalla	Chamoli	5.7.2018	13	15	-	-	*
19	Gwad	Chamoli	5.7.2018	7	9	-	*	-
20	Bamiyala	Chamoli	6.7.2018	10	10	-	*	-
21	Kandae	Chamoli	6.7.2018	13	18	-	*	-
22	Kathud	Chamoli	6.7.2018	7	11	*	-	-
23	Gouli	Danya	25.7.2018	12	10	*	-	-
24	Godgaon	Almora	26.7.2018	14	10	-	*	-
25	Dhunaghat	Champawat	17.8.2018	8	12	*	-	-
26	Lakhanpur	Champawat	17.8.2018	2	7	*	-	-
27	Kamlekh	Champawat	18.8.2018	7	7	*	-	-
28	Jankandey	Champawat	18.8.2018	4	9	-	-	*
29	Harodi	Champawat	18.8.2018	4	6	*	-	-
30	Kukdai	Chamoli	6.9.2018	10	11	*	-	-
31	Choundali	Chamoli	6.9.2018	5	6	-	*	-
32	Bainoli	Chamoli	7.9.2018	8	8	*	-	-
33	Chatoli	Chamoli	7.9.2018	9	14	-	*	-
34	Kaphlori	Chamoli	7.9.2018	16	8	*	-	-
35	Pudiyani	Chamoli	8.9.2018	10	10	-	*	-
36	Dungari	Chamoli	8.9.2018	7	11	*	-	-
37	Jakh	Chamoli	9.9.2018	8	9	-	*	-
38	Badhani	Chamoli	9.9.2018	11	9	-	*	-
39	Bhanyari	Pithoragarh	27.9.2018	3	7	-	*	-
40	Nayal	Pithoragarh	27.9.2018	3	10	-	-	*
41	Gwadi	Pithoragarh	27.9.2018	10	4	*	-	-
42	Bhalugara	Pithoragarh	28.9.2018	7	8	-	-	*
43	Kaakra	Pithoragarh	28.9.2018	4	2	*	-	-
44	Malkha dugarcha	Bageswer	15.11.2018	4	13	-	*	-
45	Hinari	Bageswer	15.11.2018	4	7	-	*	-
46	Namik-1	Pithoragarh	16.11.2018	9	7	-	-	*
47	Namik-2	Pithoragarh	16.11.2018	5	4	*	-	-
48	Badhani	Chamoli	6.1.2019	7	7	*	-	-
49	Dungar	Rudraprayag	6.1.2019	11	11	-	-	*
51	Kimana	Rudraprayag	6.1.2019	6	8	-	-	*
52	Byolda	Rudraprayag	7.1.2019	6	8	-	-	*
53	Maichun	Almora	5.2.2019	2	3	*	-	-
54	Karnadhar	Rudraprayag	28.1.2019	8	9	*	-	-
55	Huddu	Rudraprayag	28.1.2019	7	9	-	-	*
56	Gwad	Chamoli	23.2.2019	8	9	-	*	-
57	Gangolgaon c	Chamoli	23.2.2019	5	7	-	*	-
58	Badhani c	Chamoli	25.2.2019	7	6	-	*	-

- In remote difficult to access villages lack of any other facilities have led to more appreciation of the programme by village residents. In Gogina, Namik, Bamiyala villages, mothers ask their children to bring home story books from the center and read in the evenings
- Centers have been able to break social taboos regarding girls taking part in sports. Since the programme encourages girls to play and also offers sports material in the center, changes in attitudes of parents are now apparent. Also, girls are now taking part in sporting activities in schools
- Awareness about cleanliness and personal hygiene is raised through the centers. The facilitators are asked to wear clean clothes and keep the center and the surroundings clean. Issues of health and hygiene were also discussed during meetings with women and adolescent girls
- Over time, the facilitators have learnt to keep the records as desired. Different registers are maintained and an improvement in the quality of data available has been noticed in a majority of centers

Visits to centers by USNPSS staff are followed by meetings with CBOs and the facilitators. The findings are discussed and future plans are made to improve upon the weak points.

### **Children's day (Bal mela)**

A key feature of the VLCs is the children's day or bal-mela (as it is called locally) held in each cluster of villages every year. During the year, a total of 11 educational fairs were held in 9 different locations (Table 6). The CBO in Shama (district Bageswar) and Gopeswar (district Chamoli) had organized two events each; whereas the remaining CBOs organized one event in their respective clusters of villages.

A majority of bal-melas were held in government school buildings and the teachers also participated in conducting various activities during the day. Children from all learning centers gathered at one central location and participated in various activities including games, painting, poster making, debates and essay writing, general knowledge competitions.

In Badhani and Gopeswar, qualified doctors talked with children and their mothers on nutrition and health issues. In Gopeswar, health check-up of children was also carried out. In Badhani, a baby show was held. Discussions were also held around issues of personal and community hygiene. In Mouni village, the local health worker, also a member of the women's group, talked about importance of timely vaccination for infants and children.

In Danya, Binta, Ganai-gangoli children had done a lot of work using clay. Such items/artefacts were displayed during the mela for parents and other invitees to see and appreciate children's creative works. Prepared by children in Danya, Rangoli (a local art-form) was much appreciated by the community members as it was seen as an attempt towards reviving a traditional art-form which is losing relevance in modern times.

Table 6. Children's fair (bal mela) in 2018-2019.

Serial number	Venue	Village	Development block	District	Date	Number of participants (approximate)
1	Panchayat ghar	Mouni	Dhauladevi	Almora	1.1.2019	200
2	CBO bhavan	Danya	Dhauladevi	Almora	2.1.2019	430
3	Govt. Inter College	Jakh	Karnprayag	Chamoli	5.1.2019	410
4	Govt. Primary School	Kimana	Ukhimath	Rudraprayag	7.1.2019	210
5	Private school Mandal	Siroli	Dasauli	Chamoli	8.1.2019	450
6	Primary School	Dogari kande	Dasauli	Chamoli	9.1.2019	500
7	Siv mandir angan	Binta	Dwarahat	Almora	11.1.2019	175
8	Primary School	Nayal	Gangolihat	Pithoragarh	20.1.2019	200
9	Govt. Junior high school	Sirmoli	Pati	Champawat	1.3.2019	190
10	Govt. High School	Namik	Munsiyari	Pithoragarh	18.4.2019	165
11	Primary School	Gogina	Kapkot	Bageswer	19.4.2019	175

In Maichun, Badhani and Ganai-gangoli story-telling was taken up as an activity for children during the event. Children were requested to either tell a story or to read it out from books. Competitions on poem recital and singing were also held.

In all locations, the facilitators had done a lot of work to make the fair a successful event. Community members had helped in organizing the event by offering free labour and providing other utilities from the villages. For example, large utensils to cook some refreshments for children who had come from neighboring villages were provided for free by communities. Young men and women also helped in making sitting arrangements for the guests.



Figure 12. Children's fair in village Mouni.



Figure 13. Children attend with their mothers. Namik village is located near the border of India.



Figure 14. Children take part in sporting activities during a bal-mela.



Figure 15. Children participate in a skit during a bal-mela.

## Grading of children

The same method as used last year was taken up to assess the progress of children this year. A total of 742 children attending the centres participated in this exercise of assessing their progress. The assessment was carried out by the facilitators and supervisors, twice a year. The main indicators around which progress was assessed are exhibited in table 7. Since last year we had reported that a majority of facilitators focused on assessing progress in language and mathematics, this year USNPSS had requested them to take a wider perspective covering others areas of learning in the centres. As a result, better performance was recorded in painting, general knowledge, cleanliness and socialization related issues.

Table 7. Grading of 742 children during 2018-2019.

S.N .	Village	No. of children	language	Maths	Arts	Environment	General knowledge	games	socialization	Cleanliness
1	Gwar	17	8	9	2	1	0	2	1	3
2	Koteswar	14	9	6	1	2	2	1	0	1
3	Khalla	19	18	9	2	2	3	0	0	3
4	Mandal	16	5	3	6	2	3	2	5	4
5	Bamiyala	16	9	3	10	2	4	1	0	1
6	Kandei	16	4	3	3	0	6	4	0	1
7	Bandwara	15	11	4	1	0	2	1	6	2
8	Kathoor	11	7	6	0	0	1	0	2	4
9	Pudiyani	20	14	7	2	1	1	0	1	6
10	Kukdai	11	3	4	1	1	3	1	0	0
11	Jakh	20	7	10	5	7	8	1	1	1
12	Chaatoli	20	7	8	2	1	2	2	1	1
13	Kafloidi	19	14	10	6	1	5	1	1	0
14	Chaundali	20	15	9	1	3	4	0	0	1
15	Bainoli	20	14	12	1	5	4	2	0	3
16	Dungari	20	11	8	1	5	6	3	0	8
17	Sundergaon	19	16	6	0	1	3	0	1	3
18	Badhani	20	9	7	0	1	7	0	0	2
19	Gwadi	20	19	15	2	0	4	3	5	14
20	Bhanyani	20	15	15	3	0	5	8	3	5
21	Nayal	20	20	15	3	0	1	1	5	2
22	Bhalugara	18	13	9	3	2	0	1	3	5
23	Talla Namik	18	8	11	1	0	5	0	2	6
24	Hinari	15	10	6	1	2	4	1	2	3
25	Gogina	12	8	7	1	2	3	0	2	3
26	Malkha Dugarcha	17	8	7	4	4	4	1	4	1
27	Banthok	16	2	9	2	4	3	1	1	2
28	Palyun	20	19	17	3	2	2	1	4	3
29	Maniagar	19	6	6	3	8	10	0	0	1
30	Maichun	20	11	18	0	7	2	0	2	0
31	Jankande	14	7	4	3	1	1	0	1	3
32	Dhunaghat	12	3	3	3	2	2	0	4	0
33	Kamlekh	18	7	7	3	1	0	1	5	6
34	Lakhanpur	11	2	3	0	3	1	0	1	1
35	Kulori	19	11	6	5	2	3	2	4	4
36	Ruwal	17	9	5	3	2	7	3	0	0
37	Gauli	20	18	20	1	2	10	0	0	3
38	Padhai	20	9	8	2	0	1	0	9	4
39	Basaan	17	8	9	6	1	3	0	0	0
40	Bhataura	16	8	9	4	3	1	3	4	3
41	Borkhola	17	5	8	3	0	2	0	0	0
42	Byolda	14	8	5	3	2	2	3	3	4
43	Usara	19	10	11	4	3	4	1	1	4
Total		742	425	357	110	88	144	51	84	121
Percentage			57.28	48.11	14.83	11.86	19.41	6.87	11.32	16.31

Special grading sheets developed at USNPSS were distributed in all villages running the centres. After filling up, the sheets were collected at USNPSS and computed, enabling analysis of data. The final results of grading are exhibited in table 7.

### Comments of parents regarding progress of their children

Parents were involved in assessment of progress of their children. The facilitators visited home of every child to record perceptions of their parents regarding their wards progress. The whole exercise was conducted in an informal atmosphere allowing parents to talk freely without any inhibitions. This opportunity not only helped the facilitators connect with families but also made them appreciate the fact that the CBOs take so much interest in the progress of their children, something that the formal schooling systems have never realized.

Table 8. Comments of parents regarding progress of their children.

S. No.	village	District	Comment	Respondent
1	Palyun	Almora	My daughter learnt to go out (and socialize). She understands language, mathematics and environment in a better way now.	Kamla Arya
2	Palyun	Almora	Children have learnt cleanliness and personal hygiene. They do not play in the mud but go straight to the centre in the evening.	Bina Arya
3	Namik	Bageswar	My daughter regularly attends the centre. Earlier she could not read Hindi. She could not recite multiplication tables either. Now she has learnt both.	Yamuna Singh
4	Namik	Bageswar	My daughter has changed a lot. Now, she takes care of her body and keep herself clean. She asks us to do the same. On her return from the centre sometimes she tells a story to all of us at home.	Chatura Singh
5	Malkha Dugarcha	Bageswar	When she started going to the centre, she began to take care of hygiene. She asks us to do the same. She attends the centre regularly.	Gobind Ram Arya
6	Khalla	Chamoli	Krish always disobeyed me. But now that he is attending the centre some improvement has occurred. Now, he does not watch television all the time. My thanks to the shikshika.	Bilochna Bisht
7	Usaara	Rudraprayag	Ayush keeps his body clean. He asks us to trim his nails, He brushes his teeth daily and takes bath too.	Sarita Singh
8	Bainoli	Chamoli	Neeraj watches television all the time and does not study. He is weak in studies.	Binita Chaudhary
9	Chaatoli	Chamoli	Generally, children want that parents spent time with them. We try to be with our children as much as possible. After attending the centre, Navya has improved a lot. She is knowledgeable and listens to what we say to her.	Sohan Singh
10	Kaflodi	Chamoli	After attending the centre my son Divyanshu has improved a lot. He talks properly. He is not abusive towards others and never uses bad words.	Pashupati Devli

## **2. Women's Development: Uttarakhand Mahila Parishad**

The women's development programme of USNPSS was started in the late 1980s-early 1990s, when the balwadi programme began in villages. Since then, the programme has evolved organically to cover about 450 villages where women's groups are active and take up issues of development to work upon them. In addition to achieving formal parity in social and economic sectors (equality in schooling, equal remuneration for labor specially in development schemes, equal representation in village committees/panchayats etc.) the programme addresses issues of achieving practical equality in all spheres of daily life. In real terms this objective would translate into creating opportunities for women and girls to organize and understand issues/problems of their own villages and of themselves and take initiatives to solve them. For example, in the beginning (i.e. in the 1990's), women's groups took up issues of sanitation, health and hygiene with a gender perspective in a serious mode and in the process more than 10,000 sanitation facilities were installed with a partial assistance from USNPSS. Although the quantitative measures were important in the programme, USNPSS emphasized the importance of the ways in which the facilities were installed, used and later maintained by communities. The programme was linked with many interrelated issues such as availability of water for cleaning the toilets, health awareness (water borne diseases, reproductive health etc.), personnel hygiene and cleanliness at home and in the village.

The issue of achieving practical equality at home and in the community was important because post-installation discussions in villages revealed that often women were not allowed to use the facility. More so, in situations of menstruation and pregnancy when the body was considered "impure". The challenge therefore was not only to break the social taboo but also to improve knowledge of human anatomy. This was difficult because a majority of elderly women were illiterate and even those who had some schooling had either relapsed or had no knowledge of body organs. USNPSS dealt with such issues by direct interactions with communities during village meetings (several years were devoted to these issues) and by developing locally relevant, simple educational materials. The point is that achieving equality by numbers is not enough unless development programmes integrate and addresses underlying issues of inequality by gender.

It is in this context that USNPSS gives a lot of importance to "peoples lived realities", their experiences and aspirations. Experiences vary from community to community depending on the location of the villages, the socio-economic composition and the types of occupations therein. Still, some patterns emerge. Structural variables such as caste, economic status, gender etc. influence issues of equality but even these variables are context specific. This is most vividly reflected in leadership qualities among women. Often, during our visits to villages, we have seen that old illiterate women would have more ideas regarding people-centred development issues and also, they will be willing to work towards that goal by taking all village residents together. Regardless of their educational backgrounds, caste and economic status some women would assert themselves, participate more in community activities and consequently enjoy more respect than others.

Further, the perception that the socially advantaged sections of community do avoid initiatives led by SC women is now diluting. The most vivid examples of this change in perceptions and values are the tailoring and knitting centres started by USNPSS in rural areas. For example, in Mani-agar village, girls and women of ages varying from 19-34 years attend the centre run by a female instructor who belongs to a socially disadvantaged household. Similarly, in Palyun village the caste barriers are breaking owing to the location of the tailoring centre in a hamlet fully inhabited by SC community. Earlier, the Brahmins from the hamlet above would never visit the community but now a few women have started coming down to learn tailoring. The way USNPSS approached the villages becomes critical at this juncture because the upper caste families would not have attended the centre had there not been discussions through several community meetings in Palyun. Issues raised during these meetings were also important because a conscious attempt was made to question the caste-based practices and values in the village. Reinforcement of those issues with work opportunities for women led to ideas of creating new pathways in village settings.

Another dimension of USNPSS work with women is the practice of knowledge production with regular sharing; giving it back to communities. Experiences, new ideas and practices that emerge from our work with women's groups are not concentrated in our office at Almora but rather shared with those who add to this body of knowledge by working in villages (CBOs) and with communities. This has been made possible by conceptualizing knowledge production as a two-way process and continuously informing our work with data emerging from experiences and innovations in communities. Principles of collective scholarship and action have guided this work in a direction that knowledge is circulated by learning and doing. This has also meant that USNPSS gives value to people's lived realities and constantly amends its work to suit the changes occurring in villages. Instead of imposing, often alien, ideas from outside, the programme has its roots in intimate knowledge (not distant knowledge or mediated knowledge) of the people of Uttarakhand.

Owing to this approach USNPSS has traversed a very different trajectory from the mainstream development programmes and from the other NGOs active in the region. For example, in contrast to the mainstream approach of organizing women into self-help groups (SHGs) or small-small groups within a village, all women are members of a single group called the whole village group (WVG). This way of organizing strengthens solidarity and motivates women to work as a whole. The collective cognizance, and not the isolated or a fragmented wisdom, is at work.

### **Meetings at USNPSS**

During the year, three meetings were held with members of women's groups at Almora. These meetings brought together women from Kumaon and Garhwal regions to discuss their work, share experiences and develop new ideas for future. Being participatory and totally interactive in nature these meetings provide a forum to rural women to learn from each other's work and experiences. In particular, women representing older groups offer valuable insights which become the guiding principles for relatively new groups. On their return from Almora, all participants hold meetings in their respective villages.



The programme for developing the concept of ecosystem resilience and turning it into practical activities in villages has now completed in 2019. Drawing on the conceptualization of village ecosystems as dynamic entities with interdependence between the land (forests, agricultural land and grasslands), water, animals and human population, the programme was designed to clarify our own understanding of the concept of resilience both in social and ecological fronts.

Though the term resilience is now identified and understood in multiple ways in social, economic and environmental fields, the Uttarakhand Himalayas attract immense research interest from environmentalists and climate change experts alike. This interest accrues from the fact that the region hosts several glaciers from where the major river systems of the country originate and feed millions of people downstream. However, such studies are by and large confined to the higher altitude areas and the data is collected for scientific research. While such studies inform our understanding of the severity and urgency of climate change issues and how ecosystem resilience could be improved in the mountains, we took a different approach to further develop the concept.

Moving further from our own understanding of physical and causal aspects of ecological resilience which we studied under two major research studies supported by agencies of the Government of India (ICAR 2011-2014 and ICSSR 2015-2017), this programme has focused on three issues. First, the villages where the practical work on development of resilience has been carried out represent the middle Himalayas. This is a highly populated zone and yet micro-climatic variations provide special zonal characteristics to villages. Hence, apart from experiencing agro-climatic variations in livelihood strategies, communities exhibit varied degrees of remoteness, access to facilities, mobility etc. Second, the idea of resilience is explored and conceptualized with a wider lens which enables integration of social and ecological aspects of community life. Third, integration of socio-economic and ecological features of village life has enabled us to shape our ideas of resilience in relation to changes occurring in communities. The most obvious feature of this change is reflected in inter-generational differences in aspirations and attitudes of the old and the young people in communities. This reality has provided us an interesting conceptual notch to visualize resilience as an ability of communities/individual to strive towards and come to a new stage of equilibrium in a village ecosystem. Hence, we do not look at resilience as an ability of communities and individuals to resist change or to absorb shocks to attain their original positions but conceptualize it as a move towards realizing a new, yet unknown, stage of equilibrium.

This conceptualization has not only helped in theorizing and clarifying our own ideas of resilience, but it has also shaped activities undertaken with communities in villages. Reaching this understanding of resilience was not easy and took a lot of time to clarify our own doubts. A brief overview of the process entailed in reaching the present level of understanding is presented below:

The village ecosystem model that USNPSS had developed earlier in the 1990s was taken as the point of entry to advance our understanding of resilience. The ecosystem model demonstrates interlinkages between various elements of a village and emphasizes the fact that these elements depend on each other in such a way that any harm done to an element affects the whole system-the village ecosystem-in which people's lives are embedded. A healthy ecosystem supports lives of human beings as well as other fauna and flora in a manner that the system continues to work in balance. This balance between various components of village ecosystem (forests and cultivated land, water, cattle, human beings) is however, very delicate and could be disturbed easily; both by indigenous and external factors. The indigenous factors include excessive deforestation, population growth beyond the capacity of the ecosystem to support, over consumption, unsustainable use of natural resources etc. The exogenous factors that influence the ecosystem may include increasing mobility of people, penetration of markets, climate change; increasing levels of awareness and exposure to the outside world hence change in aspirations of youth who wish to migrate to the cities for a better life.

Our earlier understanding of resilience was simply that a healthy ecosystem is more resilient and a degraded ecosystem will be less resilient. A good, healthy forest would provide fuelwood, fodder and water to the residents to sustain their lives through agriculture. In a village, fodder was to turn into manure and put into the farms to improve soil quality. This was also the way traditional farming was done in the mountains. While this understanding offered a useful starting point, it did not speak directly to the issue of who was providing labour to do all the work in the farms and how resilience should be understood, if labour patterns were gendered. In particular, we began to see how in an agrarian economy the social constructs of ecosystem resilience were highly skewed towards women's labour. This realization led to the emergence of a new construct of our understanding of resilience, as it was to be an integration of the social and the ecological features in villages. The idea of viewing social resilience as distinct from ecological resilience was not working as it was apparent that these two strands worked together and not as separate entities.

The other issue was the distinction between the way the old and the young perceived the village ecosystems. After much reflection, we now argue that the perceptions regarding the nature and texture of resilience were different for the old and the young. While the older people, especially women, viewed resilience in terms of resistance to change or a system's ability to come back to its original position, the younger generation had a totally different viewpoint. Educated, exposed to outside markets and having access to mobile phones, the young people are hardly satisfied with the ideas of a system absorbing shock and going back to its original position. The young men and women are ready to take risks and chart their own pathways to lead lives that their ancestors had not even dreamt of. The large number of migrations of the young from the rural areas to the cities and towns is an example of how this difference in perceptions has impacted rural life.

Other than migration, agricultural work- a traditional livelihood strategy could be cited as an example. The elderly women, still willing to work in the agricultural fields, visualize their lives in the village, as part of a community. Resilience in agriculture is an important issue that plays out both at emotional and economic levels for the older generation of women who also cling to the idea of a continuation of traditional methods of farming. Implicit in this view is to look into resilience as crops/seeds withstanding change (climate, new seed variety etc.) and resuming the same position (for example same levels of production) when the shock is withdrawn. Several agricultural programmes of the government and other large funding organizations bear testimony to this view of resilience when the farmers (here women) sow the new seeds but in a year or two returned to traditional varieties and methods. The point emphasized by women is simply that the traditional varieties are more resilient (ecological resilience).

A deeper look into the issue will however raise the question of why women have not internalized the value of the new improved varieties? Is it resistance to change (at social levels) or the new varieties just do not work (at ecological levels)? Could it be the mindset that the agricultural system would survive or be economical to her only when she resumes the time-tested methods of growing crops? What are the time-tested ways of farming in the village? The simple answer that the farmer will give is that this is how her ancestors did work in the fields. Came a storm or heavy rains or drought or an earthquake, these varieties had survived and sustained families for generations. More resilient a variety, more is the likelihood of it having survived shocks of different kinds and stand tall over time.

For many readers, this view of a woman farmer will offer a superficial explanation of resilience primarily because the mountain agriculture is now declining and the village residents are opting for non-farm activities. While this trend is now clearly visible, a closer look into the issue will disclose that whatever agriculture activity is left in communities it is either carried out by older generations of women or young women who have no choice but to live in the village. Given an opportunity, these young daughters-in-law would prefer to live in the cities and towns whilst others have already moved out.

What do these trends tell us in terms of developing and conceptualizing the ideas of resilience? Two scenarios mentioned above clearly reflect that the theory and practice of understanding resilience in village ecosystems are under transformation. Whilst, the earlier conceptualization spoke to the theme of building up abilities in communities to resist change by trying to come back to their original position, it is obvious that people cannot and do not want to go back to their original status. Ecosystems change over time as various endogenous and exogenous factors change. People's aspiration and attitudes towards life also change with time. So, a more realistic view of resilience would be to move towards a new state of equilibrium. What that state will be, we do not know, because it is for the first time in the history of Uttarakhand that such a tremendous change is being experienced. Roads are reaching the villages, communication systems with availability of television and mobile phone services have spread. Formal educational systems are improving and there is more mobility than ever before. What we know is

that by making people understand the current changes in physical, socio-cultural and emotional aspects of individuals and communities, USNPSS can help reduce confusions and doubts in society and strengthen confidence in people to take risks and move forward.



Figure 16 and 17. Meeting of women's groups at USNPSS Almora.



Table 9. Training/workshops for members of women's groups at USNPSS Almora.

