



APPROPRIATE TECHNOLOGY INDIA (AT INDIA)

“Conservation through Enterprise”



Annual Report-2017-18

HO-Mandir Marg Guptkashi, PO-Guptkashi,
District-Rudraprayag-246439, Uttarakhand, India
Tel: 91-1364-264221 & 267355
Web: <http://www.atindia.org>

EXECUTIVE SUMMARY

Appropriate Technology India (ATIndia), a registered non-government organization, has been working in the state of Uttarakhand since 1993 with the objective to offer innovative options of livelihood for the mountain communities to help them move the subsistence based production to commercially viable levels.

AT India's vision is Conservation through Enterprise Development and its mission is to assist village communities in the state of Uttarakhand in conserving their biological diversity while utilizing non-timber forest products (NTFP) and natural resources in a socially equitable, economically efficient, and ecologically sustainable manner.

It operates under the premise that attaining economic and managerial control over their natural resources will instinctively provide local communities the impetus to support long-term biodiversity conservation goals. Its specific goals are to:

- i. Increase the household income.
- ii. Reduce drudgery and labor particularly for women and girls
- iii. Offer environmentally sustainable mountain specific livelihoods;
- iv. Inculcate respect for local culture and knowledge

What started as a biodiversity conservation project in 1993, with the mandate to develop an enterprise based model for conservation, has evolved into a vibrant livelihoods diversification and skills development activity yet remaining true to its original ideal of biodiversity conservation. AT India's strategy of raising value of existing resource base to enlist community participation in the conservation efforts, on this wide a scale, has perhaps been tested for the first time in India.

AT India has been acknowledged to be at the forefront of innovation in development strategies, both in the context of livelihood development and conservation, in the Western Himalayas, supplementing each other. The activities be broadly categorised as follows:

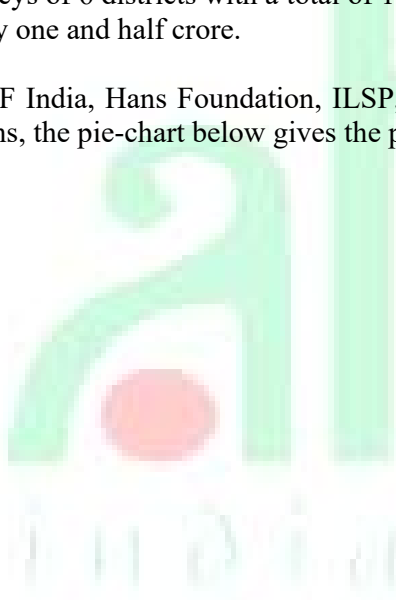
- **Conservation:** control of invasive weeds, watershed and forestry program
- **Livelihood:** Sericulture, Dairy, Beekeeping / organic honey production and organic spices cultivation.

In a bid to decentralize and make its operation self-sustainable, AT India, from the very beginning has organized its production activities through community owned enterprises.