Serial number	Duration	Partner CBOs represented	Cluster	District	Number of participants		
					Female	Male	Total
1	6-7.8.2018	4	4	2	23	00	23
2	21-22.12.2018	5	5	4	41	1	42
3	24-25.12.2018	4	5	4	29	1	30
Total		-	-	-	93	2	95

## Meetings with women's groups in villages

The USNPSS staff made visits to villages to attend meetings of women's groups and adolescent girls. These meetings provide an opportunity to understand issues that the women's groups are grappling with in their villages. In addition, the USNPSS staff provides information, offers hands on assistance and guidance to women and girls. Table 7 exhibits details of visits to villages.

Table 10. Meetings of women's groups in villages.

Serial number	Cluster	Village	Date of visit	Participants		
				Women (> 21 years)	Adolescent girls (11-20 years)	Others
1	Pati	Dhunaghat	5.4.2018	18	10	0
2		Lakhanpur	7.4.2018	14	4	0
3	Galla	Pata	29.4.2018	20	3	0
4	Danya	Aati Munoli	1.5.2018	18	0	6
5	Maichun	Banthok	22.5.2018	22	5	0
6		Moni	22.5.2018	19	3	0
7	Binta	Surna	6.6.2018	15	0	0
8	Badhani	Chaundali	1.7.2018	20	15	0
9		Chaatoli	1.7.2018	11	0	0
10	Ukhimath	Byolda	3.7.2018	15	0	0
11		Kimana	4.7.2018	27	0	0
12	Gopeswar	Bandwara	5.7.2018	10	3	0
13	Danya	Gauli	25.7.2018	18	10	0
14	Binta	Gorgaon	26.7.2018	13	0	0
15	Galla	Pata	16.8.2018	21	4	0
16	Pati	Malla Kamlekh	18.8.2018	18	4	0
17	Maichun	Sela	24.8.2018	14	0	0
18		Lamudiyar	28.8.2018	11	0	0
19	Badhani	Bainoli	7.9.2018	10	0	0
20	Maichun	Banthok	14.11.2018	12	4	0
21	Shama	Hinari	16.11.2018	8	0	0
22		Namik	17.11.2018	15	0	0
23	Maichun	Moni	18.12.2018	18	3	0
24	Danya	Munoli	27.12.2018	18	0	2
25		Aati	28.12.2018	20	0	0
26	Ukhimath	Dungar	6.1.2019	15	0	0
27		Byolda	7.1.2019	11	0	0
28	Maichun	Palyun	23.1.2019	12	13	0
29		Banthok	24.1.2019	19	6	0
30	Ukhimath	Huddu	29.1.2019	14	0	0
31		Usara	29.1.2019	10	0	0
32	Maichun	Palyun	5.2.2019	22	0	0
33		Chanoli	12.2.2019	11	0	0
34		Lamudiyar	12.2.2019	17	0	0
35		Moni	13.2.2019	16	0	0
36		Sela	13.2.2019	8	0	0
37		Palyun	14.2.2019	16	0	0
38		Maniagar	18.2.2019	12	0	0
39		Maichun	19.2.2019	21	0	0
40	Gopeswar	Gwar	23.2.2019	24	8	0

The following examples show how women are solving their problems in villages:

### **Community hygiene and opening a centre at Palyun village**

Palyun village is totally inhabited by socially disadvantaged sections (SC) of society. Literacy rates are low and despite much poverty in the village, alcoholism among men is rampant. Gender no bar, malnourished adults smoke bidis and suffer from tuberculosis. Both personal and community hygiene has been an issue for long.

The women's group of Palyun was created when USNPSS staff visited the village and opened a village learning centre for children to attend in the evenings. This year, young women and girls from Palyun had asked USNPSS for a facility to learn tailoring. A meeting in the village was held in December 2018. A young woman who had finished her ITI was selected to run the centre. The problem was to find an appropriate place for the trainees to sit and learn. Being a poor village, people had small houses and had no empty rooms.

The next meeting was held on 23 January 2019. Some of the community members suggested that the centre could function from the panchayat ghar. However, the others disagreed by saying that the place was not big enough and also panchayat meetings are held there every month. The USNPSS staff said that they have seen the place and half of it is full of wooden planks. The next potential area was the *baraat ghar* (community place). After the meeting, all participants visited the *baraat ghar*. It appeared a dirty site. The rooms were full of garbage and the whole place had a stench. The USNPSS staff asked the community members how could a centre function from such a place. Some people said that nothing could be done and USNPSS should leave the idea. However, The USNPSS staff said that the rooms could be cleaned.

The next meeting was held just outside the *baraat ghar*. After the meeting, all participants started cleaning the rooms. Garbage was removed and burnt. Still, a lot remained. The young women and men said that they would clean it on Sunday and so they did. Garbage was collected and burnt and rooms were cleaned by using 2-3 brooms. Some people fetched water in buckets and the rooms were washed. A drainage line was constructed for rain water to pass through the building.

In the next meeting, a decision was taken to clean the house every 2-3 months on a rotational basis. It was also decided that the women's group would make flower beds and plant saplings outside the building. In addition, stones-pebbles were removed and shrubs were cut by the community to make the surroundings clean and attractive. The centre was opened on 1<sup>st</sup> February 2019 and on an average 25 women/girls have been attending.

### **Women's group of Mouni village**

In Mouni village, district Almora, the village learning centre runs in a *panchayat ghar* (community centre). During winter, a large tree was preventing the sun rays to come through, causing discomfort to children in the evenings. The land is owned by an old woman. Her children have migrated out and she lives alone in the village. During meeting, the community members said that she would not allow pruning of the tree. The USNPSS staff said that the issue should be brought into her notice. During the next visit, the USNPSS staff made a visit to her house to have informal discussions with her. After some discussions, the woman agreed. Consequently, the tree was pruned and children could sit in the sun during winter evenings.

Despite having two water springs, the residents of Mouni village face water scarcity. The problem aggravated last year when debris from a nearby ravine damaged both water sources. One of those springs which was relatively better was cleaned up by members of women's groups. The women cleaned it under *shramdaan* (free labour) for three days. During the meeting in the village, women said that problems regarding water have been increasing. Despite the fact that they have been collecting roof water, vegetable production has gone down. Some elderly women raised the issue of getting some help from USNPSS. After much discussions, USNPSS agreed to provide financial support to build a wall to prevent debris coming to the spring. Further, the spring was cleaned. The whole community contributed by providing free labour for three days and collected stones to build the wall. Now, that both the water sources became clean and functional, locks have been put in both springs. One of the springs is opened in the morning and the other in the evening. All households receive equal amount of water which has reduced quarrel in the community.

### **Women's Congregations**

This year, a total of 11 congregations of women were held in 10 village clusters. Each CBO had organized one event, except for Shama where owing to long distances between villages, two congregations were held. A total of 2370 participants, majority women and girls, attended. Table exhibits the range of issues discussed during the congregations of women.



Figure 18. Women coming to participate in congregations.



Figure 19. The USNPSS staff participated in all congregations.

Table 11. Women's Congregations during 2018-2019.

Serial number	Location	Village	District	Date	Number of Participants
1	Ukhimath	Usaara	Rudraprayag	27.1.2019	400
2	Binta	Bhataura	Almora	3.2.2019	75
3	Badhani	Kukdai	Chamoli	25.2.2019	350
4	Gopeswar	Gangolgaon	Chamoli	24.1.2019	300
5	Maichun	Saila	Almora	20.2.2019	150
6	Danya	Chalmorigara	Almora	8.3.2019	200
7	Ganai gangoli	Rungadi	Pithoragarh	17.2.2019	150
8	Pati	Toli-Pati	Champawat	2.3.2019	160
9	Galla	Galla	Nainital	11.3.2019	350
10	Shama	Namik	Bageswar	18.4.2019	200
11	Shama	Gogina	Bageswar	19.4.2019	170
Total					2370



Table 12. Issues discussed during women's congregations.

Serial number	Location	Participating villages	Issues discussed
1	Ukhimath	18	Coping with disasters, NMHS programme, income generation through fruit processing, tailoring, knitting at Huddu and Kimana, training for socially disadvantaged women in Karnadhar (SC community) on making ringaal products, Home stay at Kimana, vegetable production for home consumption and sale locally, crop depredation by wild animals, declining interest in farming, solidarity in women's groups
2	Binta	6	Village learning centre, computer centre, crop depredation by wild animals, declining interest in farming, lessons learnt from meetings in Almora, alcoholism
3	Badhani	14	NMHS programme, village learning centres, computer centre, crop depredation by wild animals, alcoholism, lessons learnt from meetings in Almora declining interest in farming and tailoring centre at Diyarkot
4	Gopeswar	15	NMHS programme in Gwar, village learning centres, computer centres, crop depredation by wild animals, declining interest in farming, sense of solidarity in Bamiyala village, lessons learnt from meetings in Almora
5	Maichun	10	Tailoring, knitting centres and income generation by socially disadvantaged (SC) women and girls in Mani-agar, new tailoring centre in Palyun (SC) village learning centres, computer centre, alcoholism, crop depredation by wild animals, declining interest in farming, lessons learnt from meetings in Almora, panchayats-jila panchayat sadasya from Maichun village shared her experiences
6	Danya	10	Review of development schemes in the region and an assessment of benefits received by women, NMHS-restaurant run by women, water conservation, vegetable production, village learning centre, computer centre, crop depredation by wild animals, declining interest in farming, vocational training for girls
7	Ganai Gangoli	8	Village learning centre, computer centre, inspirations from tailoring by a woman in Bhanyani (ST) village, alcoholism among men, crop depredation by wild animals, declining interest of girls in farming, panchayats
8	Pati	10	Women's rights, vocational training for girls, NMHS programme, crop depredation by wild animals, declining interest in farming, women's education and health, village learning centres, vegetable production, fisheries for home consumption and sale locally, fruit tree plantation, solidarity, group strengthening, skill development, panchayats, alcoholism
9	Galla	8	NMHS programme, water conservation-plastic tanks installation and immediate improvements in vegetable and fruit production, forming new groups in villages, tailoring and knitting centre, computer centre, crop depredation by wild animals, development schemes in the region, vocational training for girls
10	Shama	7	Namik- Alcoholism among men, ringaal availability and artefacts made locally, vocational training for girls, crop depredation by wild animals, women's education and health, women's rights, village learning centres, community solidarity, group strengthening Gogina-Alcoholism among men, ringaal availability and artefacts made locally, vocational training for girls, crop depredation by wild animals, women's education and health, women's rights, village learning centres
Total		88	



Figure 20. Selfie time during a congregation!



Figure 21. Rural women prepare for months and perform during congregations.



Figure 22. A young woman records performance of her friends in Badhani.



Figure 23. Women at Badhani share experiences gained during the NMHS programme.

### **Medical support**

This year financial support for treatment was offered to 13 patients, especially poor women from different villages of Kumaon and Garhwal. This provision has been made by the Dayal Trust, New Delhi to improve access of poor rural women (and men) to health care services. Evidence shows that low income/poverty plays a vital role in women's access to health care facilities but also that rural women feel very hesitant in talking to a doctor. UMP tries to bridge this gap by offering support to poor women both financially and by accompanying them to the hospitals or diagnostic centres. Being a district headquarter Almora has relatively better facilities than those available in villages.

Preventive health care education is an important part of discussion in meetings with women's groups. Each year, members of women's groups also take up the responsibility of cleaning the village paths, cutting bushes in and around the village and appropriate disposal of garbage. In villages where new sanitation facilities are being installed under various government schemes, women discuss issues of cleanliness of facility in village meetings. The issue of menstruation and safe pregnancy is also addressed during discussions on reproductive health of adolescent girls and adult women.

Table 13. Support for treatment to poor patients from villages.

S. No	Patient	age	Village	District	Doctor/hospital	Ailment	Date	Amount in rupees
1	Mohan. Latwal	36	Chausali	Almora	Dr. A. P. Pande Almora	Stomach ache	17.5.2018	3285
2	Mohan. Latwal	36	Chausali	Almora	Dr. A. P. Pande	Stomach ache	7.6.2018	1724
3	Mohan. Latwal	36	Chausali	Almora	Dr. A. P. Pande	Stomach ache	13.6.2018	1846
4	Bhaves Chandra	1.5	Danya	Almora	Anjali Hospital	Head injury	10.8.2018	425
5	Deepa Papani	29	Dhamera	Almora	Dr. A. P. Pande Almora	Typhoid, fever	13.8.2018	2396
6	Radhika Devi	70	Kasoon	Almora	Dr. A. P. Pande Almora	Asthma	30.8.2018	1584
7	Diwan Singh Matiyani	42	Kasoon	Almora	Dist. Hospital Almora	Kidney stones	17.11.2018	1253
8	Daya Jarout	19	Supai	Almora	The Leprosy Mission Hosp.	Skin problems	23.11.2018	2000
9	Kamlesh Negi	27	Badhani	Chamoli	Dehradun and Ahmedabad	Dialysis	28.11.2018	15,000
10	Diwan Singh Matiyani	42	Kasoon	Almora	Krishna Hospital and Research Centre Almora	Kidney stones	31.12.2018	2786
11	Meena Devi	48	Pata	Nainital	Anurjun Maternity and Laparoscopy Surgical Centre	Cancer	18.3.2019	4500
12	Kunti Kimothi	80	Badhani	Chamoli	Karnaprayag, Dehradun	Paralysis	18.3.2019	10,000
13	Mohan Latwal	36	Chausali	Almora	Dr. A. P. Pande Almora	Stomach ache	27.3.2019	1960
Total								48,759

### Grading of women

Performance of 759 women in 38 villages was traced around 9 selected indicators using the same methods as earlier. Individual performance on a set of nine indicators was assessed and recorded by supervisors for computation at USNPSS. Each of the nine indicators was graded on a scale of A to E. A denotes the best and E indicates the least performance.

The first phase of grading was carried out in October 2018 and the next phase in March 2019. The final results are shown in Table 15. With a score of 3.2 in the first phase and 3.8 in the second phase, the final results show an improvement in performance across all indicators.

Table 14. Grading of 759 women in 38 villages during 2018-2019.

Location	Gopeswar					Badhani				Ukhimath					Binta				
Villages	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Number of women	22	21	21	21	21	21	21	21	20	21	21	21	21	21	21	21	21	14	21
Name of the village	Khalla	Gwar	Kaneei	Koteswar	Bamiyala	Pudiyani	Choundali	Jakh	Sundergao n	Udaipur	Semla	Kanda	Bangrali	Sansari	Devaldhar	Borkhola	Gorgaon	Dhamkot	Parkot
Monthly meeting	4.8	4.9	4.8	4.7	4.9	3.7	4.9	3.5	3.2	4.5	4.9	4.1	4.0	4.9	4.6	4.3	4.2	4.1	5.0
Articulation of issues	4.7	4.6	4.4	4.6	4.3	3.0	3.6	2.7	2.2	4.4	4.1	4.0	4.0	3.5	4.3	3.8	4.5	4.6	4.1
Participation in WVG	3.8	4.0	4.2	4.1	3.6	2.3	2.9	2.1	1.3	3.1	3.4	3.9	3.9	2.6	3.7	3.5	4.3	3.6	3.6
Health	4.3	4.2	4.1	4.2	4.2	2.7	3.0	2.6	2.0	3.2	3.1	2.7	2.5	2.8	3.2	4.0	3.1	2.9	3.1
Nutrition	3.4	3.3	4.6	3.3	3.5	3.4	3.0	2.6	1.8	3.7	3.5	3.1	3.1	3.3	4.0	4.0	3.9	3.9	3.5
Equality Gender, among women, children	3.6	4.1	4.0	4.0	3.8	3.2	3.0	2.4	1.8	3.1	3.5	3.4	3.3	2.8	4.1	3.6	4.0	3.7	4.0
	4.0	4.1	4.1	4.1	4.1	3.9	4.0	3.9	2.2	4.1	4.0	4.0	4.0	4.0	4.0	3.6	4.1	3.8	3.8
	3.9	4.2	4.5	4.1	4.1	3.9	3.5	2.9	2.0	4.0	3.9	3.3	3.4	3.6	4.0	3.9	4.0	3.8	3.9
Panchayats	3.1	3.8	2.9	3.7	3.1	2.9	2.3	1.8	1.3	2.5	2.6	1.6	3.5	2.2	4.0	3.4	3.9	3.7	3.3
Reading (VLC books)	2.6	3.1	3.1	3.1	2.9	2.8	1.9	2.1	1.1	1.4	1.0	2.1	1.0	1.0	1.0	3.1	3.0	1.0	1.0
Understanding of govt. schemes	3.1	3.5	3.5	3.9	3.0	3.4	2.5	2.9	1.6	3.1	3.1	2.7	3.1	3.0	3.6	3.7	3.3	3.1	3.0
First grading average	3.7	4.0	4.0	4.0	3.8	3.2	3.1	2.7	1.9	3.4	3.4	3.2	3.2	3.1	3.7	3.7	3.8	3.5	3.5
Monthly meeting	1.8	5.0	5.0	4.8	5.0	4.3	5.0	4.0	4.2	4.6	4.9	5.0	5.0	5.0	5.0	5.0	5.0	4.6	5.0
Articulation of issues	4.8	5.0	4.7	4.7	4.7	3.7	4.4	3.5	3.2	4.7	4.6	5.0	5.0	4.5	4.7	4.4	4.9	4.6	4.4
Participation in WVG activities	4.0	4.3	4.2	4.1	3.9	3.1	3.7	2.8	2.3	3.5	3.9	4.9	4.8	3.8	3.9	4.2	4.4	3.7	3.7
Health	4.3	4.3	4.3	4.3	4.5	3.6	3.8	3.2	3.0	3.8	4.4	3.8	3.4	4.3	3.9	4.6	3.7	3.8	3.8
Nutrition	3.5	3.4	4.6	3.4	3.8	4.1	3.6	3.4	2.8	4.6	4.8	4.0	4.1	4.5	4.3	4.7	4.1	4.0	3.6
Equality Gender, among women, children	3.8	4.1	4.0	3.9	4.0	4.0	3.9	3.3	2.8	3.9	4.7	4.5	4.2	4.2	4.9	4.4	4.9	4.5	4.5
	4.0	4.1	4.1	4.1	4.1	3.9	4.0	4.0	3.2	4.1	4.8	4.9	4.9	4.8	4.1	4.3	4.1	3.9	3.8
	4.1	4.3	4.5	4.3	4.6	4.4	4.2	3.6	3.0	4.6	5.0	4.4	4.4	4.6	4.1	4.6	4.0	3.9	4.0
Panchayats	3.1	3.8	2.9	3.7	3.1	3.2	3.0	2.6	2.3	2.8	3.3	3.0	4.6	3.9	4.0	4.1	3.9	3.9	3.3
Reading (VLC books)	2.6	3.1	3.1	3.1	2.9	3.3	2.4	2.5	2.1	1.4	1.0	2.5	1.0	1.0	1.0	3.7	3.0	1.0	1.0
Understanding of govt. schemes	3.1	3.5	3.5	4.0	3.0	3.8	3.4	3.1	2.9	3.1	3.5	3.5	4.1	4.3	3.9	4.2	3.4	3.2	3.0
Second grading average	3.5	4.1	4.1	4.0	4.0	3.8	3.8	3.3	2.9	3.7	4.1	4.1	4.1	4.1	4.0	4.4	4.1	3.7	3.6

Table continues.

Location	Danya					Shama			Ganai gangoli			Maichun					Pati			
Village number	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	Total
Number of women	18	21	21	21	22	17	21	21	21	21	21	21	18	17	14	21	16	16	19	759
Name of the village	Aati	Danya	Munoli	Gauli	Basaan	Gogina	Talla namik	Malkha dugarcha	Tupoli	Gwari	Nayal	Lamudiyar	Banthok	Mouni	Maichun	Palyun	Dhunaghat	Malla	Lakhanpur	
Monthly meeting	4.8	4.3	4.6	4.1	4.1	3.6	3.0	4.0	3.3	2.3	3.7	3.9	3.4	3.3	3.4	4.8	2.8	4.2	3.6	4.1
Articulation of issues	4.3	4.6	3.9	3.5	4.2	2.9	3.0	4.1	3.5	2.7	3.6	3.3	3.1	3.0	3.3	2.8	2.9	3.6	4.7	3.7
Participation in WVG	3.6	3.1	2.7	2.8	4.0	2.8	2.1	2.5	2.4	2.3	2.7	3.0	2.6	2.7	2.9	2.8	3.2	2.6	3.0	3.1
Health	4.0	2.3	3.5	2.6	3.4	2.5	2.3	3.7	2.3	2.5	2.8	2.9	3.0	2.6	3.0	3.0	2.8	3.9	2.5	3.1
Nutrition	3.9	3.2	4.1	3.4	3.5	2.7	2.5	3.8	3.1	3.4	3.2	2.9	3.0	2.2	3.1	2.8	3.0	4.4	3.1	3.3
Equality by gender	4.2	3.0	3.8	3.0	3.6	2.4	2.4	3.8	3.0	2.8	3.0	3.1	3.1	2.6	3.1	2.7	3.0	1.5	3.1	3.2
among women	3.7	4.0	3.6	4.0	4.0	2.9	3.0	3.8	3.4	3.5	3.7	3.9	4.0	2.8	4.0	3.5	3.2	3.6	3.8	3.7
In childre	4.0	3.4	3.7	3.7	3.9	2.4	2.6	3.7	3.3	3.6	3.4	3.4	3.4	2.8	3.3	3.1	3.1	1.3	4.2	3.5
Panchayats	3.1	3.9	3.0	2.8	4.0	1.4	1.8	2.7	2.1	2.5	2.7	1.7	2.2	2.1	2.1	2.0	2.9	3.4	2.8	2.8
Reading (VLC books)	2.4	2.0	2.6	2.3	2.1	1.1	1.2	2.1	1.1	1.5	1.7	1.5	1.9	1.8	2.0	1.5	2.8	3.6	1.6	2.0
Understanding of govt. scheme	3.5	2.1	3.1	2.5	2.2	1.7	2.4	3.1	2.9	3.5	3.2	2.0	2.3	1.6	2.3	1.7	2.9	3.6	3.4	2.9
First gradin averag	3.8	3.3	3.5	3.2	3.6	2.4	2.4	3.4	2.8	2.8	3.1	2.9	2.9	2.5	2.9	2.8	3.0	3.3	3.3	3.2
Monthl meetin	4.9	4.9	4.8	4.8	4.7	4.4	3.6	4.5	4.4	3.3	4.7	4.6	4.2	3.9	4.4	4.7	3.6	4.1	3.9	4.5
Articulation of issues	4.9	5.0	4.6	4.7	4.7	3.8	3.5	4.2	4.2	3.7	4.5	4.2	4.0	3.7	4.2	4.1	3.6	3.4	4.6	4.3
Participation in WVG activities	4.3	4.8	3.6	4.1	4.6	3.5	2.6	2.7	3.5	2.7	4.0	3.8	3.5	3.5	3.9	3.7	3.6	3.6	3.0	3.7
Health	4.5	3.9	4.6	3.7	4.4	3.2	2.7	3.9	3.3	3.3	3.7	3.8	3.9	3.4	3.9	4.1	3.1	3.3	2.9	3.8
Nutrition	4.3	4.9	4.9	4.5	4.6	3.6	3.0	4.0	4.2	4.3	4.4	3.8	3.8	3.1	4.1	4.0	00	3.8	3.4	4.0

Equalit By gender	4.7	5.0	4.6	4.6	4.6	3.2	3.0	3.9	3.9	3.7	3.9	3.9	4.0	3.4	4.0	3.8	3.4	1.6	3.2	4.0
among women	3.9	4.0	4.1	4.2	4.0	3.4	3.5	3.8	4.1	4.1	3.9	4.1	4.1	3.5	4.1	4.1	3.5	3.6	3.9	4.0
In children	4.2	4.7	4.4	4.9	4.8	3.4	3.2	3.9	4.3	4.1	4.1	4.2	4.2	3.4	4.1	4.1	3.7	1.3	4.6	4.1
Panchay ats	3.8	3.9	3.9	3.2	4.0	2.4	2.4	2.8	3.0	3.3	3.6	2.5	3.2	3.1	3.1	3.3	3.0	3.8	2.8	3.3
Reading (VLC books)	2.4	2.3	3.3	2.6	2.5	1.5	1.6	2.4	1.1	1.8	2.0	2.4	2.9	2.8	3.0	2.1	2.9	2.6	1.7	2.3
Understa nding of govt. scheme	4.1	2.7	3.9	3.1	3.9	2.3	2.7	3.2	3.4	3.8	3.4	3.0	3.3	2.5	3.1	2.4	3.4	4.6	3.5	3.4
<b>Second grading average</b>	4.2	4.2	4.3	4.0	4.2	3.1	2.9	3.6	3.6	3.5	3.8	3.7	3.7	3.3	3.8	3.7	3.4	3.2	3.4	3.8

Table 15. Final results of grading of women.

Serial number	Indicators	First grading		Second grading	
	Number of villages -38	number of women-759			
		Average	Grade	Average	Grade
1	Monthly meetings	4.08	A	4.48	A
2	Articulation of issues	3.74	B	4.34	A
3	Participation in WVG activities	3.09	B	3.74	B
4	Health	3.09	B	3.79	B
5	Nutrition	3.31	B	3.99	B
6	Equality				
6 (i)	By gender	3.22	B	3.96	B
6 (ii)	Among women	3.73	B	4.02	A
6 (iii)	Regarding their children	3.50	B	4.11	A
7	Participation in panchayat	2.75	C	3.29	B
8	Reading books from VLC	1.97	D	2.25	C
9	Understanding of government schemes	2.87	C	3.39	B
Total		3.2	B	3.8	B

### **3. Kishori Karyakrama (Adolescent girls programme)**

Meetings with adolescent girls were held each month in villages. These meetings aim at enabling girls to learn to think and speak on issues of development and about themselves. In addition, adolescent girls' groups take up responsibilities of organizing cleanliness campaigns in villages. Issues of gender and caste-based inequalities are discussed during meetings. Further, joint meetings of adult women and their daughters are organized to create an interface between women of different generations. Such meetings have proven very useful in solving problems of girls at home and in communities. For example, discrimination of girls in provisioning of food/milk and unequal opportunities in access to education and health are taken up. In many cases older women do realize that it is an issue of gender-based inequalities and need to be addressed.

Details of income generation opportunities for girls and women are as follows:

#### **Non-farm activities: skill development for women and girls (tailoring, knitting)**

More recently, skill development for girls and women have emerged as one of the most needed activity in view of generating income at home and in the village/region itself. A total of six centres were run during the year. Eight sewing machines and 12 knitting machines have been given interested women and girls to undertake this work from their homes.

Four centres were visited by Ms. Taniya Kaur, Ph.D. in Biology from New York University, USA. For this project, she brought her training as a biological scientist to fill the role of a social scientist with keen observational and analytical skills and wrote the following report during her 15 days stay in Almora. She writes:

The following is a personal observational account of my visit to four sewing and knitting learning centers run by Uttarakhand Seva Nidhi in the Kumaon region. My thanks to Lalit and Anuradha Pande for taking the time to discuss the various aspects of the project to expand my understanding of it, and for graciously hosting me. I would also like to thank Rama Joshi, Dharam Singh Latwal, and Kailash Papanai for their tremendous support and sharing their local expertise, without which my visit to the centers would not have been half as insightful.

The sewing and knitting learning centers were started to develop non-farming related skills for income generation that are locally useful. Furthermore, each of the centers were opened after extensive discussions with local women who felt the need for such learning centers, particularly for the younger generation. The hope is that these learning centers are new models of development, wherein these hill women learn an economically viable skill and organically organize themselves, either singly or in groups, to go into business with its inherent responsibility and risks, which they would have to bear. As entrepreneurs, the profit from their venture would be their own without any middlemen.



The four centers I visited were: Maniagar (Almora district), Binta (Almora district), Pati (Champawat district), and Paliyu (Almora district). All the centers were distinct in the duration they have been active (Maniagar is the oldest, while Paliyu the newest), proximity to an urban center, economic prosperity of the local community, and the social attitudes prevalent towards financially independent women. The vast majority of these learning center attendees are educated women, with the level of education varying from middle-school graduates to post-graduate degree holders. The young demographic (teenagers and women in their 20's) was particularly well represented, and understandably so, given their relatively lighter load of daily domestic and agricultural chores. The centers run 6 days a week. Attendees start learning basic sewing and knitting skills, irrespective of their prior experience, in a structured manner, and follow an inhouse developed syllabus and associated manual. The manual has been written by Rama Joshi after extensive interactions with the center instructors and attendees to ensure that the language used is simple and easy to follow for all. Each attendee pays Rs. 50 per month (except for the Binta center, where the fee is Rs. 100), which goes towards the rent for the center premises. Seva Nidhi provides for the instructors' salaries and other infrastructure, while the attendees bring their own cloth and wool for crafting. New batches start every six months.

At each of the centers on my visit, I asked the attendees a set of questions to better understand their motivations and experiences at the learning center. In addition, the attendees were asked to fill out a questionnaire, prepared by Anuradha Pande, Rama Joshi, and myself. I was curious to know how much modern amenities like mobile internet and television inform the attendees fashion sense. Most of the younger women I spoke with indicated the internet and television as important sources to follow fashion trends. However, the older generation relied on people watching and interacting with their peer group as crucial fashion influencers. Next, I wanted to know how learning a new skill impacted their daily domestic routines and traditional duties. All the women I spoke with were motivated and happy to attend the learning centers; some even returned for refresher classes. The women said they felt a sense of purpose when they attend classes, and daily chores were quickly and efficiently managed. However, they tended to miss classes if it was harvest season or exam-time. The learning centers seemed to me a constructive space for these women to network with other like-minded individuals, free from the trappings of the mundane.

In order to know the views of the attendees for transforming their learnt sewing and knitting skill into an income-generating activity, we formulated the following survey questions:

- § How will you earn money from the skill(s) you have learnt?
- § Where would you sell your products?
- § How would you run your own business?
- § How much income would you expect to earn from your business?
- § What is your current income from sewing and/or knitting?
- § Would you prefer to run your business by yourself or in a group?

§ If you did have a shop, what would you name it?

In my conversation with the attendees a variety of opinions were shared as to how they would earn money from their sewing and knitting. Many were keen to or already involved in tailoring and knitting at home on orders placed by customers (individuals or shops), wherein the raw material (wool or cloth) was provided by the latter. Others were inclined to open their own tailoring shops (a commercial space dedicated to their business) in their villages, or in nearby larger village or town markets. Some women wished to open their own training schools, while still others saw tailoring and knitting for their family needs as saving household expense and an indirect method of income generation. All the women unanimously agreed that they would consider investing in learning an additional skill (like machine embroidery, crochet, a masterclass on latest clothing designs, new knitting patterns, etc.) to boost sales and increase their design repertoire.

### **Village Maniagar**

We visited the Maniagar center on 3<sup>rd</sup> and 4<sup>th</sup> April 2019. This center, started on 9<sup>th</sup> June, 2017, has been active the longest. It provides training in both sewing and knitting with dedicated instructors for each craft. The average age of the attendees at the center was 24 years old. Many of the women have been crafting to earn money and have found that knitted products gave better economic returns in their local consumer market than tailoring clothes only. The women opined that tailoring solely was a bit less lucrative as the work supply was a bit sporadic. On average, the attendees expected to earn Rs. 6,620 per month from their crafting, while their current monthly earnings are Rs. 1,990. The majority of women stated that they would prefer to run a business in a group rather than by themselves.



Figure 24 and 25. Training centre at Maniagar village hosts a sewing and a knitting centre.

*A Shop in Maniagar: the experiences of three alumni going into business*

Deepa, Chandra, and Pooja are confident girls, who are setting a positive example of entrepreneurship in their neighborhood after completing their sewing and knitting training at the Maniagar learning center. The idea for the shop was born from the necessity of having a professional space for the girls to earn a fair wage from their skills. Deepa said that although she tailored clothes from home initially, the customers would not pay her fairly. Chandra found that tailoring at home conflicted with her domestic chores and felt the need for a dedicated space. Pooja used to tailor from home, but with the recent loss of the family sewing machine, she too felt the need for a shop. The shop premises belong to Deepa's family, whom had to be ardently convinced to turn over a paying commercial space (they got rent from it) for the girls to set-up shop. The sewing machines were provided by Seva Nidhi and the girls managed the rest. The shop primarily caters to the tailoring needs of women and children, and also stores a limited selection of readymade woolens. The shop is open six days a week from 10 am to 3 pm. In addition, in the evenings Chandra and Deepa run the local children's learning center and computer learning center, respectively. The girls also knit woolens in their off time to sell in the shop. All three of them have conducted workshops for training instructors at other sewing and knitting centers too. The shop space has also found an innovative auxiliary function as an intermittent eyebrow-threading salon. The girls found that it was a popular service that they initially provided from their homes, but customers would often not pay. However, when customers visited the shop for the same there was no such problem. Each of the girls earn about Rs. 3000 per month from their work in the shop. Most of their shop earnings are spent on themselves or given to their families. All the decisions regarding the shop are taken collectively by the girls, after frank discussion and when a favorable consensus is reached. In the near future, the girls are planning to store bolts of cloth, and some pre-stitched salwars and pajamas to boost sales and provide their customers the ease of locally shopping for cloth. They hope to finance the purchase of the cloth bolts from the current profits of the shop.

Figure 26. The girls at work in their shop in Maniagar



## Binta

We visited the center on 5<sup>th</sup> April, 2019. This learning center provides sewing training only, and has been active for nearly a year and half (opened on 1. 11. 2017). The general population of Binta seemed well-off and economically secure with their agrarian lifestyle. The average age of the attendees on the day of our visit was 22 years old. In the course of our conversation with the women, I learnt that most of the young girls were learning to sew mainly for personal use, while the older women were keen to sew for additional income. This group expected to earn on average Rs.2,071 per month from their sewing. But their current average income per month is Rs.521. Furthermore, the majority of women at this center would prefer to run a business in a group.



Figure 27. Tailoring centre at Binta, district Almora.





Figure 28. Tailoring centre at Binta district Almora.

### **Toli-Pati village**

We visited this center on 9<sup>th</sup> April, 2019. The Pati center was opened on 1<sup>st</sup> April, 2018 and provides training for both sewing and knitting. Pati seems a local economic hub where many families from surrounding villages migrate to, particularly for children's education and employment opportunities. The average age of the attendees on the day of our visit was 23 years old. The attendees expect to earn on average Rs. 3,850 per month from their crafting. Their current average income per month is Rs. 944. Nearly equal number of attendees indicated that they would prefer to run a business in a group and by themselves.



Figure 29. A tailoring centre at Toli village, Pati, district Champawat.



Figure 30. A knitting centre at Toli village, Pati district Champawat.

### Paliyu village

We visited the Paliyu sewing learning center on 12<sup>th</sup> April, 2019. This is the newest center to open on 1<sup>st</sup> February, 2019. The average age of the attendees on the day of our visit was 24 years old. In general, the attendees were focused on learning, and their aspirations at the time were limited to sewing for themselves and their families. Consequently, with the exception of the instructors, the women were not earning from their sewing as yet. They hoped to earn on average Rs. 3,395 per month in the future. The majority of respondents indicated that they would prefer to run a business in a group.



Figure 31. Attendees at the Paliyu center. The room given by the community to run the center is being repaired and made more attractive for girls to attend.

Table 16. Summary of the data collected in the surveys during visit to the centers. The most striking relationship across the four centers is between the average time attending the centers and the average actual income from crafting.

Indicators	Maniagar (25 respondents)	Binta (14 respondents)	Pati (25 respondents)	Paliyu (19 respondents)
Average age (years)	24.4	21.6	23.4	24.1
Average time attending the center (in months)	10.88	4	4.2	1.32
Scheduled caste and tribe members (percentage)	36	21.43	0	73.68
Average expected income from crafting (in Rupees)	6,620	2,071	3,850	3,395
Average actual income from crafting (in Rupees)	1,990	521.43	944	263.16
Run a business in a group (percentage)	60	92.86	52	63.16

Visit to the four sewing and knitting learning centers allowed me to closely observe a novel empowered community development project in action. All the women I interacted with showed great potential and varying levels of confidence in their abilities to succeed as entrepreneurs. However, an interesting conundrum arises as to how much external handholding (in the form of the invaluable role of Seva Nidhi in this project) is enough for such a development model to attain sufficiency and autonomy. I believe communities require examples of transparent and ideal institutions in action to know and learn how to emulate for themselves. Furthermore, opportunities, or the development of conducive environments for them, are required for such groups to help themselves and reach their full potential. In particular, I think that the women attending the learning centers would benefit immensely with technical knowledge on how to market their products effectively and explore new markets. I also found that the majority of women were amiable to learn new techniques in sewing and knitting to produce more innovative products in the future.



Figure 32. A knitting centre at Huddu village, Ukhimath, district Rudraprayag.

#### **Tailoring centre Diyarkot, district Chamoli**

Two new tailoring centres were started in Badhani cluster, district Chamoli. The centre at Diyarkot village is managed by a male tailor whilst a young woman runs the centre at Bainoli village. About 30 women attend each centre.

#### **Tailoring and knitting centres at Ukhimath**

In Ukhimath area, the tailoring centre is run by an experienced elderly woman who has been offering training on stitching for a long time. The knitting centre was shifted from Kimana to Huddu village this year. Training on knitting is provided by a young woman who is a school teacher's wife and wanted to spend her time in the village in a fruitful way.

### **Material given to the centres**

Since there were enough sewing and knitting machines for the centres, this year only some accessories were purchased and distributed. This includes boxes of threads in multiple colours, scissors, needles of different sizes, buttons, hooks, bobbin, bobbin covers, milton chalk boxes, wool, registers, copy and pens, buckram etc. No rent was paid for the rooms by USNPSS. The learners paid a small amount as fee and this money was used to pay the room rent, if any, and to buy cheap cloth for the trainees to learn and use the stitched garment themselves. In addition, the trainees brought old sarees, and old pieces of cloth from home and practiced stitching. In almost all the centres, the girls had made salwar kammez for their own use from old sarees. Further, blouses and frocks were stitched from old sarees.

### **More imagination and creativity**

In the tailoring and knitting centres women and girls have on their own created other crafts/items as shown in the photos below. Embroidery, Croatia etc. is used not only to enhance the value of the stitched clothes and sweaters but items such as wall hangings, bed covers etc. have also been prepared. This skill needs more inputs and marketing possibilities in future.



Figure 33. Crafts/items developed by women and girls attending tailoring centres.



Following are some stories in brief as told by women and girls who have been attending tailoring and knitting centres in different villages:

Ms. Daya Bisht lives in Jakh village and travels every day to Binta to learn sewing. She said, *a school bus comes every day to our village. I asked the driver and he allowed me to use that for my travel every day to Binta. Distance between Binta and Jakh is about 7-8 km. I have attended the centre for the last five months. I come every day and learn seriously. Some people from my village gave me work and this month I have earned 1.5 thousand rupees. Now, I am getting married. A few days ago, my future-father-in-law had come home. My mother showed him clothes that I had stitched. I told him that I would like to open a tailoring shop after marriage. He had agreed. After three months of marriage, Daya opened a shop in Kuwali village.*

Maya Kaira, village Bhataura, said, *I attended the centre for about 8 months and became good at it (sewing). Now, I have become very confident too. I wanted to open a shop in the market but my mother refused. She said that I would be getting married soon and then who will look after the shop. So, I asked for work in my own village. That worked out fairly well. Now, I earn about 2.5-3 thousand rupees per month and more during the wedding seasons. Income is a fluctuating thing- sometimes we get more sometimes it is less but, on an average, the whole thing is very satisfactory.*

Priyanka Arya, Parkot village, says, *we made a group of four girls and came together to attend the centre. After some time one of the girls left but others continued to come. After seven months of training I have gained confidence to take work. Now, people from two villages give me clothes for stitching. I take some cloth to the centre where the trainer helps me cut it properly.*

Diksha Kaira, village Borkhola, said-*when I first came to the centre, everything was new for me. Girls were making clothes of different kinds and seeing them I was scared. I thought, I will never ever be able to work like them. When I used to see them cut a piece of cloth, everything looked easy but doing it myself was scary. Then I told myself that if these girls can do this, I can also learn. Slowly, I began to hold the scissors properly. I was conscious of the fact that my work must look neat and done in a professional way. After months of learning now I do feel that I can open a shop anywhere. I am doing my BA degree now and whenever I go out, I take my own money in my purse. This is empowering.*

### **Women and girls generating business**

A total of 26 trained girls and women have either opened their own shops or run business from home. The average monthly income is about 2200-2500 rupees with some villages displaying much support to this initiative whilst the other communities giving work to other tailors too. The following is the list of girls and women who have started shops this year:

Table 17. Women getting business from villages.

Serial number	Shop on the road side	Village		Working from home		
			Stitching clothes of people from neighbouring villages	Villages where women are getting business from	Stitching clothes of people from her own village	Resident of the village
1	Chandra Arya	Maniagar (a shop opened jointly by three young girls)	Smt Kiran Arya	Chami, Kharkoli Kasoon	Puja Supyal	Banthok
2	Deepa Arya		Jyoti Goswami	Gwar, Nakot, Daula	Renu Gailakoti	Banthok
3	Pooja Arya		Smt. Gita Joshi	Jogyura, Fulari, Barecheena, Berinag	Pushpa Chmiyal	Chanoli
4	Smt. Basanti Arya	Maniagar	Priyanka Arya	Parkot, Khakoli	Diksha Kaira	Borkhola
5	Soni Bisht	Nagarkhan	Garima Mehra	Chaturbhoj, Jaalbagari, Toli, Sela	Maya Kaira	Bhataura
6	Smt. Daya Bisht	Kuvali-Binta	Neetu Arya	Barecheena, Maniagar, Maichun, Supai, Palyun	Nirmala Kaira	Bhataura
7	Smt. Luxmi Puspwan	Ukhimath	Nandi Bainola	Maniagar, Maichun, Supai, Sela Palyun, Gairad	Sapna Supyal	Banthok
8	Smt. Renu Adhikari	Binta	Hira Gailakoti	Dhamera, Kwiti	Kala Bagadwal	Girchola
9	-	-	Smt. Deepa Bohra	Pati, Malla Kamlekh, Jaulari, Punakot, Lakhanpur, Toli	Uma Bagadwal	Girchola
10	-	-	Neetu Bainola	Maichun, Panuanaula	Poonam Arya	Chaami
11	-	-	-		Smt. Gita Joshi	Maalgaon

### Grading of adolescent girls

This year grading of 547 adolescent unmarried girls was carried out in 38 villages. The same method as in previous years was used to assess performance, twice a year with a gap of six months. Indicators used to assess performance include adolescent girls' skills in socialization, expression, language development, awareness regarding health, nutrition and personal/community hygiene, understanding of gender and caste issues, life skills and planning for the future. Grading was carried out by the supervisors and the facilitators in VLCs. Filled up

sheets were collected at USNPSS Almora and scores were generated for every girl by feeding information in computer.

Table 18. Village-wise scores of grading of adolescent girls, 2017-2018.

S n o	Location	Gopeswar					Badhani					Uk hi ma th	Danya					
	Village	Bandwara	Mandal	Kathur	Devaldhar	Bamiyala	Sundergaon	Pudiyani	Chaundali	Kukdai	Jakh	Udaipur	Ruval	Takoli	Padai	Basaan	Munoli	Kulori
	Number of girls	16	11	14	15	16	13	18	14	14	21	21	17	11	8	11	10	7
1	Socialization	2.9	3.0	2.6	3.0	3.1	1.8	1.8	2.6	1.4	2.3	2.3	2.3	2.3	2.5	2.5	2.6	1.9
2	Expression	2.9	3.3	2.8	3.0	3.1	1.5	1.5	2.4	1.3	2.0	2.4	2.3	1.8	2.5	2.4	2.0	1.4
3	Language	3.7	3.6	3.4	3.8	3.6	1.7	2.4	3.9	2.4	2.6	2.6	2.5	2.4	2.5	2.5	2.2	1.9
4	Health, nutrition, hygiene	3.1	2.8	2.8	2.9	2.9	1.7	2.0	2.4	1.8	2.1	2.4	2.7	2.1	2.6	2.5	2.2	1.9
5	Equality by gender, caste	3.1	3.1	3.0	3.3	3.3	1.6	1.9	3.0	1.6	2.2	2.7	2.5	2.1	3.0	2.2	2.1	1.6
6	Life skills	2.9	2.7	2.5	2.5	2.6	1.3	1.2	1.9	1.0	2.4	2.1	2.0	1.5	3.0	2.1	2.0	1.3
7	Future planning	2.9	2.6	2.7	2.7	2.6	1.7	1.9	2.6	1.9	2.1	2.1	2.7	1.7	3.0	2.0	2.1	1.3
Average First grading		3.1	3.0	2.8	3.0	3.0	1.6	1.8	2.7	1.6	2.1	2.4	2.4	2.0	2.7	2.3	2.2	1.6
1	Socialization	3.4	3.6	3.1	3.5	3.4	2.8	2.9	3.2	2.4	2.9	3.5	2.8	3.2	3.1	3.2	3.1	2.9
2	Expression	3.1	3.6	3.3	3.2	3.4	2.4	2.4	3.2	2.0	2.9	3.4	2.8	2.8	3.3	3.1	2.5	2.0
3	Language	3.8	3.6	3.6	3.8	3.6	2.7	3.2	4.0	3.1	3.2	3.7	3.0	3.4	3.3	3.1	3.0	2.7
4	Health, nutrition, hygiene	3.1	2.9	2.9	2.9	3.0	2.6	2.8	3.1	2.5	2.8	3.6	2.9	2.8	3.0	3.2	2.7	2.6
5	Equality by gender, caste	3.1	3.3	3.0	3.3	3.3	2.6	2.7	3.5	2.6	2.8	3.8	2.6	2.8	3.0	2.7	2.6	2.4
6	Life skills	2.9	2.9	2.6	2.5	2.6	2.3	2.2	2.5	1.6	2.2	3.5	2.1	2.3	3.0	2.6	2.4	1.9
7	Future planning	2.9	2.6	2.8	2.7	2.6	2.7	2.9	3.4	2.8	3.0	3.6	2.9	2.7	3.5	2.7	2.7	2.0
Average second grading		3.2	3.2	3.0	3.1	3.1	2.6	2.7	3.3	2.4	2.8	3.6	2.7	2.9	3.2	2.9	2.7	2.3

Table 16 continues.

Table 16 continues.

		Danya				Binta					Maichun				
	Village	Danya	Dharagad	Dasili	Gauli	Simalti	Suma	Bhatara	Binta	Borkhola	Maichun	Banthok	Maniagar	Mouni	Palyun
	Number of girls	11	12	11	21	7	16	21	9	10	18	17	16	13	21
1	Socialization	2.2	2.3	2.0	2.4	2.9	2.9	3.6	4.0	3.0	1.1	2.5	1.0	2.7	1.9
2	Expression	2.2	2.3	1.9	2.4	2.7	2.5	3.5	3.7	2.4	1.7	2.3	1.7	2.8	1.7
3	Language	2.4	2.4	2.6	2.6	2.7	2.4	3.1	3.3	2.5	2.6	2.5	2.6	2.6	2.2
4	Health, nutrition, hygiene	2.6	2.8	2.6	2.7	3.0	2.7	3.2	3.3	2.4	1.9	2.5	1.7	2.5	2.0

5	Equality by gender, caste	2.5	2.7	2.4	2.6	2.6	2.7	3.0	3.1	2.3	1.5	2.3	1.5	2.1	2.1
6	Life skills	2.3	2.3	2.0	2.4	1.6	1.4	2.5	3.0	1.0	1.3	2.2	1.3	2.1	2.1
7	Future planning	2.3	2.3	2.0	2.2	2.3	2.7	3.1	3.1	2.0	2.2	2.1	2.1	2.0	2.1
<b>Average first grading</b>		2.3	2.5	2.2	2.5	2.5	2.5	3.1	3.4	2.2	1.8	2.3	1.7	2.4	2.0
1	Socialization	2.5	2.8	2.7	2.8	3.0	3.3	3.7	4.0	3.4	2.1	3.4	2.0	3.7	2.8
2	Expression	2.6	2.7	2.8	2.9	2.9	2.8	3.7	3.9	2.9	2.3	3.3	2.6	3.8	2.6
3	Language	2.6	2.8	3.6	3.0	3.0	2.6	3.1	3.7	2.8	3.3	3.5	3.6	3.6	3.1
4	Health, nutrition, hygiene	2.6	2.8	3.4	2.8	3.0	2.9	3.3	3.7	2.5	2.6	3.5	2.6	3.5	2.9
5	Equality by gender, caste	2.5	2.7	3.2	2.7	2.6	2.7	3.1	3.2	2.6	2.1	3.3	2.5	3.2	2.7
6	Life skills	2.3	2.3	2.7	2.5	1.6	1.4	2.5	3.0	1.0	2.1	3.2	2.4	3.0	2.7
7	Future planning	2.3	2.9	2.9	2.5	2.3	2.67	3.1	3.1	2.0	3.2	3.1	3.2	3.0	2.9
<b>Average second grading</b>		2.5	2.7	3.0	2.7	2.6	2.63	3.2	3.5	2.5	2.5	3.3	2.7	3.4	2.8

Table continues.

		Pati			Ganai gangoli			Shama	Total girls
	Village	Kamlekh	Harodi	Dhumagha	Gwadi	Nayal	Tuproli	Namik	
	Number of girls	12	9	15	21	16	11	23	547
1	Socialization	2.2	2.0	2.3	2.2	2.1	1.8	2.2	2.4
2	Expression	2.3	1.9	2.3	2.5	2.6	2.0	2.4	2.3
3	Language	3.3	3.3	2.2	2.8	2.6	2.4	2.5	2.7
4	Health, nutrition, hygiene	2.9	2.3	3.7	2.1	2.3	2.4	2.4	2.5
5	Equality by gender, caste	2.9	2.0	2.1	2.5	2.7	2.1	2.6	2.4
6	Life skills	2.5	2.6	2.3	2.2	2.2	1.9	2.1	2.0
7	Future planning	1.5	2.2	1.9	2.8	2.9	2.6	2.1	2.3
<b>Average first grading</b>		2.5	2.3	2.4	2.5	2.5	2.2	2.3	2.4
1	Socialization	3.8	2.3	3.1	3.1	3.3	2.6	3.2	3.1
2	Expression	2.8	2.1	2.8	3.1	3.2	2.9	3.0	2.9
3	Language	2.3	3.2	2.7	3.7	3.6	3.0	3.3	3.2
4	Health, nutrition, hygiene	2.4	3.1	3.7	2.9	3.0	2.6	3.0	3.0
5	Equality by gender, caste	3.0	3.4	2.9	3.2	3.1	2.9	3.1	2.9
6	Life skills	2.8	3.2	3.0	3.1	3.1	2.7	2.9	2.5
7	Future planning	2.8	2.3	2.7	3.3	3.6	3.0	2.8	2.8
<b>Average second grading</b>		2.8	2.8	3.0	3.2	3.3	2.8	3.0	2.9

The overall results of grading of adolescent girls are shown in Table 17. Data records an increase in performance from 2.4 in the first phase to 2.9 in the next phase, with a gap of six months between the two phases.

Table 19. Overall results of grading of adolescent girls in 43 villages.

Serial number	Total number of villages 43	Total number of girls 547			
	Indicator	First grading		Second grading	
		Score	Grade	Score	Grade
1	Socialization	2.37	B	3.06	A
2	Expression	2.32	B	2.92	B
3	Language	2.71	B	3.23	A
4	Health, nutrition, hygiene	2.5	B	2.95	B
5	Equality by gender, caste	2.43	B	2.91	B
6	Life skills	2.03	B	2.52	B
7	Future planning	2.29	B	2.84	B
Average		2.4	B	2.9	B

0-1	D
1.1-2	C
2.1-3	B
3.1-4	A

#### 4. National Mission on Himalayan Studies

##### Resilience through Empowerment - Awareness, Engagement and Transformative Action

The NHMS initiative was introduced in to the village clusters through informal community meetings. Engaging, enthusing and organising the community for a specific purpose was the first task undertaken by the CBO's. These meetings laid the foundation for the practical initiatives and fore-grounded them within the broader aim of enhancing social-ecological resilience of the village project. The value people place on the practical work is the key determiner of its sustainability and long-term success. Bringing to the fore and emphasizing appropriate scientific tenets further validates and strengthens legitimacy of project. For a sense of ownership of the project to emerge, activities were designed in a way that would encourage the community to reach evidence-based conclusions about their village ecosystem instead of a top down approach of knowledge dissemination. To bridge informal and formal knowledge systems social-ecological concepts and tools were introduced alongside when felt relevant and appropriate.

The village meetings, rich in grounded insights and scientific knowledge served as brain storming sessions where pressing need gaps of different sets of stakeholders were deliberated upon. This setting encouraged the community to appreciate the intricate inter-linkages between social-ecological health of their village and their most pressing problems. Having gone through this creative process, it was easier for the community to organize and commit themselves to the project. In the subsequent sections, detailed description of the awareness and engagement activities is presented.



Figure 34. Writings on the walls to raise awareness under NMHS.



Figure 35. Writings on the walls to raise awareness under NMHS.

### Community meetings: general, mahila sangathan, youth

Although the *mahila sangathan* was the main vehicle through which the NMHS activities were carried out, to ensure inclusion, meetings open to all and those separately with youth were also conducted. During meetings with different sets of stakeholders, pressing needs of the community were identified and discussed and deliberated upon. Such as, the increasing need for cash income and employment opportunities, water scarcity, increasing menace of wildlife etc. As these issues were very personal, they evoked a lot of interest and the respective communities were enthused at the prospect of resolving some of these issues. The informal and personal nature of the meetings, set them apart from impersonal information dissemination sessions typical of government programs. Next, they prioritized the issues on the basis of urgency, scale of benefit and budgeting constraint. As problems emerged, creative freedom was given to the CBOs to organize appropriate activities that would interest and educate the community. In Pata, Nainital district, puppet shows on water conservation and solidarity were organised. Further, the women were sent to Ukhimath and Gopeswar in Garhwal on an exposure visit. They also made a visit to Ganaigangoli, district Pithoragarh, to see the work of other women's groups in the region. The end goal was to encourage them to critically analyse the problem and understand how it affects their life in the hamlet. The awareness activities were thus not carried out in a conventional manner, where they tend to be top-down information dissemination exercises. Neither were they an isolated or discreet exercise. Theoretical knowledge was subtly introduced to complement the emerging practical insights. The participants were encouraged to conceptualize the problem in a systematic and analytical manner.



Figure 36. The community in Pata, district Nainital, meet for a discussion on installing tanks.

Table 20. Awareness activities carried out across project sites.

S.No.	Village clusters	No. of meetings (2017-2019)	Participants
1	<b>Pata</b> Dhura Supi Budibana	Galla Load-amodi Jaipur (Nathuwakha) Kasyalekh	70 8 villages 650 households
2	<b>Kimana</b> <b>Byolda</b> Semala Mangoli	Karndhar Samsari Bangrali Kanda	100 8 villages 280 households
3	<b>Aati</b> Gauli Ruwal	Munoli Talli Danya	95 6 villages 273 households
4	<b>Joshyura</b> Piplati Bunga-kamlekh	Kamlekh Paargoshni Katwalgaon Ladhaun	47 7 villages 255 households
5	<b>Gwar</b> Gangolgaon Khalla Bandwara Sagar	Devaldhar Kathur Bamiyala Dogadi Kandai	93 10 villages 546 households
6	<b>Chaundali</b> Jakh Sundergaon Diyarkot	Kukdai Pudiyani	78 6 villages 530 households
	<b>Total</b>	483	<b>45 villages</b> <b>2534 households</b>

Knowledge generating sessions on village ecosystem and its importance, climate change effects, mitigation and adaptation strategies and informal discussion over a range of topics of relevance to the village ecosystem were taken up. A thematic list of the topics that were discussed in the meetings are presented below:



Table 21. Topics discussed in the meetings.

Themes	Topics
<b>Village ecosystem resilience</b>	<ul style="list-style-type: none"> <li>• Village eco-system health, interlinkages of 'Jal jungle zameen'</li> <li>• Socio-economic transitions</li> <li>• Change in community life</li> <li>• Health and hygiene</li> <li>• Balanced diet</li> <li>• Ways to enhance resilience by solving pressing problems: polyhouses, fencing around crop fields, horticulture, polytanks, kurmula traps, plantations, water conservation, women run restaurant, vegetable seeds, fruit processing, non-farm work (sewing, stitching, restaurant)</li> <li>• Climate change impacts – agriculture, forest, water scarcity, crop cycle, invasive species</li> </ul>
<b>Livelihoods</b>	<ul style="list-style-type: none"> <li>• Livelihoods: animal husbandry, organic agriculture, mushroom, vermin-composting, herbs, marketing, non-farm work, eco-tourism</li> <li>• Change in livelihoods – declining interest in agriculture, less production of local items</li> </ul>
<b>Gender and generation</b>	<ul style="list-style-type: none"> <li>• Women's workload</li> <li>• Intergenerational transitions in value systems</li> </ul>
<b>Land</b>	<ul style="list-style-type: none"> <li>• Soil erosion</li> <li>• Trenches on hill slopes</li> <li>• Crop diseases</li> <li>• Illegal Sale of land</li> </ul>
<b>Forest</b>	<ul style="list-style-type: none"> <li>• State of forests: declining tree canopy, pressure due to dairy industry, fodder species, animal grazing, conservation</li> <li>• Human wildlife conflict</li> <li>• Forest fires</li> </ul>
<b>Water</b>	<ul style="list-style-type: none"> <li>• Water conservation, Ground water recharge</li> <li>• Drinking water</li> <li>• Traditional water sources, water flow rate</li> </ul>

### Health assessment of the village ecosystem: A workbook

A detailed interactive workbook was developed by the USNPSS staff for community members to utilize for assessing the health of their respective village ecosystems. The objective of this workbook was empowering the communities with the knowledge, methods and practical exposure to identify and resolve problems affecting their village ecosystem, ultimately enhancing its resilience. The broad themes covered in the workbook are displayed in the table below. A training programme on collecting needed data was organized for the CBOs at USNPSS office, Almora. After completion of this assessment the findings were presented and discussed in village meetings and at the USNPSS office at Almora.

Table 22. Themes covered to assess the health of the village ecosystem.

Theme	Issues
Village forest	Tree canopy, invasive species, soil cover, wildlife & pests
Cultivated land	Adaptive species, mixed cropping, use of crop residue, cultivation pattern, weeding
Groundwater	Village map, water scarcity, groundwater recharge, water flow in springs & seepages, change in status over time, estimating water availability & use for domestic purposes
Cattle	Diversification of livestock & poultry, indigenous species, composting
Climate change	Record of variation in weather patterns during 2017-2019 and its impact on livelihood
Community	Focus on gendered division of labour, women's added labour burdens, intergenerational contributions; strengthening community cooperation, meetings with women's groups, presentation of findings in village meetings

The workbook is interlaced with relevant theoretical insights concerning different elements of the village ecosystem: forests, soil, water, livestock and human population. It encourages systems thinking by bringing alive the critical inter-linkages between these elements. For instance, it practically brings alive the intricate web of linkages between extraction of leaf litter (from forests), forest health, invasion of crop fields by pests and wildlife. Another example is the use of mulch on crop fields and its implications for ground water recharge.

The practical field-based components bring community members out onto the field to collect primary data in a systematic manner. It encourages application of their mental faculties to draw conclusions from this data, and what it implicates for their lives, present and future, in the village. The workbook therefore raises thought provoking issues for deliberations and encourages the community to critically assess the state of their village ecosystem. One of the related objectives was to build capacities in the village community to measure, record, collate and analyse information concerning the natural resource base of the village. Although they have tacitly held such information and knowledge but have not articulated or visualised the same in a systematic, comprehensive and rigorous manner. The exercise of measuring water flow of natural seepages (see figure 2) and the rate of water consumption per household (see figure 3), were engaging and useful practical applications. These activities have exposed the village community to some simple ways of quantifying and tracking water supply and demand, and the seasonal changes therein.

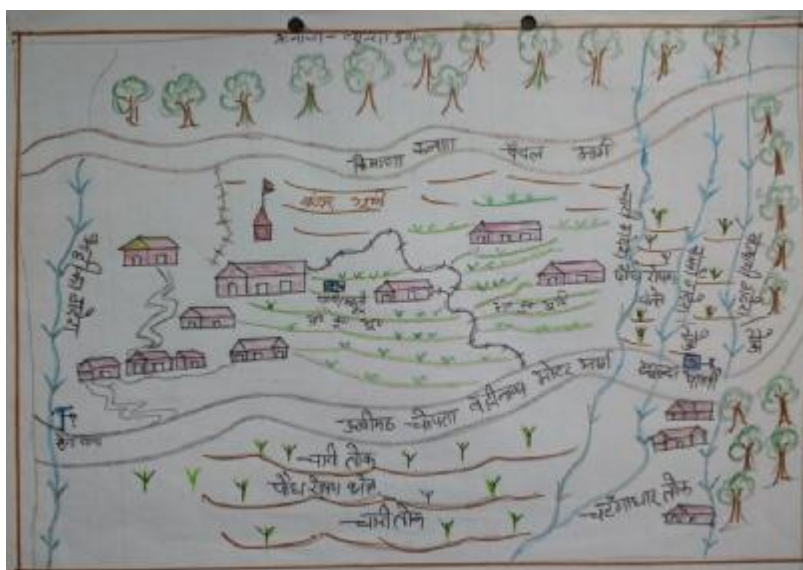


Figure 37: A map prepared by the residents of Byolda displaying the village ecosystem components.

**तालिका-1 (वर्ष 2018)**

नल खात का नाम	प्रवाह दर लीटर प्रति मिनट (माह जून/जुलाई से दिसम्बर तक)												औसत प्रवाह दर
	1	2	3	4	5	6	7	8	9	10	11	12	
पेठडा झरना (5 लीटर/मिनट)							2.7.214	3.8.214	0.1.214	1.10.214	16.11.214	1.8.214	0.816
गंगोला (5 लीटर/मिनट)							0.56	0.15	0.22	0.35	0.48	1.27	0.576
भवांमी (5 लीटर/मिनट)							0.15	0.7	0.19	0.15	0.27	0.42	0.301
चिरकुनी झरना (5 लीटर/मिनट)							0.30	0.8	0.11	0.19	0.27	0.42	0.371
तेर झरना (5 लीटर/मिनट)							1.575	0.58	1.11	1.39	1.55	3.4	1.421

Figure 38: Water flow rates of natural seepages accessed by residents of village Gangolgaon, Chamoli.

Issues of social equity, particularly, gendered division of labour and intergenerational perspectives are also built into the workbook. It encourages the participants to reflect on women's added burdens in the form of care, reproductive and household labour. Some of the activities require collating historical anecdotal information with the prevailing realities, in the form of empirical evidence collected by the younger generation, so as to spark discussions

between different generations of participants. Thus, the interactive nature of the workbook calls for strengthening community cooperation despite the diversities inherent to communities.

2	॥ धुमा देवी	200	210	225	240	250	260	265	260	270	250	240	210
3	॥ विशेष्वरी देवी	190	210	220	230	240	250	255	250	260	240	245	200
4	॥ कुँवरी देवी	200	215	210	240	245	260	265	240	250	220	240	210
5	॥ हेमा देवी	190	185	200	210	220	230	240	255	260	250	245	200
6	॥ अनीता देवी	210	230	230	240	250	260	245	260	240	250	230	220
7	॥ सुलोचना देवी	210	235	240	250	260	270	275	280	290	260	280	220
8	॥ नर्वदा देवी	220	210	250	260	265	260	280	290	300	270	260	230
9	॥ राजेश्वरी देवी	210	220	260	270	280	285	290	260	270	260	250	220
10	॥ समीति देवी	220	210	250	255	270	280	240	250	260	250	240	230
11	॥ रेखा देवी	190	195	260	260	270	275	230	240	260	220	210	200
12	॥ रंकी देवी	200	210	270	280	290	300	290	280	270	230	220	210
13	॥ असमती देवी	190	180	250	260	270	275	280	230	240	240	230	220

Figure 39: Household water consumption rates recorded as part of the assessment by residents of village Bangrali, Ukhimath

### **‘Apne jungle ko jaano’ (know your forest): Inter-generational forest scoping exercise**

In Pata cluster, an innovative community engagement activity was carried out over a few days in 2017 and 2018. The entire hamlet/village community including men and women of all ages, organised themselves into smaller groups and conducted transect walks covering large parts of their village forest. The aim of the exercise was to assess changes in the forest with a longitudinal perspective. The three distinct life stages of village community: the young, the middle-aged and the elderly, contrasted their memory of different parts of the forest (species biodiversity and density, water sources, wildlife etc.) with the current situation. They were able to relate to the idea of forest degradation and climate change in an empirical manner. They could also join the dots between the problems being faced by them in their daily life (declining agricultural productivity, declining water flows, irregular rains etc.) with larger ecosystem changes in a coherent manner.

### **Identified problem areas and need gaps**

After completion of the in-depth village surveys and nearly 6 months of community meetings and deliberations the most pressing issues were identified which if resolved would enhance village ecosystem resilience. These are:

**a. Rampant and unchecked crop depredation by wildlife**

The most pervasive, persistent and frustrating feature of impact on Himalayan agriculture is the rampant crop damage by wildlife. The issue has been widely raised, discussed and acknowledged in bureaucratic and media circles of Uttarakhand in recent years. Across the surveyed sites a significant decline in agricultural production and incomes is attributed to crop depredation.

**b. Water scarcity and conflicts**

In Aati, Pata & Joshyura, households were facing acute water scarcity while those in Chaundali had issues of difficulty in accessing the distant natural water sources that they depended on. Village sites located in the fruit belt of Ramgarh, district Nainital, were struggling with maintaining their horticultural practices for which timely water availability is critical. Water scarcity in the area due to over-extraction is compounded by erratic and untimely precipitation. Inter and intra hamlet conflicts over water sharing was another pressing concern at few sites, namely Joshyura and Pata.

**c. Need to enhance cash incomes**

Traditional livelihoods such as agriculture and animal husbandry are on decline but new livelihood opportunities to sustain village households are few. Further dependence on markets even for basic needs is rising but not the sources and quantum of incomes. The need to diversify both farm and non-farm livelihoods was unanimously accepted and prioritized across sites.

**d. Dearth of good quality vegetable seeds and declining nutritional quality of diet**

Unavailability of high-quality vegetable seeds was expressed in all village sites. Increasing dependence on purchased groceries and vegetables was felt to be a wasteful expenditure which could be avoided.

Table 23. Problems identified by communities.

Identified Problems	Pata	Kimana Byolda	Aati	Joshyura	Gwar	Chaundali
Water scarcity and conflict	✓		✓	✓		✓
Crop Depredation	✓	✓	✓	✓		✓
Deteriorating farm livelihoods	✓	✓	✓	✓	✓	✓
Stagnant nonfarm livelihoods		✓	✓			✓
Lack of agricultural support			✓			✓
Forest degradation	✓					✓

## Participatory practical initiatives

### 1. Enhancing water security by improving availability and resolving conflicts

#### Drinking water pipeline

At Joshyura and Chaundali drinking water pipelines were laid down to bring water from untapped natural seepages to deal with water shortages. In Joshyura conflicts over water had persisted for years and in Chaundali downstream households were severely affected by water shortage. Let us look into the experience of project implementation at these sites in detail.

Hamlets Joshyura, Boonga and Piplati together form the revenue village of Hauli Piplati. A natural seepage located about 2700 m from Joshyura was the main water source for Joshyura and Piplati hamlets via a common pipeline. For years the two communities had been at loggerheads as each wanted to capture more water supply to their respective hamlet. It had become a common practise for hamlet residents to turn off the water supply to the other hamlet at the 'T' junction so as to augment the water flow to their own hamlet. Despite such practices Joshyura households were struggling to meet their water requirements.

Joshyura residents decided to solve this conflict once and for all by laying down an individual pipeline for their hamlet connected to a different seepage. A new pipeline measuring 1650 m was constructed from a seepage and connected to a portion of the existing pipeline as depicted in the figure:

Table 24. Enhancing water security.

Enhancing water security : outputs and outcomes		
<b>Polythene-lined tanks</b>  <b>Clusters</b> § Pata (Nainital) § Aati (Almora) § Joshyura (Champawat)	<b>Outputs</b>	
	No. of beneficiary households	312 Pata + 10 in Aati + 5 in Paargosani
	Per household storage capacity added	10,000 litres
	Total storage capacity added	3, 27, 000 litres
	Change in time use (hr/day) or distance covered (km/day) on fetching water	Needs dedicated assessment. Reports of about 1-2 hr/day saved & 8-9 hr/ week
	Range of needs being met with stored water	Vegetable cultivation for home use, Horticulture, Domestic use, Cattle
	Any change in area under cultivation/crop cycles/crops	<ul style="list-style-type: none"> <li>• Pata - Intercropping, 3 crop cycles of vegetables (versus 1 prior to project)</li> <li>• Aati - Vegetables cultivation for home</li> </ul>
	<b>Outcomes</b>	
	Implications for livelihood strategy	Increase in production. Income from a season of peas Rs. 15000/household
	Implications for time-use and daily routine	<ul style="list-style-type: none"> <li>• Decline in unproductive labour of fetching water</li> <li>• Shifts in time-use towards productive and selfcare activities</li> <li>• Young girls and women attending sewing/tailoring/computer classes at Galla centre</li> <li>• Older women spending more time on</li> </ul>

		self-care, socialization and community work
	Skill and capacity building	<ul style="list-style-type: none"> <li>• Technical knowledge of polytank development and maintenance</li> <li>• Poly tanks built in small uneven patches of land display ingenuity</li> </ul>
<b>Drinking water pipeline</b>  <b>Clusters</b> <b>§ Joshyura</b> <b>§ Chaundali</b>	Change in water flow	Not monitored
	Number of new stand posts built	4 (Joshyura)
	Number of households with augmented water availability	<ul style="list-style-type: none"> <li>• 140 of which 11 are scheduled caste.</li> <li>• 6 downstream households now have sufficient supply in the piped connection</li> </ul>
	Range of needs being met	Drinking, domestic, homestead horticulture
	Change in time use (hr/day) or distance covered (km/day) on fetching water	Needs dedicated assessment. Reports of about 2-3 hr/day saved (summer months)
	Implications for household livelihood strategy	<ul style="list-style-type: none"> <li>• More cash income in hand</li> </ul>
	Implications for time-use and daily routine	<ul style="list-style-type: none"> <li>• Decline in labour of fetching water</li> <li>• Significantly less drudgery in summer</li> </ul>
	Inter-hamlet conflict resolution	<ul style="list-style-type: none"> <li>• Separate source and pipeline have resolved conflict between hamlets Joshyura and Piplati</li> </ul>
	Intra-hamlet conflict resolution	<ul style="list-style-type: none"> <li>• between Hauli and downstream habitation</li> </ul>
	Skill and capacity building	<ul style="list-style-type: none"> <li>• Application of traditional knowledge in identifying natural seepage basis community's knowledge of seasonal water flows</li> <li>• A model of low-cost pipeline, one-fourth of typical government schemes</li> </ul>
<b>Renovation of natural springs seepages Aati</b>	<b>Outputs</b>	
	No. of springs	<ul style="list-style-type: none"> <li>• 3</li> </ul>
	<b>Outcomes</b>	conservation of traditional water systems
	Implications for household labour	<ul style="list-style-type: none"> <li>• Women's workload reduced</li> </ul>

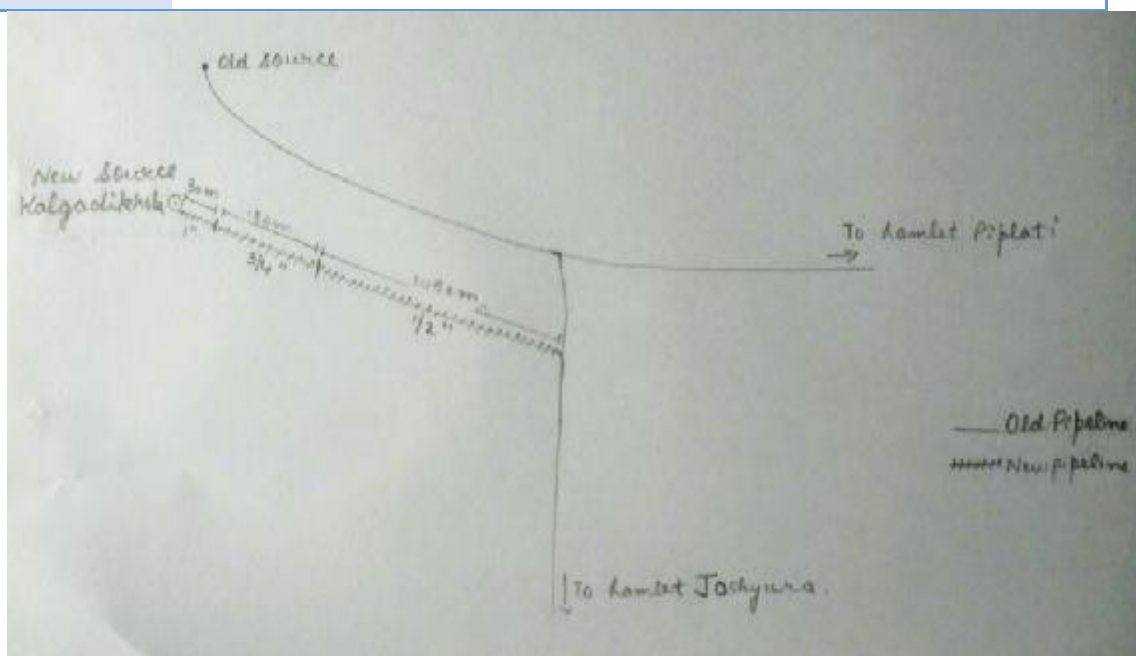


Figure 40: Pipeline layout to resolve water scarcity & conflicts at Joshyura, Champawat.

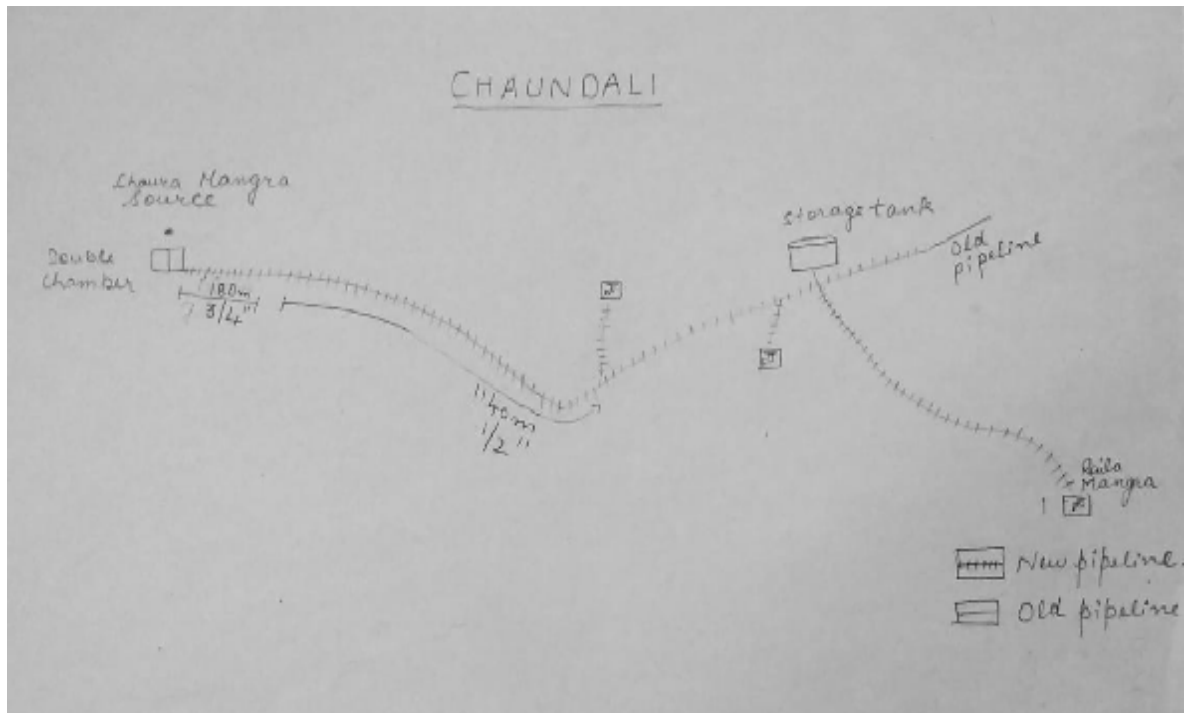


Figure 41: Pipeline layout to resolve water scarcity and unequal water availability at Chaundali, district Chamoli.

In Chaundali water shortages were a problem for all but were most acute for downstream households who could not get sufficient water through the piped water facility in the hamlet resulting in intra-hamlet differences in water access. A natural seepage is located within the hamlet but its water is not potable. Drinking water facilities such as several taps and storage tanks are spread out in the hamlet but they don't meet the daily needs, more so during the summer season. To meet the daily requirements the village residents, walk to a natural seepage located about half a km away from the village every day. Walking to and from, waiting and filling up water would take 2-3 hours every day. Summer months meant much drudgery for the residents as they had to make multiple trips on foot to fetch water. And much of this burden fell on women and girls.

To resolve the problem a 1140 m pipeline was laid down from an unused natural seepage and a 13000 L storage tank constructed in the hamlet to store water for uninterrupted supply. The new infrastructure was merged into the pre-existing pipeline and three new tap stand posts were also constructed to achieve an equitable spread of taps in the hamlet.

## (ii) Polythene-lined water tanks

At three village clusters water scarcity was addressed by expanding storage capacity in form of polythene lined tanks. The horticultural hamlets in the Pata region have been facing severe water crisis for years mainly attributable to climate change and anthropogenic pressure. In Pata cluster, an acute awareness of competing demands on the water resources emerged ever since tourist



resorts and elite housing complexes came up in the local area and more particularly right above the hamlet. Water availability in the ravine that flows beside the hamlet in the vicinity has dwindled. In addition to the pressure of over-extraction, climate change is affecting all dimensions of ecological processes, including water flows and rainfall patterns. Declining water availability has impacted horticulture immensely which is the main livelihood in the area. The women's group of Pata therefore concluded that they would benefit immensely from polythene-lined tanks. About two years ago poly-tanks were built in neighbouring hamlet Galla, under a project funded by ICAR, which partly triggered this choice, as Pata residents were witness to the multitude of benefits neighbours had reaped. The demand for tanks were so high in that area after 90 tanks were built in Pata during 2017-2018, residents of Budibana, Lodhia, Sakaar, Muskutan, amongst others, also expressed interest to be included in the NMHS project in the 2nd year. Total 312 poly tanks of ten thousand litre capacity each have been built by beneficiaries under the NHMS project.

In Aati cluster, a total of 10 polythene lined tanks have been constructed by households interested in vegetable cultivation during the total project duration (2017-2019). Nearly all of these polytanks are rainwater dependent, intended to conserve run-off and rainfall.

In Joshyura clusters, 5 polythene-lined tanks have been built along with poly-tunnels for water provision.

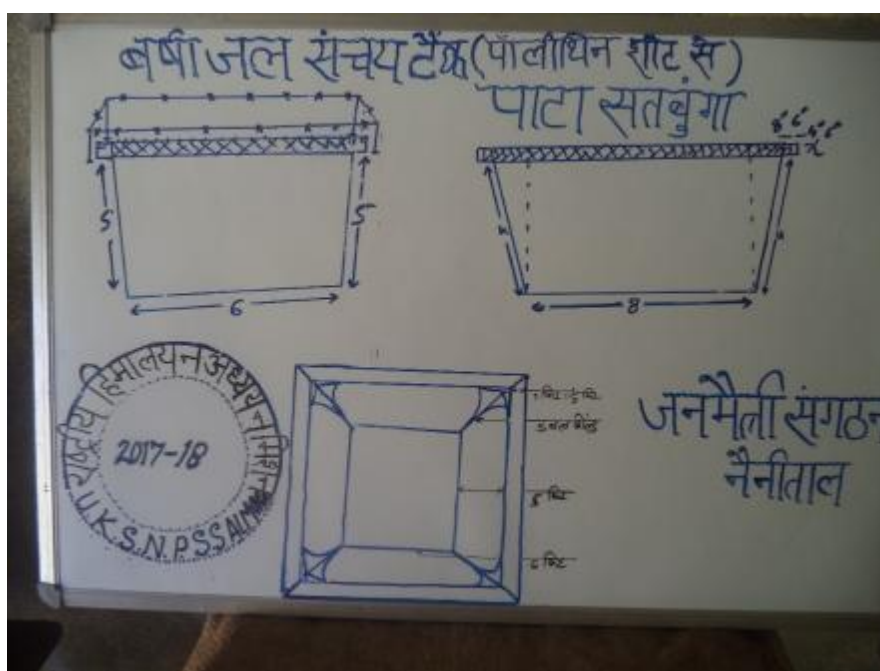


Figure 42. Dimensions of the tanks as thought out by communities at Pata and Galla.



Figure 43. Water tanks (in blue) dot the fields at Pata.

### (iii) Renovation and maintenance of natural water resources

To ease water scarcity in the area renovation of 3 springs and seepages was also undertaken to ease off pressure on existing water sources.



Figure 44. A naula (water spring) after renovation.

### **(i) Conflict resolution in Joshyura**

Our field experiences from a large number of hill villages points to the significance of water as a critical resource in causing unrest/conflict or on the other hand forging harmonious community relations. When tenets of equitable sharing, fairness and justice are built into practical initiatives, they can go a long way in contributing to healthy community relations and resultantly a resilient community.

The pipeline work at Joshyura has successfully solved longstanding conflicts in the hamlet. The individual pipeline for Joshyura has resolved the inter-hamlet conflict. A written agreement on free flow of water supply and removal of all blockages and diversions within the hamlet has resolved intra hamlet conflicts and cynicism.

### **(ii) Enhancing harmony through inclusion in Chaundali and Pata**

The poly tanks of Pata have expanded piped access to the natural seepage through an efficient system of sharing. The few households that have a private pipeline from the natural seepage in the hamlet are now supplying water to other households once their poly tanks get filled up. The new water source is meeting daily water needs of the entire hamlet.

Issues of equity and access have been consciously considered and effectively dealt with within the scope of the Chaundali pipeline layout. Now the downstream households, most of whom were scheduled caste are also benefiting from the piped supply. Inclusion of all attempted while deciding location of the taps. For instance, one stand post on the route taken by women to the forest, a separate tap as close as possible to the highest cowshed in the hamlet and another closer to the downstream scheduled caste households to ensure that the initiative benefits the majority.

### **(iii) Healthy mechanism of cooperation and sharing evolved in Pata**

Pata's poly tanks function as a web was made possible by the principle of sharing water with neighbours as tanks get filled up. As a tank fills, a pipe is connected to a tank in the vicinity. The system has strengthened mutual trust, bonding and reliance within the hamlet.

### **(i) Poly houses**

Considerable interest in horticulture, particularly for vegetable cultivation was expressed across the village clusters as several crop cycles can be reaped in a short span of time, and the produce is readily marketable locally. The NMHS initiative has leveraged pre-existing conditions and livelihood practices to boost the local economy. Gwar and Pati clusters have been into vegetable cultivation for a long time and opted for poly houses to further strengthen their livelihoods. In Gwar this was taken up during the entire two-year project duration, and in Pati this work began only in the second year of the project. A total of 43 poly houses and 49 movable tunnel shaped poly houses, were constructed in Gwar and Joshyura cluster.

## 2. Improving farm and non-farm livelihoods

Table 25. Improving horticulture.

Reinvigorating commercial horticulture & domestic vegetable production		
<b>Poly houses</b>  <b>Clusters</b> <b>Joshyura (Champawat)</b> <b>Gwar (Chammoli)</b>	<b>Outputs</b>	
	No. of poly houses built	92 in 5 villages/hamlets
	Area brought under poly houses–total and average/household	1 poly house = .2 nali (approx)
	Income from vegetable sale	Around Rs. 15000/year (Joshyura) & Rs. 25000/year (Gwar)
	Reduced expenditure	Rs. 3000 per season or Rs. 18000/year
	<b>Outcomes</b>	
	Implications for livelihood strategy	<ul style="list-style-type: none"> <li>Enhanced incomes, improved horticulture</li> <li>Confidence in feasibility</li> </ul>
	Skills and capabilities	Learning by doing: different polyhouse design and iterations by CBO and community
<b>Fruit sapling plantation</b> <b>Clusters</b> <b>Kimana</b> <b>Joshyura</b> <b>Gwar</b> <b>Chaundali</b>	<b>Outputs</b>	
	No. of plants	5390 plants, 1750 households, 24 hamlets
	Species	Apple, plum, kiwi, apricot
	Survival	60% (Pati)
	<b>Outcomes</b>	
	Income	To be achieved over longer term
	Implications for livelihood strategy	To be achieved over longer term: supplementary income source
<b>Vegetable cultivation: Engagement and seed distribution</b>  <b>Clusters</b> <b>All village</b> <b>Clusters</b>	<b>Outputs</b>	
	Number of households engaged-seeds distributed to	1254 households of 20 villages
	Total area brought under Horticulture	607 nali
	Fallow land brought under cultivation	6 nali
	Production and income generated	Not monitored
	Months of vegetable production attained	6-8 months
	Sale income	Sale income reported in Pata, Kimana, Aati, Gwar
	<b>Outcomes</b>	
	Food security/improvement in nutritional intake	<ul style="list-style-type: none"> <li>Range of vegetables in daily diet repertoire increased</li> <li>New vegetables have entered food basket</li> <li>Poverty stricken Byolda households eating a nutritionally richer diet</li> </ul>
	Any implications for household livelihood strategy	§ Diversification of livelihood § Reduction in purchases § Skill and capacity building § Enthusiasm for minor horticulture § Confidence in feasibility of vegetable cultivation and ability to succeed (where not done earlier)
	Social capital	§ Cooperation to tackle crop depredation
<b>Plant nursery</b>  <b>Clusters</b> <b>Kimana</b> <b>Gwar</b>	<b>Outputs</b>	
	No. of households engaged	8
	Income generated	Rs. 13000/household in Kimana, not yet at Gwar
	<b>Outcomes</b>	
	Any implications for household livelihood strategy	Successful experiment with supplementary income source



Figure 45. Farmers put organic manure to enrich soil inside poly houses.

The mainstay of Gwar's economy is dairying and vegetable cultivation. It was felt that an initiative to improve vegetable production would be ideal as Gwar is located by the road and has well established market linkages. It emerged through the meetings that expanding into non-seasonal vegetables would enable residents to consume organic home-produced vegetables through the year, in addition to selling them. This idea was partly inspired by the existing government subsidized poly houses in the village, which only a few had been able to take up owing to the considerable investment required, over and above the subsidy. Through the NMHS initiative access of poly houses has expanded to interested others.

At Gwar, the beneficiaries along with the CBO representatives experimented with the poly house design and displayed USNPSS's 'learning by doing' ideology very well. Initially iron frames were used for a few poly houses which were later replaced with bamboo resulting in considerable cost reduction. In the first lot, windows hadn't been included in the design, which heated up the poly houses excessively, harming the plants and made working inside unbearable. Later on, the same structure was adapted to include windows.

Like Gwar, Pati cluster is also known for good vegetable cultivation however production declined considerably due to damage by wildlife in recent years. Here, beneficiaries opted for easily movable tunnel shaped poly houses, keeping in mind the need for soil rotation every few seasons.

## **(ii) Vegetable seeds**

To address the widespread demand for good quality vegetable seeds, these were distributed in all project clusters covering a total of 1214 households and 18 villages/hamlets.





Figure 46. A woman farmer in Gwar, district Chamoli, saves seeds for future use.

### (iii) Fruit saplings

In a few clusters, fruit tree saplings were also distributed as per demand. This was envisioned as a way of diversifying the livelihood profile. In Gwar most orange trees had aged past the productive stage and to replace them lemon tree saplings were planted given its medicinal value and market demand. In Pata, in view of the badly affected agricultural situation residents wanted to diversify land-based activity. In Chaundali, residents were eager to try new income sources and were eager to plant fruit trees. It was decided to distribute some fruit trees to all households of these clusters. A total of 5400 fruit saplings were planted in 20 villages by 1035 households.

### (iv) Nurseries

In two clusters, Chaundali and Ukhimath, plant nurseries were set up as a form of supplementary income, covering a total area of 5 nalis. While the one at Chaundali is a community nursery of aromatic plants for sale; the ones at Kimana are independent nurseries set up by individual households.

## 2.2 Improving non-farm livelihoods

The felt need for cash income to keep up with the changing lifestyles and indomitable pull of youth aspirations was most obvious across the project sites. At the same time, it was well acknowledged that farm livelihoods are becoming increasingly vulnerable due to climate change impacts and ecosystem degradation. Need to expand into the non-farm sector was perceived to be a matter of urgency. Keeping community needs and aspirations at the centre of the project, a variety of non-farm initiatives were initiated, although much more remains to be done in this sector. Out of these, the most challenging was the execution of the women run dhabha and marketing shop, which we discuss first.

Table 26. Reinvigorating non-farm livelihoods.

Reinvigorating non-farm livelihoods		
<b>Women run dhabha Aati</b>	<b>Outputs</b>	
	No. of women employed	2 women and 1 man (whole village women's group is involved)
	Income generated	Starting stages
	<b>Outcomes</b>	
	Social innovation	<ul style="list-style-type: none"> <li>• Breaking gender stereotypes/change in gendered norms and expectations</li> </ul>
	Social capital	<ul style="list-style-type: none"> <li>• Strengthening of community cooperation</li> </ul>
<b>Local produce marketing centre/ shop</b>	<b>Outputs</b>	
	Institutional system	Supply chain system worked out
	Total number of beneficiary villages	41 villages
	Income generated	Starting stages
	<b>Outcomes</b>	
	Social capital	Strengthening community cooperation
<b>Clusters Aati Chaundali</b>	Any implications for household livelihood strategy	<ul style="list-style-type: none"> <li>• Diversification to non-farm</li> <li>• Market linkage for farm produce</li> </ul>
<b>Tailoring and knitting training centre Kimana</b>	<b>Outputs</b>	
	No. of women/girls trained	98
	No. of trainees involved in income generation (from home/shop established)	67
	No. of sewing machines provided to interested	8
	No. of knitting machines provided to interested	12
	Income generated	500-9,000 per month (depending on the village)
	<b>Outcomes</b>	
	Skill and capacity development	Supporting and mentoring young entrepreneurs
<b>Food processing trainings Kimana</b>	Social innovation	Redefining gender roles
	<b>Outputs</b>	
	No. of beneficiaries	318 participants from 12 hamlets
	No. of trainees involved in income generation	70
	Income generated	700-2000 per season
	<b>Outcomes</b>	
	Skill and capacity development	Value addition to farm produce
<b>Ringaal handicraft training Kimana</b>	Any implications for household livelihood strategy	Supplementary income source
	<b>Outputs</b>	
	No. of beneficiaries	25
	<b>Outcomes</b>	
<b>Poultry units Kimana (Rudraprayag)</b>	Skill and capacity development	Value addition to natural produce
	Implications for household livelihood strategy	Supplementary income source
	<b>Outputs</b>	
	No. of beneficiaries	4 with set up of 100 chicks each
	Income generated	Around Rs. 2000 after 3 months
<b>Madua thresher Chaundali and Gwar</b>	<b>Outcomes</b>	
	Skill and capacity development	
	Financial security/liquid cash	
	<b>Outputs</b>	
	No. of households/beneficiaries	Whole village
<b>Madua thresher Chaundali and Gwar</b>	Quantity of <i>Madua</i> processed	All village produce
	<b>Outcomes</b>	
	Implications for household labour	Women's work has reduced
	Implications for household livelihood strategy	Motivated to continue <i>madua</i> cultivation

### **(i) Women run restaurant and local produce shop**

The initiative at Aati arose from the urgent need to rethink and reinvigorate local livelihoods. Although agriculture continues to be practiced here, the increasing relevance non-farm sector was palpable and acutely evident from the fact that nearly a third of the working men were engaged in non-farm occupations (Household survey, 2017). This demonstrates the realization that labouring on the agricultural field alone can no longer sustain life in the hills. The chronic problem of inefficient agri-produce marketing facilities along with declining agricultural production called for some concerted efforts.

#### **The model**

Aati enjoys a strategic location close to the Danya market, beside the busy tourist route that connects Almora to Munsiyari and beyond<sup>1</sup>. The tourists that pass along the route were identified as a niche consumer segment that would appreciate pahadi cuisine and local organic farm produce. Local travellers would also appreciate food close to home cooked meals. Since the restaurant can only utilize limited produce from the hamlet a display and sale section, where local millets, spices and pulses will be sold, was conceptualized to open up the opportunity to the entire village. Residents of Danya town and the numerous hotels in the market also require a regular supply of vegetables and groceries.

The restaurant's unique selling proposition is authentic pahadi food (pahadi identity) made by local pahadi women (close to home cooked food) in an all women managed restaurant (differentiation), made wholly out of Bamboo (eco-friendly). These elements differentiate the hotel from other eateries in the area.

A few women would run the hotel and shop as regular employees. A federation has been formed and interested households from nearby villages can join in. Local food produce would be supplied by members of the federation. This would eliminate middle men, increase household incomes and scale up the impact. The hotel and shop together would act like a marketing hub for the hamlet's produce.

#### **Structural work**

Feasibility of the bamboo design was studied by the CBO and finally adopted to meet the budgetary allocation of Rs. 2.5 lakhs. Furthermore, the attractive bamboo structure would set the hotel apart from the concrete buildings that crowd the landscape and be a model of low-cost construction which doesn't compromise on attractiveness. The structure was completed by July 2018. Unfortunately, a landslide during the monsoon season severely damaged the structure (see figure). The repair work was completed in June 2019 costing additional money. The restaurant and shop finally became operational in June 2019

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<sup>1</sup> Common tourist destinations on this route are Pithoragarh, Lohaghat, Champawat, DharChula, Munsiyari





Figure 47. Inside the restaurant.



Figure 48. The same structure after a landslide in the monsoons in August 2018.

### **Ownership and administrative structure**

At USNPSS it was recognized early on that the choice of the ownership structure was the most critical decision which would determine the nature and scale of the venture's impact. For instance, an equal shareholding would more likely lead to equitable distribution of profits; and on the contrary unequal stake would be amenable to the risk of power capture by a few influential families. After months of discussions within the community along with some catalytic influence of USNPSS it was decided to set up a federation of the mahila sangathan members, who would be equal shareholders in the venture.

The next important decision was system of employment of staff. Several arrangements were deliberated upon, such as, long term, rotational and part time employment. Finally, fixed employment to a few needy women was decided in the community meetings as the best option. According to them, rotational or part time duty doesn't promise a fixed regular income and is thus not incentive enough to forego involvement in other income generation activities instead. Three willing women have been identified to run the hotel and the shop.

## **Challenges and hurdles**

### **i. Persistent threat of natural hazard induced disasters**

The landslide induced damage to the hotel structure stalled the project and increased costs significantly. There are no clear answers for practically dealing with adverse environmental events that are a part and parcel of living in the hills.

### **ii. Normative sensibilities regarding appropriate work for women**

Initially the concept of women servicing travellers and tourists was strongly opposed as it was perceived to be risky and normatively inappropriate by the village community.

### **iii. Employment of unmarried girls**

Young unmarried women would be the best fit for the job role at the dhaba and shop as they have fewer responsibilities at home, are more articulate in Hindi and English, and are more trainable. However, this is not possible at the moment for the work is felt to be inappropriate for unmarried girls. It may be a possibility after the women run restaurant gains acceptability.

### **iv. Women's already burdened days**

Women's day is already brim full with responsibilities and the hotel would be an add-on for the employed women. Managing time between agricultural, household and hotel responsibilities emerged as a valid concern during the community meetings. At USNPSS we are very keen on monitoring the impact of this added responsibility on women's time use and its implications for her daily life over time.

## **Dealing with local politics**

While long term association of USNPSS and the local CBO with women's groups in Danya had opened up new possibilities of income generation activities, the process of opening up a restaurant was marred with local politics too. The most vivid example of this aspect was reflected in attitudes and behaviour of the restaurant owners who were already in business. Feeling threatened, a restaurant owner filed a false case against the person who had given his land to build the restaurant. Further, the land-lord had to deal with several enquiries from the local administration, based on complaints made by the local influential men and also as routine procedures.

The gender aspect added another dimension to the problems that had already cropped up. Since the members of the women's group in Aati village were to run the restaurant, persistence of the traditional roles that co-exists with deeply entrenched ideas of gender segregation in society did surface and led to resistance for such a move. The women, however, were articulate and managed to defend themselves by sharing tasks and making the working hours flexible. In a meeting, it was decided that the restaurant will function from the morning to the afternoon and close in the evening. This was to avoid any row that might come up in the evenings when the local traffic was low and instances of abuse and harassment under the influence of alcohol were not unusual. In addition, women had work at home because a majority of them had cattle and the other household tasks needed attention.

### **(ii) Local produce marketing centre, Garhwal**

An urgent need for an agri-produce marketing centre/shop was also recognized in Chaundali cluster in Garhwal. Agricultural production in the area is good but marketing of indigenous grains and millets is a difficult task. A marketing centre where local produce would be procured and packed has been set up at Chaundali.

### **(iii) Poultry**

A few poor households that needed urgent financial help opted for small poultry set ups that would provide quick liquid cash returns. Two households were given 50 chicks each to rear and sell poultry. They were also provided with some fund for setting up a bare minimum infrastructure for the same.

Bira, a 32 years old woman from the scheduled caste hamlet Byolda, is entirely dependent on daily wage labour to take care of her large family of 8 daughters. She reported production of 5 sacks (35 kg each) of potato and 8 kg of ginger. She retained some produce for her home and sold the rest bringing in cash income of about Rs. 3,000 in one season. She earned nearly Rs. 13,000/- from the poultry business. Thus, their household earned about 16000/- from the NMHS interventions over the first year.

Shanti Devi, a 30 years old mother of five children reported having home grown vegetables for the 8 months of the year to sustain her family, versus being completely dependent on purchased vegetables the year prior to the NMHS project.



Figure 49. Women benefitting from growing potatoes and having poultry at Byolda village.

#### **(iv) Madua threshers**

As per demands of Chaundali and Gwar households, two units of Mandua thresher have been provided. These machines are used in rotation by members of women's groups in both sites. It has reduced women's labour and time that used to incur in processing of madua.

#### **v. Food processing training**

Training programmes on making pickles, juices and jams were organized at 15 hamlets in Ukhimath cluster in which about 150 participants undertook training.

#### **vi. Tailoring and sewing training centres**

As demanded by young women and girls, tailoring and sewing centres were set up in Kimana cluster where 98 participants from surrounding villages have under taken training so far. Experienced tailors have been employed to provide basic training to begin with and also acquaint with latest trends. Eight sewing machines and 12 knitting machines have been given to interested women and girls to undertake this work from their homes.

Table 27. Enhancing health of a village ecosystem.

3. Enhancing health of village ecosystem		
Regeneration and protection of village forest		
<b>Village ecosystem assessment</b>  § All clusters	<b>Outputs</b>	
	Village ecological workbooks completed	18 hamlets
	<b>Outcomes</b>	
	Skill and capacity building	<ul style="list-style-type: none"> <li>• Empirical knowledge</li> <li>• Hand-on training on assessment tool</li> <li>• Confidence</li> <li>• Ability to monitor change over time</li> </ul>
<b>Plantation of fruit, fodder, herb species in village forest</b>  Clusters: § Pata	<b>Outputs</b>	
	No. of plants/saplings planted	15000 in Pata+1000 Chaundali area
	Area of plantation	Village forest + reserve forest +van panchayat
	Species planted	Local fodder and fruit bearing trees: Oak, mulberry, darim (wild pomegranate), grape, Tushar, mango, local tubers
	<b>Outcomes</b>	
	Implications for ecological health	<ul style="list-style-type: none"> <li>• Improved biodiversity, leaf litter, soil quality, nutrient cycling</li> </ul>
<b>Plantation of fruit, fodder, herb species in village forest</b>  Clusters: § Chaundali § Kimana § Gwar	Implications for well-being	<ul style="list-style-type: none"> <li>• Anticipated reduction in crop depredation by wildlife and better returns from agriculture</li> </ul>
	<b>Outputs</b>	
	Number of plants/saplings planted	25000
	Species planted	Lemon, Napier, Mulberry
	<b>Outcomes</b>	
	Implications for ecological health	<ul style="list-style-type: none"> <li>• Anticipated: less dependence on forest produce</li> </ul>
<b>Protection of forest</b>	Implications for household livelihood strategy	<ul style="list-style-type: none"> <li>• Supplementary income</li> </ul>
	Implications for household labour	<ul style="list-style-type: none"> <li>• Reduction in women's work of fetching fodder, leaf litter etc. from forest</li> </ul>
	<b>Outputs</b>	
	forest protection	Community owned forests, reserve forests, van panchayats in all sites
<b>Protection of forest</b>	<b>Outcomes</b>	
	Implications for ecological health	Anticipated improvement in ecosystem services over long term

## 5. Overall project outcomes contributing to resilience of village ecosystems

Quantitative data relating to the accomplishments of the NMHS programme is presented in a table in the beginning of the report. The following section focuses on the overall qualitative achievements in villages.

### Enhancing water security by improving availability and resolving conflicts

In addition to solving water insecurity concerns, the initiatives have succeeded at being extremely sensitive to location specific intricacies such as local level politics, differing needs of stakeholder groups (social group, gender, village/hamlet associations). In the following discussion we shall see that these practical initiatives have resulted in higher order outcomes such as conflict resolution, cooperation and sharing mechanisms, improved health and well-being and setting examples of efficiency and optimization.

#### Multiplier effect of water

Availability of water has a far greater cumulative impact over time, akin to the concept of multiplier effect used in economics to describe the much greater income generated in society upon a smaller amount of investment. For example, a good crop brings in good cash income and good quantities of agricultural waste. Better incomes translate into better living standards and investments on human resource development. Better agricultural waste translates into better fodder and manure; which in turn leads to more milk production and enhanced soil fertility. When part of the total water requirements is taken care of by the added storage capacity women spend lesser time and labour on fetching water and more time on productive activities. Women beneficiaries of Pata reported that at present they only fetch drinking water and therefore younger women can spend more time on skill training initiatives.

Chaura Singh Nayal of Pata had not cultivated potato in the year prior to the project but in 2018 he got a higher production of peas and also cultivated potato as the second crop. Tara Devi reports a harvest of 9 sacks of peas in 2018, as opposed to none the previous year. Some more self-reported production figures are displayed in the table below:

Name	2017 summer	2018 summer
Gaura Singh Nayal	3-4 sacks of peas	10-12 sacks of peas
Hema Devi	3 sacks of peas	15 sacks of peas
Tara Devi	0 sacks of peas	9 sacks of peas
Tara Singh Gaud	6 sacks of potatoes	20-25 sacks of potatoes
Prakash Chandra	3 sacks of peas	9 sacks of peas





Figure 50. Water storage tanks at Pata.

#### **Enhanced water availability across project sites**

In Pata cluster water tanks have helped enhance storage capacity of each beneficiary household by 10,000 litre and a total of 312 lakh litre capacity has been added overall. In Chaundali and Joshyura, the newly tapped water sources are sufficiently meeting the needs of both upstream & downstream households. In Aati, renovated springs and polytanks have eased severity of water woes to some extent.



Figure 51. Narayan Dutt of Aati, Almora, displays his newly dug tank a short distance from his house on the dry hill side.

### Self-sufficiency from water tanks

Narayan Dutt of Aati, Almora is the one out of three brothers who remains at the village. Three of his four sons have migrated outside Uttarakhand to which he approves of as he does not see a liveable future in the hamlet in times to come. He has about 30 nali of cultivated land in which he grows a mix of local millets, cereals and small amounts of vegetables for household consumption. Although he is committed to working hard on his fields and bringing home the little, he can, his biggest concern is the acute water scarcity in the hamlet.

*“This is a very dry area and water is a big problem. We get only drinking water from the tap, which too is supplied just once a day. Since it is not raining properly, we are in this state and the water in the seepages has also declined. There is no option but to take our cattle downhill to the ravine”*

Even as his sons try to establish themselves away from the village and its hardships, Narayan Dutt is certain that he would continue living here and practising agriculture. He believes anything that can help him better his agricultural production will be a blessing for him. For this reason, he has dug the poly tank right where the water drains down the hill slope so maximum run-off can be collected.

*“If we have water, we have everything. Earlier I could easily get a basket full of garlic, onions and a few baskets of potato. This year I did not have enough for sowing wheat so I had to purchase the seed from the market”*

The polythene-lined tank is a flicker of hope amidst the difficult circumstances. He now grows a diversity of vegetables which have reduced household expenditure.

*“When I came to know about the project, I thought why not to grow some vegetables. Some spinach, chulai, capsicum, onions and potatoes. Every day I put water in these manually. I grow green chillies in these fields next to the poly tank. Due to the poly tank I can give some water in all these fields and when it rains the tank will be filled up again”.*

In Pata, beneficiaries have experienced remarkable results in horticulture due to the polythene-lined tanks. Instead of being fully dependent on rainfall the polythene lined tanks have brought a great degree of autonomy to the horticulturist's plans and augmented incomes. Ability to store large amounts of water displaces the growing sense of helplessness in light of uncertain rainfall patterns and dwindling water resources.

Multiple cycles of vegetables are now grown under the fruit trees, which is significantly improving production for both home consumption and sale. Within a few months, water tanks have proven their immense utility in buffering households against the vagaries of climate. The



need for polythene lined tanks is so acute that the available funds were not sufficient to meet demands of all those interested.

### **Fight for right to water: Hamlet Pata**

Residents of Pata and the local CBO have long been raising their voices against illegal water extraction by big resorts that are situated just above the hamlet. After women's active engagements in NMHS activities, a new zeal can be seen amongst the women to stand up to the management of the aid resorts. In \_\_ January 2019 women's group held a meeting with the resort management and further emphasized their disapproval regarding deep boring water extraction as it affects downstream village communities in addition to disturbing the ecological balance. They demanded all such structures to be destroyed as soon as possible as the first step for any further talks. They also raised instances of tree felling by resort management and warned of repeating this in the future. Such a one-on-one meeting with the resort management was a first. The community's confidence and conviction were strengthened by their recent collectivization and engagement in tank construction and awareness activities.

### **Horticultural and home production enhanced across villages**

Water availability has supported and enhanced both commercial horticulture and home production in the project hamlets. In Chaundali, vegetable cultivation was not prevalent but when seeds were supplied and sufficient water was available, good cauliflower production was achieved reducing some expenditure on purchased vegetables.

### **Resource Efficiency**

The NMHS activities are excellent models of making best use of resources (infrastructure, human resource, finance). In Pata, 14 abandoned cement water tanks that were damaged or leaking have been polythene lined and brought back to use. Augmented storage capacity and efficient water sharing mechanism has minimised the wastage of water.

In Joshyura, by including the existing pipeline infrastructure in the layout, the expenditure on the new pipeline was minimised as much as possible. In Chaundali, considerable part of the expenditure was avoided as the community provided voluntary labour for the non-technical part of the work. Community of Joshyura and Chaundali were amazed that this work was accomplished at nearly one-fourth cost of government projects.

### **Women's drudgery eased**

While benefits of convenient water availability span across age and gender, they are particularly significant for women's daily lives in these water scarce hamlets. Women and unmarried girls primarily responsible for fetching water spent a lot of time on this task. In Pata and Aati polythene tanks are now used for multiple needs, such as washing clothes, utensils and feeding cattle and have eased women's burdens to a large extent. In Chaundali and Joshyura, enhanced water flows preclude women from making multiple trips to the natural source located a kilometre away. This was most perceptible in Chaundali as women and girls did not need to fetch water from the natural seepage during the summer of 2018. A woman from Chaundali appreciated this change immensely, *"Had the pipeline not been made at this time we would have been busy fetching water, so it's a huge change in our lives"*

Time is a limited resource and when time is saved in any aspect of daily life it opens up opportunities for optimizing daily time budget with more time available for productive recreational and self-care activities. Older women reported having more time for resting, socializing and self-care; while the younger reported spending more time for recreation, learning and skill development. During a focus group discussion with girls and young women it was a common refrain that they were less pressured for fetching water and are thus able to spend more time for skill training sessions.

### **Ecological benefits of water storage and slow release**

Poly tanks help improve soil moisture levels and ground water levels because water is used gradually in smaller quantities for irrigation, instead of washing down the slope swiftly.

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### **Enhancing forest health and knowledge of ecosystem services**

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#### **Engaging and enthusing village community for forest regeneration and protection**

The awareness activities, discussed at the beginning of the chapter, proved very effective in educating the community about the intricate linkages between forest health and their most pressing problems such as declining water flows, crop depredation, soil erosion and decline in soil fertility. The practical 'hands-on education' motivated the community far more profoundly than generic messages of afforestation, which have become trite and commonplace. Through practical activities, such as, *'apne jungle ko jaano'*, water flow measurements, forest health assessment etc. these over repeated issues were brought alive by reinforcing the critical value of forest as a resource and the ecosystem services it provides. One of the biggest achievements of the NMHS work is to have enthused the village communities, particularly the youth, towards improving the state of the village forests basis its contribution to long term well-being.

## **Anticipated long term ecological outcomes**

A whole range of ecosystem services shall be realized as over medium to long term from the massive forest plantations.

- **Reduction in wild life induced crop depredation:** For many beneficiaries the foremost motivation for planting fruit and herb species was to tackle the increasing incidence of wild animals straying into human habitations. It is expected that incidences of crop depredation would go down once these plants mature and provide food to wild animals, particularly, monkeys and wild boars.
- **Fodder resources:** Fodder species were opted by hamlets where considerable cattle population exists, these were planted in the forest area as well in the hamlet.

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## **Synergistic project outcomes**

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### **Conflict resolution**

Socio-political conflicts are not only the biggest hurdle to the progress of any community, they further involve community of its social capital and resilience. Since it was difficult for the community to envision any progress unless such disputes and conflicts are resolved, they were tackled head-on through the NMHS funded work. For instance, the long-standing disputes over water have finally been resolved and in Chaundali, such conflicts have been precluded by expanding access of water to all.

### **Intergenerational cooperation**

Awareness and engagement component served as a platform for different generations to talk, share and exchange views on the nature of change in village ecosystem. Different knowledge and value systems came face to face and despite the differences, cooperation was achieved in all project sites.

### **Community cohesiveness**

Through the process of collaborative decision-making community bonding has strengthened considerably. In some hamlets special mechanisms of cooperation have evolved to support and sustain the project initiatives. For instance, in case of Pata, the success of poly-tanks is directly dependent on the willingness and efficiency with which households share flowing water with each other.

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## **Improved and enhanced horticulture**

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### **Empowerment through doing, innovating, customizing**

The poly houses were designed by Gwar and Joshyura communities after a lot of discussion and iteration. Starting with a general idea and limited technical inputs from UNSPSS, beneficiaries

and CBO staff designed low cost bamboo poly houses. In Gwar fixed poly houses were opted for due to space constraints while in Pati, movable tunnel shaped poly houses were opted for to enable convenient soil rotation. As a result of this process the beneficiary households are now adept at making low-cost poly-houses

### **Enthusiasm towards horticulture**

Hamlets where vegetable cultivation wasn't prevalent have a renewed enthusiasm towards minor horticulture for their household needs and have developed confidence in their ability to reap good results. Kimana and Chaundali households were mainly into cereal and millet and cynicism towards vegetable cultivation was strong due to anticipated damage by wild animals. Two years of NMHS work has certainly changed that perspective. In Kimana a total of 225 nali was brought under vegetable cultivation. During the focus group discussion (FGD) at Kimana, depending upon the area cultivated women reported cash savings ranging between rupees 500–5000 over the year.

To tackle wildlife, rotational crop watch was operationalised by identifying a patch of land located closer to the habitation and where several families owned land. The initiative was thus also a social experiment for overcoming the pervasive problem of wildlife induced crop depredation. It has served as an effective demonstration to neighbouring hamlets that vegetable cultivation is feasible with community efforts.

The scheduled caste hamlet Byolda deserves special mention, where 607 nali land has been brought under vegetable cultivation, including 5 nali which had been left fallow.

### **Enhanced incomes**

Poly houses have boosted horticulture and augmented incomes. By making off season vegetable cultivation possible, a wider range of vegetables are available for sale through the year. This supports household incomes during the lean dairy season, the main income source in the village.

In Kimana and Gwar, nurseries were also set up as a source of supplementary income. The former are individual nurseries of plants that are locally demanded and the latter a community initiative of medicinal and aromatic plants, which will give returns in a few years. The beneficiary families at Kimana earned around Rs. 13000 from their nurseries over the season.

### **Better diets**

Poly houses have resulted in greater diversity of organic vegetables for household consumption. Poly houses have encouraged experimentation and some new vegetables have entered the regular food repertoire. A wider variety of home-grown vegetables has contributed to their food security and considerably expanded the routine food basket. Several vegetables, such as ladies' finger, tomatoes, capsicum, and brinjal that were previously purchased are now grown at home. During the FGD at Gwar, beneficiary households reported about 6 months of home-produced vegetables,

reducing their expenditure by Rs. 500 to 2000 over a season. Although it may appear like a paltry amount it is a significant support to less well to do families. If continued over the years the activity can be a sustainable solution for improving health and well-being of the community.

**Changing attitudes towards farm work: Scheduled caste hamlet Byolda,  
Rudraprayag**

The scheduled caste hamlet Byolda deserves a special mention, where 607 nali of land has been brought under vegetable cultivation, including 5 nali which had been left fallow for years. The very process of making inroads into Byolda and motivating the residents to get involved under NMHS activities was a challenging task. To begin with women of Byolda were encouraged to take part in women's group activities at the gram-sabha level and also to form their own sangathan. Later a variety of vegetable seeds were distributed in the hamlet just before the monsoons of 2017 set in. Despite repeated attempts to motivate them, things didn't get moving. The community organizer then arranged for a demonstration on planting seeds by a woman from the neighbouring hamlet Kimana, who was already a beneficiary of the NMHS project. When the Byolda community still didn't move to action, the community organizer reached the village one early morning and told everyone that he wasn't leaving until the seeds were planted.

One year post the NMHS project Byolda looks different and the residents feel differently about their lives. Indifference has given way to motivation, and ambivalence to confidence. During the focus group discussion conducted in the hamlet on 2<sup>nd</sup> July 2018, a woman expressed the general attitude of discouragement towards agricultural labour and how it has transitioned. The bigger victory is the change in attitude towards agriculture. Like Kimana these families too are taking turns to watch over the fields and are succeeding in their efforts.

*"Because we get nothing out of doing this work, so we had thought leave it,,even if we work hard we won't get anything...but after doing this for two years we can see how much we have benefitted".*

## **Equity and inclusion**

In Gwar those unable to afford the state governments subsidized poly houses have been able to join in under the NMHS initiative.

## **Sustainability of practical work ensured**

Tenets of project sustainability were woven in to the foundation of the project design and this manner of meaningfully and wholly engaging the community has ensured that the community takes ownership of the project work, rather than viewing it as another government or NGO funded project.

## **Inclusiveness and reaching out**

The doors were left open to all villages in the region to get involved. During the first year the main practical work was undertaken in 6 village sites and in the second year more village communities volunteered for scaling up activities in their respective hamlets.

Special attention was given to such hamlets in the project clusters that needed urgent interventions. The story of Byolda is a case in point where a beginning had to be made from the most basic level of awareness and education of health and hygiene. In a short span of two years the community has come a long way and has attained some degree of self-sufficiency through vegetable cultivation.

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## **Enhancement of and experimentation with non-farm livelihoods**

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### **Renewed vision for innovative non-farm opportunities**

The women's restaurant is a novel attempt at experimenting with non-farm opportunities for rural communities. Although marred with challenges it is serving as a model for a renewed vision and mindset towards income generation that identifies opportunities amidst situations of constraint. The whole exercise has been a crash course on entrepreneurship - identifying unmet needs and feasible opportunities, designing an appropriate legal and administrative structure, assigning roles and remuneration to human resource and deciding upon a clear benefit proposition for customers.

The tailoring and knitting centers have stirred up the entrepreneurial spirit amongst trainees by encouraging them to think about what makes a successful entrepreneur, and in the process providing inputs on the developing expertise (skills to create latest designs & technique), competitiveness (up to date about upcoming trends) and self-sufficiency (technical know-how of machines, basic repairs). Upon course completion some trainees have collaborated and started their own tailoring ventures, which is evidence of the success of the skills imparted – both tangible and intangible.

In Ukhimath area, the tailoring centre is run by an experienced elderly woman who has been offering training on stitching for a long time. The knitting centre was shifted from Kimana to Huddu village this year. Training on knitting is provided by a young woman who is a school teacher's wife and wanted to spend her time in the village in a fruitful way.

### **Training on making artefacts from ringaal**

Training on upgrading skills on making artifacts from ringaal, a local variety of bamboo, was held in Karndhar village, Ukhimath, district Rudraprayag. The village is totally inhabited by scheduled caste families who already had some experience in weaving different items from ringaal. The women's group however wanted to have training related to this work so that items could be made more professionally and could fetch better price in the market.



Figure 52. A knitting centre to generate non-farm income, Huddu village, district Rudraprayag.

### **Weakening of rigid gender norms**

Initially, the very idea of a woman run restaurant and shop was absurd to the community. After months of discussion amongst men & women of all ages, gradually the prospect gained acceptance. This process churned the community's collective consciousness, resulting in emergence of new acceptable pathways for income generation. An unfathomable idea was critically discussed - concerns and oppositions raised, risks acknowledged and solutions arrived at. Women's presence at eateries has been accepted and adopted by some that are outside the scope of the project. Initially skeptical about the feasibility of a women run restaurant, a neighboring hotel owner's wife now works beside her husband at the roadside hotel, an attitudinal change they attribute to the NMHS initiative.



### **Quick cash options for poor households**

Few households, needing urgent financial help were provided with low investment, fast return options such as poultry set ups and nurseries.

### **Support systems for farm livelihoods**

Food processing trainings has enabled needy households to augment their income by value addition to their farm produce. The local produce marketing units, in Garhwal and Kumaon, are dealing with the most longstanding and frustrating issue of farmers – inability to get good markets and prices for otherwise much valued local organic produce, such as, millets, lentils and fresh vegetables. The local produce marketing centres are helping families avoid spoilage of home-produced items and also in getting a better place by avoiding middlemen. *Mandua* threshers have reduced the drudgery associated with growing *mandua*, and for those who have left it, it looks attractive again. In hamlets such as Chaundali where *mandua* grows very well, the machine is a big value add.

### **Merging of disparate knowledge systems: bridging gap between book-based knowledge of the young and grounded experiences of village elders**

An attempt was made to bridge the deep chasm between book based scientific knowledge and decades of practical experience of the elders. The balanced combination of modern theoretical knowledge, traditional knowledge and practical application has resulted in optimum outcomes, tangible as well as intangible. No rigid demarcations between community knowledge, traditional knowledge and theoretical knowledge were maintained because the ultimate aim was to empower these communities to collectively resolve their problems. The plantation drive along with the awareness activities brought the young and the old on a common platform to collate their experiences and knowledge, and reach broader conclusions. Together they acknowledged, appreciated and acted to resolve degradation in the village forest, to the extent that was possible in their capacity. When hands on activities to assess forest health were conducted, it became intuitively apparent to the participants that forest degradation as evidenced by the select indicators is the direct cause of increasing incidences of crop depredation, declining water resources, and fodder deficit. Activities like '*apne jungle ko jano*' and the ecosystem health assessment added to their existing experiential knowledge and made it holistic in a collaborative effort.

### **Learning and skilling by doing**

- Critical thinking and problem-solving abilities

The whole project scoping exercise was an efficient training in critical thinking to identify and solve community problems.

- Managing socio-political barriers

Traversing through socio-political issues that invariably turn out to be bigger hurdles to any constructive work had to be dealt with repeatedly to arrive at a clear plan of action. Local politics, gender norms and conflicting needs of different stakeholder groups stalled the projects again and again, but it was a valuable learning for the community and CBOs to have negotiated and found a way through them.

- Systematic project lifecycle conceptualization and management

The initial few months laid focus on community meetings and discussion, where problems were identified within the scope of budgetary provisions, followed by conceptualizing possible solutions. Then feasible options were identified followed by optimizing and cutting costs. This was an excellent exercise in project management and implementation. The beneficiaries along with the CBOs stewarded project design, execution and quality monitoring in its entirety. 'Jugaad' the quintessential Indian way of doing things was a common feature in the planning and implementation of the initiatives, giving it a relatable 'home-grown' flavour.

#### **Application of scientific tools for village ecosystem assessment**

The beneficiaries got a taste of scientific methods of assessing the status of the village ecosystem and tracking changes therein. Both social and ecological science inspired tools were well enmeshed into the project.



Figure 53. A young SC woman from Byolda village got the courage to speak up and share her experiences re NMHS during a congregation of women. Said that she was holding a mike for the first time in her life.

## **6. Developing evaluation indicators and assessing progress**

The USNPSS staff has developed a sequence of indicators to measure success and to monitor progress regarding activities specific to NMHS programme. The following table exhibits the indicators and the details of evidence emerging from activities carried out under the NMHS programme:

Table 28. Indicators of a resilient village ecosystem.

	Indicators of a resilient village ecosystem	Evidence from NMHS
The individual	<b>Empowered with health, knowledge, skills and practical experience</b>	
	<b>Aware and Knowledgeable</b>	Equipped with latest information Aware of climate change transitions and impacts, future risks
	<b>Healthy</b>	Improvement in nutritional richness of diet Improvement in health and hygiene conditions (Byolda) Catalytic role in provision of proper shelter for a poor family (Byolda)
	<b>Technical skills</b>	Training on income generation skills –Entrepreneurship, stitching, knitting, food processing, horticulture, handicraft Hands-on training on project cycle design, management, budgeting, record keeping Ecosystem assessment tools, climate change knowledge
	<b>Cognitive skills</b>	Problem identification and resolution Decision making Systems thinking-village ecosystem processes and beyond Ingenuity
	<b>Social, emotional and interpersonal skills</b>	Negotiation and conflict resolution at Joshyura and Chaundali Team work and cooperation: all initiatives a collective effort Achievement motivation: despite barriers all initiatives completed Open-mindedness: social and livelihood innovations Confidence in own abilities: learning by doing Empathy: focus on equity and inclusion
The	<b>Empowered with social, natural &amp; knowledge-based capital</b>	
	<b>Able to adapt to change, stresses and disruptions</b>	Multiple disruptions in project implementation dealt with new solutions

	Able to <b>envision and accept transformative change</b>	Transformation in gender norms
	Committed to <b>efficient management of resources:</b> natural, physical and financial	80% fund utilization in villages Low cost Bamboo poly houses and a hotel Use of old pipeline in new water connection Re-use of abandoned cement tanks
	Able to <b>meet basic needs</b>	Community driven organic emergence of all initiatives to address felt-needs Initiatives designed to meet community's most pressing needs
	Able to <b>resolve Problems</b>	Conflict resolution at Joshyura and Piplati over water Multiple disruptions in project implementation dealt with new solutions
	Committed to <b>equity and inclusiveness.</b> Recognizes and <b>respects diversity</b> within	Expansion of water availability to downstream, scheduled caste households in Chaundali Diversity of interventions within project villages in accordance with needs Inclusion of ultra-poor hamlets
	<b>Collaborates</b> across gender, generation, caste, class	Knowledge sharing and exchange between generations Acknowledgement of specific needs of women, young girls, youth Project design and initiatives cover a range of stakeholder priorities across gender, age and caste
	Able to <b>govern itself</b>	Model of village/hamlet level self-governance
	<b>Able to provide healthy ecosystem services</b>	
<b>The ecosystem</b>	<b>Healthy ecosystem services</b> and flows Provisioning Regulating-Supporting-Cultural	Enhancing forest health -Forest protection– fencing and guarding -biodiversity, density, leaf litter – Fruit, fodder trees, herbs plantations in village forest and village Enhancing groundwater levels and soil moisture -Water retention and storage. Reducing run off -Slow release of stored water moisture Pest control and better pollination -Intercropping made possible by water initiatives -Optimum flows between village ecosystem components -Agricultural waste used as fodder, dung used as manure to reduce intake from forests etc.

The indicators listed above incorporate tenets of resilience thinking at different scales: individual, community and ecosystem. As discussed in Chapter 2, these initiatives are a result of free-flowing inclusive discussions at the community level. Therefore, each of these initiatives is a result of the communities felt needs. Our special focus on inclusion and equity has resulted in

initiatives of a diverse nature, that benefit the village community on the whole but some of them have special relevance for particular subsets such as the ultra-poor, women, young girls etc.

We also emphasise that these indicators are not etched in stone and would evolve continuously as per new situations arise. In the current project, resilience thinking is perceptible at multiple levels: the individual, the community, the CBO, the project implementing NGO and the village ecosystem.

The elderly women, still willing to work in the agricultural fields, visualize their lives in the village, as part of a community. Resilience in agriculture is an important issue that plays out both at emotional and economic levels for the older generation of women who also cling to the idea of a continuation of traditional methods of farming. Implicit in this view is to look into resilience as crops/seeds withstanding change (climate, new seed variety etc.) and resuming the same position (for example same levels of production) when the shock is withdrawn. Several agricultural programmes of the government and other large funding organizations bear testimony to this view of resilience when the farmers (here women) sow the new seeds but in a year or two returned to traditional varieties and methods. The point emphasized by women is simply that the traditional varieties are more resilient (ecological resilience).

A deeper look into the issue will however raise the question of why women have not internalized the value of the new improved varieties? Is it resistance to change (at social levels) or the new varieties just do not work (at ecological levels)? Could it be the mindset that the agricultural system would survive or be economical to her only when she resumes the time-tested methods of growing crops? What are the time-tested ways of farming in the village? The simple answer that the farmer will give is that this is how her ancestors did work in the fields. Came a storm or heavy rains or drought or an earthquake, these varieties had survived and sustained families for generations. More resilient a variety, more is the likelihood of it having survived shocks of different kinds and stand tall over time.

For many readers, this view of a woman farmer will offer a superficial explanation of resilience primarily because the mountain agriculture is now declining and the village residents are opting for non-farm activities. While this trend is now clearly visible, a closer look into the issue will disclose that whatever agriculture activity is left in communities it is either carried out by older generations of women or young women who have no choice but to live in the village. Given an opportunity, these young daughters-in-law would prefer to live in the cities and towns whilst others have already moved out.

What do these trends tell us in terms of developing and conceptualizing the ideas of resilience? Two scenarios mentioned above clearly reflect that the theory and practice of understanding resilience in village ecosystems are under transformation. Whilst, the earlier conceptualization spoke to the theme of building up abilities in communities to resist change by trying to come back to their original position, it is obvious that people cannot and do not want to go back to their original status. Ecosystems change over time as various endogenous and exogenous factors

change. People's aspiration and attitudes towards life also change with time. So, a more realistic view of resilience would be to move towards a new state of equilibrium. What that state will be, we do not know, because it is for the first time in the history of Uttarakhand that such a tremendous change is being experienced. Roads are reaching the villages, communication systems with availability of television and mobile phone services have spread. Formal educational systems are improving and there is more mobility than ever before. What we know is that by making people understand the current changes in physical, socio-cultural and emotional aspects of individuals and communities, USNPSS can help reduce confusions and doubts in society and strengthen confidence in people to take risks and move forward.

Across the village clusters the importance of forests for ecosystem resilience was recognised and reemphasized by communities. The two tangible implications of forest degradation (a) excessive crop depredation by wildlife and (b) declining water sources and flows that had emerged prominently during community meetings were fore-grounded in cognizance with hands on activities to better understand current state of forest health. During the campaign on "*apne jungle ko jaano*" and the ecological assessment exercises, communities recognised considerable decline in tree and plant biodiversity which strengthens and supports ecosystem resilience. decline in leaf litter and the soil's ability to absorb water and the resultant decline in groundwater levels was recognized as having serious implications for both human and wildlife population. Likewise, commonly found fruits and herb are gradually declining forcing wild animals to move out of the forest and towards crop fields.

Basis these findings protection of the village forest was carried out at all sites by the women's groups. At two of the village clusters, where crop depredation was a severe problem (Pata and Chaundali villages), it was also decided to plant useful tree species which would help meet their needs and also of wild animals in the forest itself. In total more than 25000 plant saplings, cuttings, seeds of fruits, local tubers, fodder, fuelwood and flower species were planted in forests surrounding these two sites.

### **Collaboration with other institutions and the government**

Collaboration with the G B Pant Institute of Himalayan Environment and Development continued in relation to the NMHS programme executed under the Ministry of Environment and Forests and Climate change, government of India. Dr. Lalit Pande, Anuradha and Ritu participated in a national workshop on the project progress monitoring and evaluation on the 3rd and 6<sup>th</sup> February 2019, Kosi Katarmal. Further, the following officials made visits to project sites to interact with communities and see activities:

### **Visits to village sites**

Besides assessing outputs and outcomes developed by USNPSS and as discussed above, the following visits add to the vista of gauging achievements under the programme:

**a. Visit of the representative of the Ministry of Environment Forests and Climate Change, to Pata village**

An advisor to NMHS and representative of the Ministry of Environment Forests and Climate Change, Government of India, made a visit to Pata village, district Nainital, on 14<sup>th</sup> April 2018. He saw the water tanks and attended a community meeting to discuss how the programme has helped in livelihoods generation in the village.



Figure 54. Visit of the representative of the Ministry of Environment, Forests and Climate Change, advisor NMHS, Government of India to Pata village on 14<sup>th</sup> April 2018.

**b. Visit of the District Magistrate Rudraprayag to Byolda**

The District Magistrate, Rudraprayag, made a visit to Byolda village to see the work carried out by the Himalayan Grameen Vikas Sanstha and USNPSS under NMHS. Byolda village is totally inhabited by SC population. Despite being close to the block development offices, the village faces many challenges.

Under NMHS, the community at Byolda has started many income generation activities such as potato cultivation in fields that lay abandoned for many years, vegetable (beans, cabbage, cauliflowers, coriander etc.) cultivation, and poultry farming.

One of the important offshoots of the NMHS programme is construction of a house for a very poor family in Byolda. The woman shown in the photograph breaks stones at the roadside for living. The family could not afford to build a house and their applications to the government had



not received any response. On his visit to the village, the District Magistrate, saw the situation and immediately ordered to release funds for construction of a house for the family. Subsequently, a house was constructed for the poor family (see photo below).

**c. Visit to Pata village by the nodal officer, NMHS**

Mr. Kireet Kumar, nodal officer-NMHS GBPIHED, made a visit to Pata village, district Nainital, on 11.3.2019 to attend a women's meet to review and discuss achievements and challenges regarding NMHS. He addressed a gathering of women's groups from Pata and its surrounding villages and also saw the water tanks and vegetable production in the region.



Figure 55. A house owned by a poor family in Byolda.



Figure 56. A new house was constructed as the matter was brought to the notice of the District Magistrate, Rudraprayag.

#### **d. Inauguration of women run restaurant by the District Magistrate Almora**

Inauguration of the women run restaurant was held on 27.6.2019 at Aati village, district Almora. In his inaugural address, the District Magistrate, Almora said that the local administration would extend its full support to the initiative. He said that it is a pioneering work because the restaurant would be managed by rural women. Mr. Kireet Kumar, nodal officer, NMHS also attended the event. Referring to it as a novel idea, he said that the restaurant should function smoothly with the co-operation of the whole community. He said that a lot of work is being done with bamboo housing in the north-eastern states and in case the experts visit Uttarakhand, they must see this work. He said that treatment of bamboo poles can make them more durable. The guests also cautioned against offering meals at cheap rates and said that the initiative should be profitable. Dr. Lalit Pande presented a detailed account of expenditure incurred in creating the infrastructure. He said that the whole initiative depends on people's co-operation and good will and strengthening a sense of community is an aspect that would require continuous dialogue and collaboration with each other.



Figure 57. The District Magistrate, Almora, inaugurating the restaurant at Aati village.

## **7. Reflections and way forward**

The NMHS project provided a comprehensive learning opportunity to USNPSS, and to the community-based organisations and communities, especially women and girls. Comprehensive

because owing to the project design, each of the stakeholder groups were forced to set aside their assumptions about the meaning of development and start out fresh, not from an office, but from the villages. Our collective efforts to resolve community need gaps have enriched us with valuable capabilities, which we carry forward as an asset. As we complete this final project report, it will be fruitful to synthesise our learning and suggestions in this chapter. We bring forth and discuss specific issues that caught our attention and/or challenged us on the field, and which we feel would enrich shared knowledge of the wider development community. We also urge for such submissions from other projects under NMHS as well so that there may be productive and meaningful sharing of experiences.

The main policy implications emerging from this work are that nurturing resilience in village ecosystems does require long term engagement with people and their environment. Theoretically, literature on cross-disciplinary research has shown a change in the description of the term ‘resilience’ from a system’s ability to return to its original position to a transformative change to a new and unknown state of equilibrium (chapter 2). Realization of this shift in definition of the term resilience would encrust a complex terrain in practical terms partly because what lies ahead is not known and therefore the whole process of transformation is endowed with risks and uncertainty. Yet the village ecosystem model, as described in chapter 2, does offer several entry points from where activities could begin and sustain with the purpose of building resilience. Chapter 3 offers details of such activities that USNPSS undertook to nurture resilience of village ecosystems in different village clusters in Kumaon and Garhwal regions of the state of Uttarakhand.

While we acknowledge that NMHS’s priorities are inclined towards physical aspects of environmental concerns, it is a reality that people are as much an intrinsic part of the Himalayan ecosystem. Ecosystem management and restoration cannot succeed without managing the current needs and aspirations of the human element and therefore the ecosystem model developed by USNPSS has put people/communities in the centre around which resilience building initiatives revolve. We also acknowledge the fact that many micro level problems have roots in macro policies and practices, which require long-term engagement with communities, civil society organizations and the state. For instance, climate change and crop depredation cannot be tackled effectively at the local level. If the aim is resolution of problems and not just adapting to the problems, the vision has to be much broader. Some other examples emerging from this work under NMHS are as follows:

**i. Locating village water woes within widespread commercial water extraction**

The case of hamlet Pata of Nainital district, is an appropriate example of a community initiative starting out at the micro scale, but eventually having to engage with a macro level intervention. Even though installation of water tanks has eased scarcity and rendered considerable convenience to the residents of Pata, the initiative has little impact on the excessive water extraction for commercial use by resorts uphill. The community clearly discerned that poly tanks

are only helping them adapt to the situation and easing the burdens in the short term, but if the root problem is not dealt with, even the poly tanks would not be effective in the long-term. This understanding has enthused the community to collectively challenge excessive water extraction by the upstream resort owners but it needs policy level changes and implementing these on the ground strictly.

**ii. Meaningful engagement with hill specific issues: small-scale, low-impact disasters**

Small-scale low-impact adverse environmental events are one of the defining features of life in the hill villages of Uttarakhand, and yet there has been no meaningful engagement with it either at policy or at local administrative level. It is now well established that small-scale, low-impact disasters that do not take lives cause much developmental backsliding (Rautela 2015). Research conducted by USNPSS has also emphasised the pervasiveness and seriousness of these seemingly low-impact events on people's lives in the hills (Ritu in USNPSS, 2017).

In Aati, Almora district, the 'women run restaurant' initiative was stalled because of a landslide which damaged the bamboo structure severely. In the aftermath the CBO representative failed to find any governmental avenue for compensation or support, as it was a commercial structure and no human and livestock lives had been lost.

In this context, USNPSS advocates setting up a locally accessible cell/body comprising of geologists, architects, civil engineers and social welfare officers to provide consultancy services at nominal charges, to anyone requiring safety and suitability assessment of a chosen location for construction. Further, since such adverse environmental events do not qualify for disaster relief, much thinking is required to institute some avenues to support rebuilding and repair.

**iii. Crop-depredation by wild animals**

Crop depredation by wild animals (monkeys, wild boar, langoor, deer etc.) is one of the top problems of hill communities of Uttarakhand and one of the biggest discouragements towards continuing with agriculture. Learning from recent attempts to deal with the wildlife problem, that is, declaring the wild boar vermin, there is urgent need for a more realistic intervention by the state and district level government. Since most villagers, particularly women who work the fields and the forests, are not equipped to hunt wild boars, though well-intentioned, the policy does not solve the problem. A practical intervention, which lays larger part of the responsibility on the forest department instead of the villagers is required.

**iv. Improve access to good quality vegetable seeds, fruit and forest tree saplings**

The programme has revealed that one of the biggest barriers to homestead vegetable cultivation, apart from wildlife menace, is lack of good quality vegetable seeds. Across the project sites beneficiaries demanded vegetable seeds, fruit tree and forest tree saplings. Urgent remedial steps are needed to improve upon the situation.

**v. More stress on non-farm for younger generation**

The need for non-farm livelihood options has been voiced across the project sites, especially by the young but there are not enough opportunities being created to meet this need, leading to much discouragement and frustration. Agricultural productivity has been on the decline and rural lifestyles are getting more and more integrated with the modern market systems. Modern education, media and cultural change have distanced the young considerably from traditional ways of life. In this context it is unfair to expect rural youth to bind themselves to a life revolving around agriculture, forests and livestock, when their aspirations are pulling them elsewhere.

**vi. Community-centric programme design and implementation**

Our experience over the last two years has reconfirmed our belief in community-centric conceptualisation, design and implementation of projects and initiatives. Projects implemented with limited involvement of beneficiaries at the strategic level, are unlikely to endure the test of time. We also acknowledge that project design and implementation by community in isolation does not guarantee success and sustainability. We draw attention to the role of time-tested community-based organisations and NGOs, that (i) have sustained a relationship of trust with communities, and therefore are in a position to act like catalysts that stimulate community's consciousness through education, action and genuine openness to the community ideas, and (ii) play a big role in encouraging project sustainability over longer periods of time.

**vii. Enduring engagement to take it from a project to a way of life**

Working on issues such as equity, resilience, community education and empowerment to have any effect, have to be carried out over longer periods of time. It is hard to imagine touch and go projects to have any enduring effect on circumstances created by decades of socialisation and centuries of cultural influence. Intangible outcomes, such as, breaking rigid gender norms; encouraging inclusion of marginalised sections in village development; or laying to rest long-standing conflicts, requires sustained stimulation. Once these processes are sparked off the NGO and CBO is still required to take on the role of nurturing, guiding and protecting the progress, until the community reaches a state of equilibrium.

**viii. Low-cost bamboo poly houses**

The most important learning from the poly house initiative at Gwar (Garhwal) and Joshyura (Kumaon) villages is that contrary to popular perspective in developmental sector, communities are quite adept at innovative breakthroughs. The concept of bamboo-frame poly houses has revolutionised thinking in these villages. Although it is an implicit understanding that poly houses need to be shifted every few seasons, this is quite a challenge to execute with extremely heavy iron-frame poly houses. In Gwar village beneficiaries decided that it would be prudent to go for bamboo poles, which would reduce the cost significantly and also make it easier to move the poly house when needed.

In Joshyura village the beneficiaries further tweaked the design, and went for tunnel-shaped poly houses that are very easy to move around. Such space for creativity and iterations will certainly enhance the life and use of these poly houses.

**ix. All NMHS projects to necessarily build in bare minimum social responsibility**

Our experience of helping a poor elderly woman in Byolda village get a house constructed for her under the Indira Awaas Yojana simply by pointing it out to the District Magistrate, made us realise the power of keeping our eyes open beyond project boundaries. Going forward we propose that every project instituted under NMHS should identify seriously disadvantaged persons and families in their project area and coordinate with the district management to get their critical needs met. Project scientists and staff ought to keep their eyes and ears open for possibilities of all kinds of needs, which may have nothing to do with their own project but could easily be resolved through other government programs, and this simple act can have a big impact of NMHS activities in the mountains.

**x. Special financial provisions for project impact evaluation**

Resource constraints of small organizations are a big barrier to instituting a dedicated impact evaluation component in projects. Particularly, impact evaluation of social projects dealing with income generation or intangible outcomes-such as community or village ecosystem resilience and gender issues are quite complex, time-taking and resource-intensive to execute. Ideally, this task deserves to be a project in its own right to ascertain evidence of change, and identify what works in the ground.

We propose that more and more follow-up studies should be carried out to ascertain the final impact of income generation projects at the beneficiary level. It would be valuable to go deeper and assess who provides the labour for income generation work (on whom is the burden falling), who has control over the earned income and how is this income spent (is it spent on productive things, such as, investment, education, skill building etc., and are they spent in a gender sensitive manner).

**8. Research and Publications**

**a. Research**

Household data collected for the NMHS programme was computed and analysis carried out during the year. This set of data includes both qualitative and quantitative information regarding population, education, livelihoods and income, climate change, perceptions of labour by gender and aspirations of young especially girls.

A workbook “assessing health of a village ecosystem” was developed, modified and used to collect data on availability and changes regarding natural resources that constitute the village ecosystem. Data was collected on availability of water, forests, agriculture etc.

**b. Publications**

**Nanda**



The 17<sup>th</sup> issue of Nanda, the yearly magazine for rural women was prepared with the aim of documenting activities, new ideas and experiences of women's groups, adolescents girls' groups and CBOs. This is a unique initiative because the rural women and girls, and not the academicians, journalists, urban writers etc; write about gender, rural development and changes occurring in society. In addition, the magazine offers space for publication of original songs, poems, folk stories etc. Articles collected from rural areas of Kumaon and Garhwal are edited at USNPSS for publication each year. A total of 1500 copies were printed and distributed this year.

### ***Muskaan***

Muskaan, a newsletter for children attending village learning centres, is prepared with an aim of encouraging rural boys and girls to write on issues that they find relevant and useful. Articles, stories, poems, songs and drawings of children are printed on an annual basis. This year, 200 copies of Muskaan were prepared and distributed in villages.



Figure 58. Young women in villages read and discuss issues from Nanda.





Figure 59. The ASHA health workers take up issues published in Nanda to start discussions with women.



Figure 60. The ASHA health worker of Banthok village starts discussions with women taking up topics from Nanda.

## **9. Environment Education in Schools**

The workbooks developed by USNPSS for Classes 6-8 continued to be a part of regular curriculum in government schools.

## **10. Collaboration with other organizations**

Collaboration with the G B Pant Institute of Himalayan Environment and Development continued in relation to the NMHS programme executed under the Ministry of Environment and Forests and Climate change.

### **i. NMHS presentation**

Dr. Lalit Pande, Anuradha and Ritu participated in a national workshop on the project progress monitoring and evaluation on the 3<sup>rd</sup> and 6<sup>th</sup> February 2019, Kosi Katarmal.

### **ii. Centre for Science and Environment, New Delhi**

Dr. Lalit Pande was invited as a guest speaker during the annual media conclave on the 'State of India's Environment', February 11-13, 2019 at Nimli. The event was organized by the Centre for Science and Environment, New Delhi

### **iii. CUSE IITB**

Anuradha Pande participated in a gender colloquium at IIT Mumbai during 23-24 August 2018. The aim of the colloquium was to explore gender issues in urban transformation focused on the adolescent girls.

**iv. Panchayats and the local administration**

Various representatives of the local administration (doctors, block pramukh, school teachers and principals, panchayat members, came to attend the women's congregations in different locations. In addition, collaboration with the local administration including the municipality of Almora continued in organizing samvaad

**v. Shri Aurobindo Ashram Delhi**

In collaboration with Shri Aurobindo Ashram, New Delhi, USNPSS has been supporting vocational training of young rural girls for the last nine years now. This year Sunita Arya from Namik village (district Pithoragarh) and Kamla Nayal, village Pata (district Nainital) learnt tailoring. Harshita Nayal, village Pata (district Nainital) was trained in cooking and baking during October 2018- March 2019.

In addition, with the support of the Rajeswar Sushila Dayal Charitable Trust, New Delhi, 11 girls were sent to Him Jyoti Vocational Institute Dehradun for skill development training on different trades.



Figure 61. Eleven rural girls were sent to Him Jyoti Vocational Institute, Dehradun for training.

**vi. The Doon Library and Research centre**

USNPSS hosted a few sessions of the international seminar on the Himalayan languages organized by the Doon Library and Research centre, Dehradun. Held during 9-10.2018-14.10.2018, the seminar was attended by about 80 participants.

### **vii. Scholarship to girls**

Late Mrs Alka Dhawan scholarship was awarded to Ms. Rizwana Parveen from Almora. She is doing a diploma in General Nursing and Midwifery (GNM, second year) from the Keshlata Hospital, Bareilly, Uttar Pradesh. Her father works as a painter and the family is very poor.

### **viii. Computers for use in villages**

This year old and used computers were donated by Mr. Mallik, Kasar Devi to USNPSS. Earlier these computers were used in centres run by him in villages. However, over time all children had learnt and attendance in the centres became very low. Therefore, Mr. Mallik requested USNPSS to take those sets for use in new villages. Consequently, 8 computers (Hp-P4 CPU/Zebtronics LCD monitor), 2 printers, key board and mouse (combo), 1 Scanner, 8 computer tables and 8 chairs, Battery, 2 extension boards, 1 central table (plastic), 1 steel almirah, 1 PVC carpet (damaged) and 1 door mat were received on 15.2.2019. This equipment was sent to Badhani and Gangolgaon villages on the 15<sup>th</sup> and 16<sup>th</sup> February 2019. USNPSS provided other supplementary items such as 2 new inverter, 1 old rug, 2 rims of plain paper (for printing) and 2 bottles of distilled water for batteries.

Mr. Ken reed and his daughter Ana Reed of Wisdom Garden Institute came to donate old and used laptops on 24 November 2018. They had brought 4 units of used P4 laptops with adapters, 3 used HP mini laptops with adapter, 2 used HP mini laptops without adapter, 4 used I series laptops with adapter, 1 new Minolta video camera

### **11. Library and Resource Centre**

Repair and maintenance of floors, bathrooms and drainage from the roof was carried out. A small wooden almirah was made in the guest room. Painting of the building was done. New mats were purchased and put on the floors, after using the old mats for about twenty-five years. Cleaning of the khet was also done this year.

### **12. Meetings of the Governing Body**

Meetings of the Governing body were held on 12.5.2018 and 15.12.2018 and 30.3.2019.

### **13. B. D. Pande Memorial lectures**

Owing to the rescheduling of the 9<sup>th</sup> B D Pande Memorial Lecture to December 2018, this year two lectures were held.

On December 15, 2018 Mr. Muktesh Pant, vice chairman and senior advisor to Yum China and independent Director of Pinnacle Foods (former CEO Yum China), recipient of two Golden Lion Awards at Cannes, considered to the highest honour in the field of advertising, spoke in Hindi on “भारत और चीन में बुनियाद ढाँचे का विकास” (Development of Infrastructure in India and China).

The 10<sup>th</sup> B D Pande Memorial Lecture was delivered by the noted author and historian Sri Ramachandra Guha on 30<sup>th</sup> March 2019. He spoke on “Ten Reasons Why Mahatma Gandhi Still Matters”.

200 copies of the lecture, “Bharat aur Cheen main Buniyadi dhanche ka vikas”, delivered by Mr. Muktesh Pant in December 2018 were printed and distributed. A video of the same was prepared and uploaded on the web. Booklets of Mr. Ram Guha’s lecture are also being prepared. The video has already been uploaded on the web.



Figure 62. The ninth B D Pande memorial lecture was delivered by Mr. Muktesh Pant.



Figure 63. The tenth B D Pande memorial lecture was delivered by Mr. Ram Guha.

#### 14. Sangosthi programme

The sangosti programme is a new initiative of USNPSS to provide a forum to the residents of Almora town to meet, interreact and be familiar with the local scholarly work in different fields.



Sri Devendra Mewari, a popular Hindi science-fiction writer for children discussed some excerpts of his book; Meri Yaadon ka Pahar, published by the National Book Trust, New Delhi. The event was held at USNPSS office on September 29, 2018.



Figure 64. Discussions with the science fiction author Mr. Devendra Mewari.

Renowned Sanskrit scholar, Dr. Jay Datt Upreti spoke on the topic “Ved and Vedanta” on 3.11.2018. He has written several books in Sanskrit and Hindi. Given the vast field of Vedas and mythology that he specializes in, it was decided that after a few months one more session will be held.



Figure 65. Lecture and discussions by Dr. Jay Datt Upreti, a renowned Sanskrit scholar.

### **15. Audit**

An audited statement of accounts is enclosed.

## **16. Visitors**

Mrs. Purobi Mukherjee, Kolkata, visited on 2. 3.2018

Prof. Hamid, Dept. of English; Kumaon University, visited on 6.4.2018

Ms. Cheryl Calopy, researcher and author, USA, stated at USNPSS during 7.4.2018-11.4.2018

Representatives of the Dayal Trust visited during 19.4.2018-20.4.2018 and saw the work in Danya, Mainagar villages

Ritu from Faridabad stayed during 21.4.2018-2.5.2018, 27.6.2018-11.7.2018, 29.7.2018-10.8.2018, 22.9.2018-6.10.2018 for data computation and analysis re NMHS programme

Mr. Tewari Tialkpur, New Delhi visited on 24.4 2018

3 young women from Pati came on the 27.4.2018 and left on the 28<sup>th</sup> morning to Galla to learn tailoring in the training centre at Toli

Mrs. Piyali Pant and Mr. Manoj Pant, Mumbai, visited during 27.4.2018-30.4.2018

Mr. K. J. S. Chatrath and Anurag Chatrath, Chandigarh, visited on 6.5.2018

Mr. Rajesh Bhatt, Surabhi and Hemant, Haldwani, came on 6.5.2018

Mr. S. S. Rawat DGM ONGC Dehradun came with his wife on 8.5.2018 to see the computer literacy programme. During his stay they made visits to Maniagar, Danya, Gogina, Pati and Galla villages

Dr. H. C. Pande, Mrs. Abha pande, Lucknow, Mrs. Ratna Sudarshan, Delhi came on 12.5.2018 and left on the 14. 5.2018

Ms. Babita Galia, an undergraduate student, stayed over to give exams in college, 14.5.2018-15.5.2018, 18.5.2018-19.5.2018 and 3.12.2018-4.12.2018

Ms. Anila Pant and Ms. Pushpa Punetha, came from Kausani and stayed for the night on 16.5.2018

Ms. Sierra Gledfelter, USA, came on 17.5.2018. she left for Galla village the next morning and stayed there for two days to document the work. She came back on the 20.5.2018 and left the next day

Mr. Roop Singh Mehta, Bindukhatta, visited during 20.5.2018-21.5.2018

Mr. Bhagwan Dobhal, RISE-Sheraghat, visited on 22.5.2018 to discuss the girls vocational training programmes in Dehradun and Delhi

29 girls from different villages came in relation to selection for vocational training programme in Dehradun and Delhi, 30.5.2018-31.5.2018

Mr. Kailash Pande, Shakti, came on 31.5.2018 and 6.7.2018

Mr. Mohan Kandpal, SEED, came on 10.6.2018 to meet the director

Mr. Kishan Singh Danu, from Devaal in Chamoli district came to discuss his environmental awareness initiatives in the region, 9.6.2018-10.6.2018

Mrs. Pamela Chatterjee, Kausani came on 18.6.2018 and also stayed over the night of 23.6.2018

Mr. Gopal Prasad, Jan Shikshan Sansthan Bhimtal visited on 23.6.2018 and 1.2.2019

Ms. Sierra Glatfelter, USA, came on 25.6.2018 to discuss the role of funders and NGOs in development in India. She visited again during 7.7.2018-9.7.2018 to discuss climate change and livelihood issues

Mr. Ajay Tamta, Member of Parliament, Almora came to meet the director on 26.6.2018

Mr. Arvind Kumar and Ms. Arundhati Deosthale visited on 17.7.2018

Mr. Mukul Sanwal (IAS) and Mrs. Poonam Sanwal from Noida visited during 18.7.2018-20.7.2018

Prof. Mohan Rawat from the university of Nagaland made a visit on 25.7.2018

Mr. and Mrs. Chanana from Delhi and Mr. Mehra of Chirag visited on 28.7.2018 in relation to hold talks about possibility of opening a school at Tatik village

11 girls and their parents came on the 29.7.2018 and 30.7.2018 to discuss the vocational training programme in Dehradun. A total of 11 girls left on the 30<sup>th</sup> evening

Ms. Shanu visited during 6.8. 2018-7. 8.2018 and 9.1.2019-10.1.2019

Ms. Manini Chatterjee and Mr. Deb Mukherjee from Delhi visited on the 8<sup>th</sup> August 2018

Mr. Vinod Arya from Maichun and Basant from Danya came on the 14.8.2018

A preparatory meeting for Samvaad was attended by a total of 8 members, 14.8.2019

A group of 12 people came from bhowali on 9.9.2018

Ms. Surabhi from Danya came on the 18.9.2018 to discuss the village learning centres programme

Mr. Devendra Mewari came from Delhi to give a lecture on science fiction writing for children and stayed at USNPSS during 27.9.2018-29.9.2018. The lecture was attended by about 40 people from Almora. Mr. Kapilesh Bhoj, author, came to meet him on 28.9.2018

Ms. Sunita Arya, Harshita and Kamla Nayal from Namik and Galla villages stayed at USNPSS on 29.9.2018 and left for Aurobindo Ashram New Delhi on the 30<sup>th</sup> September 2018. Mr. Kedar Singh Koranga from Shama was accompanying Sunita till Almora

Mr. Subir Shukla and Mrs. Preeti Joshi from IGNUS Delhi visited on 3.10.2018

Mr. Malik and his doctor friend from Kasaar Devi came on the 6.10.2018



Mr. B. K. Joshi, C. S. Tewari and Sundar and Yogita, Doon Library Dehradun visited during 9-10.2018-14.10.2018 to organize an international seminar on the Himalayan Languages. A few sessions of the seminar were also held at USNPSS. About 80 participants attended the seminar

Mr. Manoj Pant and Mrs. Piyali Pant from Mumbai visited during 13.10.2018-15.10.2018

Mr. R Joshi and Ms. Kanta Joshi from the Trivedi Trust New Delhi visited during 14.10.2018-18.8.2018. they saw the work in Maniagar, Paliyun and Danya villages and also held discussions with the CBOs

Mr. Vinay Pande, SBI, Delhi visited on the 16<sup>th</sup> October 2018

Mr. Bhagwan Dobhal from RISE visited on 23.10.2018 to discuss the progress on girls undergoing training in a vocational training centre at Dehradun

Four representatives of the Dayal Trust, Delhi and Mr. Ranjan Joshi, Almora visited on 30.10.2018

Mr. Pitamber Gahtori, Pati, district Champawat made a visit to the USNPSS on 1.11.2018 to discuss the NMHS programme

Mr. Niranjana Pant, Delhi came on 1.11.2018 and left on 3.11.2018

Mr. Sudhanshu Dhuliya, Judge-the high court of Uttarakhand, came with his wife and the SDM Almora on 9.11.2018

Ms. Anandi Devi and Kundan, Namik village, stayed for a night on 17.11.2018

Ms. Chitra Nandan from Jalna visited on 20.11.2018

Mr. Ken Reed and Ana Reed, USA, brought some used computers on 24.11.2018 and left on 26.11.2018

Mr. Daya Vardhan and ms. Dolly Arya, Almora college, came to use the library on 28.11.2018

Mr. Anand Jagota, Mrs. Sujata Jagota and Mihir Pande came on the 5.12.2018 and 7.12.2018

Mr. Manish Khanna, auditor, Naintial came on the 17.12.2018, 13..32019

Mr. B. S. Bisht and M. Galia came on 28.12.2018 to discuss the NMHS programme

Mr. Chandrakant Joshi and Mrs. Geetika Joshi visited on 28.12.2018

Five girls from Laxmi Ashram Kausani stayed during 1.12.2018 to 1.1.2019 in connection to their exams in open school

Mrs. Maya Joshi came with five members of women's groups to visit Danya to see the bal mela on 2.1.2019

Prof. Christopher Hoadely, New York visited during 8.1.2019-10.1.2019

Ms. Imi K. Maria and Mr. Kamal Taori (retd. IAS) from the international Institute for Holistic Research and Voluntary Action visited on 18.1.2019

Ms. Rita Joshi, Amita and Ranjan Joshi came on 6.3.2019

Ms. Renu Shukla and Ranjan Joshi, Aarohi visited on 14.3.2019

Mr. Mahesh Arya, Delhi came on 14.3.2019

Ms. Anita, Rajeev Mumbai came with amita and Ranjan Joshi, 19.3.2019

Mr. Gopal Arya from Chirag visited on 27.3.2019

Mr. Ashu Sikri and Ms. Sweta Sikri, USA, visited on 28.3.2019

About 200 participants attended the lecture delivered by Mr. Ram Guha on 30.3.2019

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**Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan, Almora**

**List of Governing Body members for year 2018-19**

S No..	Name	Occupation	Address
1	Dr. Lalit Pande (Chairman and Chief Executive)	Social work	Manorath Sadan, Champanaula, Almora 263601
2	Dr. H. C. Pande (Member)	Former Vice Chancellor	1/97 Vijay Khand Gomti Nagar, Lucknow
3	Dr. B. K. Joshi (Member)	Former Vice Chancellor	217, Indira Nagar, Phase 1, P.O. New Forest, Dehradun
4	Shri Suman Dubey (Member)	Former Editor	N-125, Panchsheel Park, New Delhi- 110017
5	Ms.Ratna Sudarshan (Member)	Advisor, ISST, New Delhi	C-96 (third Floor), Panchsheel Enclave, New Delhi 11017
6	Mr Ranjan Joshi (Member)	Former IT consultant	Belvedere, Brighton Corner, Almora 263601

**Special Invitees:**

7	Shri Arun Singh	Former M.P. and Union Minister	MA 1/3-2D Garden Estate, MG Road, Gurgaon.
8	Ms. Manini Chatterjee	Editor	B-27, Press Enclave, New Delhi - 110017
9	Prof K. S. Valdiya, F.N.A.	Scientist	Shubhangan, Longview Compound, Nainital
10	Dr. M. G Jackson	Former Professor	Flat no H-1101, Pioneer Park Sector 61, Gurgaon 122001
11	Shri K.S. Mallick	Retd Civil Servant	Ganga Niwas, Kasar Devi, Almora 263601
12	Smti Anuradha Pande	Social worker	USNPSS, Almora
13	Shri Vikram Mehta	Brookings, Delhi	Binsar, Almora
14	Col C.S. Pant (Retd)	Consultant Radiologist	Green Park, New Delhi
15	Shri Deb Mukharji	IFS Retd, former Ambassador	C-71 IFS Apartments, Mayur Vihar-1, Delhi -91
16	Dr O.P. Yadava	CEO, National Heart Institute	Kassar Devi, Almora

**USNPSS Almora**  
**Staff 2018-19**

<b>S No.</b>	<b>Name</b>	<b>Sex</b>	<b>Qualifications</b>	<b>Work experience in USNPSS</b>
1.	Dr Lalit Pande Director	M	Ph.D.in Mechanical Engineering, Purdue University S.M.in Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, Mass. USA B.Tech (with distinction) Indian Institute of Technology Delhi Awarded <i>Padma Shri</i> by the President of India IITDelhi Distinguished Alumni Award 2014 Outstanding Mechanical Engineer OME Award Purdue University (2017)	32 years
2.	Ms Anuradha Pande	F	MSc. (Geology), Kumaun University Nainital, Post Graduate diploma in environmental management, Lucknow	26
3.	Ms. Rama Joshi	F	Intermediate, U. P. Board	25
4.	Sri Kamal K. Joshi	M	M. A. (History), Kumaon University, Almora campus	25
5	Sri Jeevan C Joshi	M	Inter science	30
6	Sri Suresh Bisht	M	Intermediate	25
7	Sri Kailash Papnai	M	MA (Education), MA (Political Science) Kumaon University	11
8	Ms. Ritu (PT)	F	MA (TISS, Mumbai), MPhil, IIFM, Bhopal	5
9	Sri D. S. Latwal	M	B.A. Kumaon University	14
10.	Sri Divan Matiyani	M	Class 11	19
11	Sri Mohan Singh	M	Class 8	10

मनीष खन्ना एण्ड क.  
सनदी लेखाकार

**Manish Khanna & Co**

Chartered Accountants

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## INDEPENDENT AUDITOR'S REPORT

**To The Members of Uttarakhand Sewa Nidhi Paryawaran Shiksha Sansthan**

### Opinion

We have audited the financial statements of Uttarakhand Sewa Nidhi Paryawaran Shiksha Sansthan (the entity), which comprise the balance sheet as at March 31st 2019, and the profit and loss account, (and Receipts and Payments Account) for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the entity as at March 31, 2019, and of its financial performance for the year then ended in accordance with the Accounting Standards issued by the Institute of Chartered Accountants of India (ICAI).

### Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the Code of Ethics issued by ICAI and we have fulfilled our other ethical responsibilities in accordance with the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance and cash flows of the entity in accordance with the accounting principles generally accepted in India. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error. In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so. Those charged with governance are responsible for overseeing the entity's financial reporting process.

### Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements

For Manish Khanna & Co.  
Chartered Accountants

Firm Registration Number : 008584C

Manish Khanna, FCA, DISA(ICAI)

Partner Membership Nos 077858

Place: CAMP Almora

Dated: 11 September 2019



**Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan, Almora**  
Balance sheet as at 31 March 2019

**Sources of funds**

<b>Corpus Fund</b>		<b>Current Year</b>	<b>Previous Year</b>
Opening balance		6,764,204.97	4,272,921.97
Add: Corpus donations		11,907,672.50	2,491,283.00
Total corpus fund		18,671,877.47	6,764,204.97
<b>Reserves</b>			
<b>General Reserves</b>			
Opening Balance	3,393,964.90		3,075,000.40
Add: Current year's appropriation	408,530.21	3,802,495.11	318,964.50
			3,393,964.90
<b>Specific Reserves</b>			
Opening Balance	7,924,654.68		6,921,736.03
Less: Expenditure met from reserves	(2,168,295.68)		(778,242.64)
Add: Current year's appropriation	2,280,604.28	8,036,963.28	1,781,161.29
Total reserves		11,839,458.38	7,924,654.68
Total sources of funds		30,511,335.85	11,318,619.58

**Utilization of funds**

<b>Net current assets</b>			
<b>Current assets</b>			
Cash in hand	50.00		485.00
Cash in bank	3,251,393.16		5,700,027.47
Balance in bank in fixed deposits	28,196,244.00		13,392,460.00
Accrued Interest	148,575.00		345,990.00
Advances	-		21,000.00
Income tax deducted at source	547,053.70		509,995.00
Total current assets		32,143,315.86	19,969,957.47
<b>Less Current liabilities</b>			
Unspent grants in aid [Annexure A]		1,631,980.01	1,887,132.92
Net current assets		30,511,335.85	18,082,824.55
Total utilization of funds		30,511,335.85	18,082,824.55
Notes to accounts and significant accounting policies - Annexure - "B"			

For Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan

*Jeewan C. Joshi*  
Jeewan C. Joshi  
Accountant

*Dr. Lalit Pande*  
Dr. Lalit Pande  
Chairman

This is the balance sheet referred to in our report of even date For Manish Khanna & Co. ICAI FRN 008584C Chartered Accountants



Manish Khanna, FCA, DISA (ICAI)  
Partner  
Membership Nos 077858  
Dated : 11 September 2019  
Camp Almora  
UDIN : 19077858AAA4BL4412




Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan, Almora  
Income and Expenditure Account  
for year ended 31 March 2019

	<b>Current Year</b> Amount [Rs]	<b>Previous Year</b> Amount [Rs]
<b><u>Income</u></b>		
Administrative charges	270,000.00	270,000.00
Receipts from imparting training workshops	251,700.00	300,400.00
Donations	618,888.00	392,529.00
Interest on bank deposits	1,566,605.70	1,161,751.00
Miscellaneous income	-	1,750.00
Income tax Refund- Sansthan	16,341.00	-
	<u>2,723,534.70</u>	<u>2,126,430.00</u>
<b>Total Income</b>	<u><u>2,723,534.70</u></u>	<u><u>2,126,430.00</u></u>
<b><u>Expenditure</u></b>		
Bank Charges	1,150.81	1,160.21
Books, periodicals and news paper	4,168.00	3,578.00
Insurance	11,303.00	7,890.00
Miscellaneous expenses	9,491.00	10,526.00
Excess Grant spent	3,005.41	
Printing	5,282.00	3,150.00
<b>Total expenditure</b>	<u>34,400.22</u>	<u>26,304.21</u>
	<u><u>2,689,134.48</u></u>	<u><u>2,100,125.79</u></u>
<b><u>Current year's surplus appropriated</u></b>		
a. General Reserves	408,530.21	318,964.50
b. Specific Reserves	2,280,604.28	1,781,161.29
	<u><u>2,689,134.48</u></u>	<u><u>2,100,125.79</u></u>

For Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan

This is the income and expenditure  
account referred to in our report  
of even date  
For Manish Khanna & Co.  
FRN : 008584C  
Chartered Accountants

  
Jeewan C. Joshi  
Accountant

  
Dr. Lalit Pande  
Chairman

  
Manish Khanna, FCA, DISA(ICA)  
Partner  
Membership Number 077858  
Dated : 11 September 2019  
Camp Almora  
UDIN : 19077858AAAABL4412





**Uttarakhand Seva Nidhi Parayawan Shiksha Sansthan, Almora**  
Receipts and Payments Account  
for the year ended 31 March 2019

Receipts	Current Year		Previous Year	
	Amounts [Rs.]	Amounts [Rs.]	Amounts [Rs.]	Amounts [Rs.]
<b>Opening balances</b>				
Cash in hand	485.00	70.00	2,167,308.75	
Cash in bank	5,700,027.47	4,316,600.25	1,112,500.02	
Fixed Deposits	13,392,460.00	11,200,830.00	302,876.00	
			1,281,309.00	
			2,399,406.50	
			591,837.75	
			4,315,536.75	12,170,854.77
<b>Grants Received (including interest earned on grant funds)</b>				
1- Rajeshwar Sushodha Dayal Charitable Trust	2,451,379.00	2,448,612.00		
2- Indian Council of Social Science Research	-	823,811.00		
3- SAMVADUCOST	-	5,000.00		
4- Han Krishna Kamla Trivedi Memorial Trust	1,010,074.00	1,315,085.00		
5- Association for India's Development	519,000.00	381,240.00		
6- Silicon Valley Community Foundation - 1	674,329.00	638,175.00		
7- Silicon Valley Community Foundation - 2				
(Eric and Leila D'Casta Fund)				
8- ONGC	1,685,500.00	1,502,353.84		
9- NMHS	239,000.00	561,500.00		
	4,041,742.00	4,548,066.00		
			10,621,024.00	
<b>Revenue Receipts</b>				
Administrative charges	270,000.00	270,000.00		
Receipts from imparting training workshops	251,700.00	300,400.00		
Donations	618,863.00	382,529.00		
Interest on bank deposits	1,942,595.70	1,161,751.00		
Income tax refund- Sansthan	16,341.00	1,750.00		
			2,126,430.00	
			2,481,283.00	
<b>Capital Receipts</b>				
Corpus donations				
			11,907,672.50	
			2,147,296.68	778,242.64
			148,575.00	261,647.00
				21,000.00
			37,058.70	108,082.00
				485.00
			5,700,027.47	19,062,972.47
			13,392,460.00	
			31,447,687.16	
			44,691,193.67	32,459,083.09

This is the balance sheet referred to in our report of even date For Manish Khanna & Co. Chartered Accountants (FRN 006834C)

*Manish Khanna*  
Manish Khanna, FCA, DISA(ICA)  
[ Membership Nos 077858]  
Partner  
Camp Almora  
Dated : 11 September 2019  
UDIN : 19077858AAAAABI4412



For Uttarakhand Seva Nidhi Parayawan Shiksha Sansthan

*Jeevan C. Joshi*  
Jeevan C. Joshi  
Accountant

*Dr. Leel Pande*  
Dr. Leel Pande  
Chairman

**Uttarakhand Seva Nidhi Paryavaran Shiksha Sansthan, Almora**

**Financial Year ended 31 March 2019**

**Annexure "A" to Balance sheet - Grants -in -aid**

Name of the grant	Receipt Current Year				Balance as on 31.3.2019
	Balance as at 1.4.2018	Amount received during	Interest credited to grant	Total grant funds available	Amount spent/ Adjusted
1- Rajeshwar Susheela Dayal Charitable Trust	651,523.26	2,400,000.00	51,379.00	3,102,902.26	1,889,393.03
2- Hari Krishna Kamla Trivedi Memorial Trust	203,321.57	1,000,000.00	10,074.00	1,213,395.57	1,211,821.24
3- Association for India's Development	78,364.00	519,000.00		597,364.00	102,364.00
4-Silicon Valley Community Foundation -1 (Eric and Leila D'Casta Fund)	16,647.00	674,329.00		690,976.00	690,976.00
5-Silicon Valley Community Foundation -2 (Eric and Leila D'Casta Fund)	735,065.59	1,685,500.00		2,420,565.59	2,420,565.59
6- ONGC	-30,337.75	239,000.00		208,662.25	192,652.25
7- NMHS	232,549.25	3,959,839.00	81,903.00	4,274,291.25	4,368,404.80
<b>Total</b>	<b>1,887,132.92</b>	<b>10,477,668.00</b>	<b>143,356.00</b>	<b>12,508,156.92</b>	<b>10,876,176.91</b>
					<b>1,631,980.01</b>

Name of the grant	Receipts during previous the year				Balance as on 31.3.2018
	Balance as at 1.4.2017	Amount received during the year	Interest credited to grant	Total grant funds available	Amount spent/ Adjusted
1. Rajeshwar Susheela Dayal Charitable Trust	370,300.01	2,400,000.00	48,612.00	2,818,912.01	2,167,388.75
2. Indian Council of Social Science Research	-823,811.00	823,811.00	-	-	-
3. SAMVAD/UCOST	-5,000.00	5,000.00	-	-	-
4.Hari Krishna Kamla Trivedi Memorial Trust	732.59	1,291,000.00	24,089.00	1,315,821.59	1,112,500.02
5. Association for India's Development	-	381,240.00	-	381,240.00	302,876.00
6-Silicon Valley Community Foundation -1 (Eric and Leila D'Casta Fund)	659,778.00	638,178.00	-	1,297,956.00	1,281,309.00
7-Silicon Valley Community Foundation -2 (Eric and Leila D'Casta Fund)	1,532,118.25	1,602,353.84	-	3,134,472.09	2,399,406.50
8- ONGC		561,500.00	-	561,500.00	591,837.75
9- NMHS		4,451,200.00	96,886.00	4,548,086.00	4,215,536.75
<b>Total</b>	<b>1,734,117.85</b>	<b>12,154,282.84</b>	<b>169,587.00</b>	<b>14,057,987.69</b>	<b>12,170,854.77</b>
					<b>1,887,132.92</b>

*Teeraj Singh*

*Latika*





## SCHEDULE NO. "B"

Financial year 2018-19

### (a) SIGNIFICANT ACCOUNTING POLICIES

1. Assets are stated at cost, as reduced by amounts that have been met by persons other than USNPSS. Those assets which are funded wholly out of grant funds and are not returnable to the donor at the time of completion of the project are stated at a nominal value of Rupee One.
2. Assets acquired by USNPSS are treated as application of income for charitable purpose and charged to revenue in the year of acquisition.
3. Amounts received by way of Grants are reflected in the Balance Sheet until utilized and upon utilization, the balance if any, is transferred to the Income and Expenditure Account. Unutilized grant is considered as income if not refundable and conversely, excess expenditure on grant if not recoverable is treated as expenditure.
4. Investments, if any, are stated at lower of cost or realizable value.
5. Cash basis of accounting is followed in preparing the statements except interest on time deposits with banks which is accounted on accrual basis.

### (b) NOTES TO ACCOUNTS

(i) Assets acquired/disposed by Sansthan till 31 March 2019 out of grant funds and own funds are :

Description of asset	Amount
Office Equipment	6,46,174.96
Vehicle	9,20,481.00
Furniture and Furnishing	1,05,505.00
Library	437,178.50
Solar Water Heating System	23938.00
Multifunction system	88,200.00
Portable hard drive	5,600.00
Inverter with battery	29,900.00
Computer, printer, scanner	1,91,923.00
Total	24,54,900.46
Less : Asset disposed off at Original Cost	
Vehicles	7,08,852.00
Total assets	17,46,048.46

These assets are carried at nil value.

- (ii) During the year one vehicle was disposed off at Rs 18,000, and another vehicle given in exchange for a new vehicle. The value of old vehicle exchanged was agreed upon at Rs 2,00,000. The cost of new car is accounted at net of value realized upon disposal of assets at Rs 7,02,481/ which is met from previous year's accumulation for specified purpose