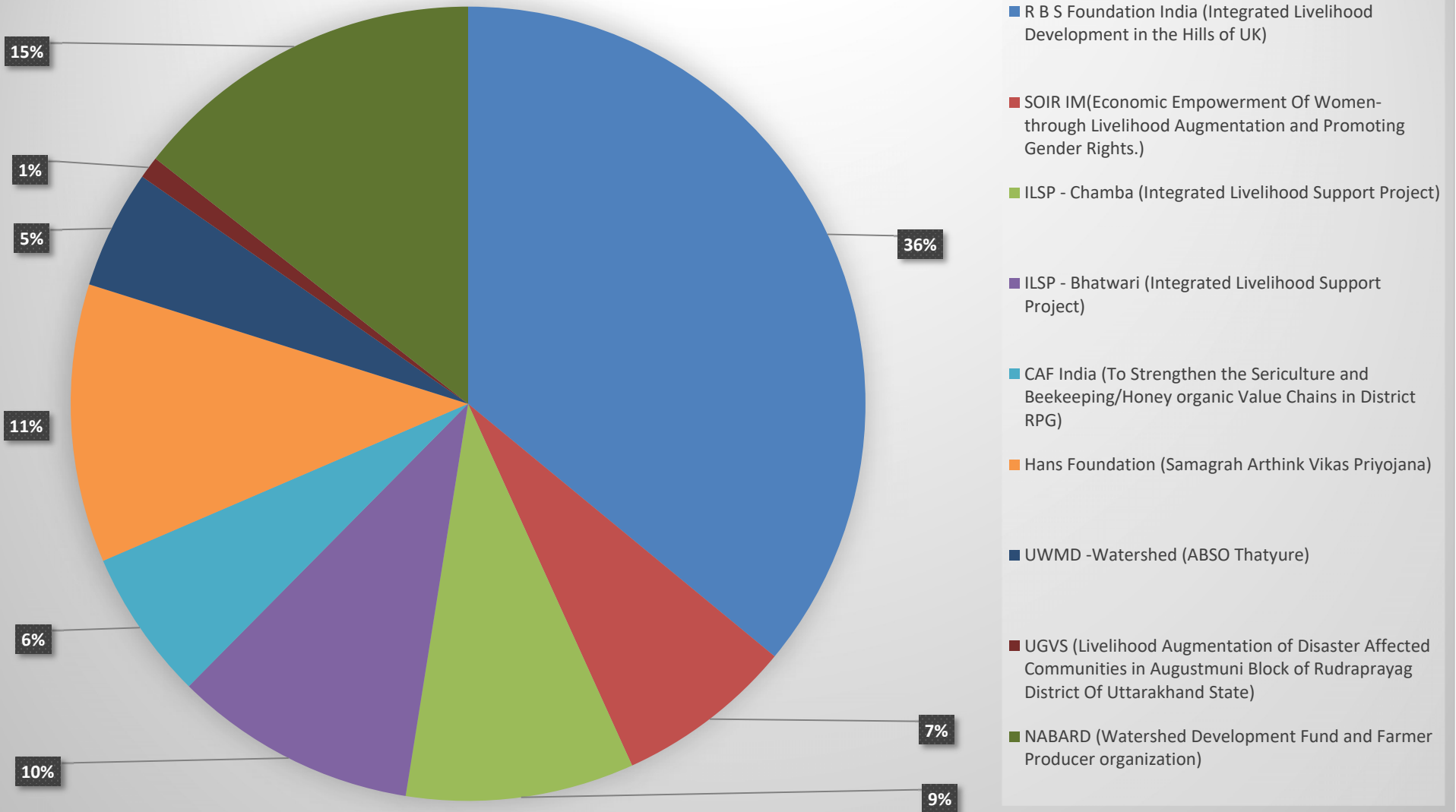
AT India works closely with its two strategic partners entities viz. DevBhumi Natural Products Producers Co. Ltd. (DNPPCL) a producer company, registered under the Company's Act and Ushamath Mahila Mahasangh Ltd (UMM) a community owned microfinance institute; in promoting the development of 601 mountain villages spread across 6 districts i.e. Rudraprayag, Chamoli, Tehri, Uttarkashi, Dehradun and Pauri of the Garhwal region of Uttarakhand. The three organizations are independent with their own Board of Directors and professional staff.

The approach and model evolved by AT India, where in, UMM supports the SHGs formed initially by AT India by extending door step, convenient and affordable financial services required for investing in the enterprises involving women in SHGs and once the SHGs start commercial production they become a producers group and shareholder in DNPPCL which provides the post-harvest services including marketing, has met with considerable degree of success evidenced by the vibrant presence of 1394 SHGs, in 42 Valleys of 6 districts with a total of 11796 women memberships and over 8561 shareholders in DNPPCL which procures products from them with a turnover of nearly one and half crore.

During the financial year AT India in partnership with CAF India, Hans Foundation, ILSP, NABARD, RBS Foundation, SOIR-IM, UGVS and UWMD has carried out various livelihood projects worth Rs.556.83 Lakhs, the pie-chart below gives the percentage expenditure done on the different projects.



Projects handled during the F.Y 2017 – 2018



SECTION 1
APPROPRIATE TECHNOLOGY INDIA
(AT India)

LIVELIHOOD PROGRAMS

1. SERICULTURE SUB SECTOR-OAK, ERI AND MULBERRY SILK

Oak tasar silk promotion program remains one of the ‘flagship’ programs of AT India in the state of Uttarakhand and best reflects the organisation’s synergistic approach of forest conservation through enterprise development. Since 1995 Oak tasar program has come a long way and in 2003-2004 AT India became the single largest producer of oak cocoons in the country with a record harvest of 30-40 lakh. Subsequently from 2005 onwards AT India diversified into Eri and Mulberry silk with a view to enhance silk production, at the same time maintaining the sustainable harvests from oak forests.

AT India introduced the value chain based approach in silk sector and has conducted wide range of capacity building exercises in order to enable the stakeholders to operate across the different stages of the value chain. AT India continues to promote the silk sector in partnership with the Directorate of Sericulture (DOS) and the Central Silk Board (CSB), which has shown remarkable results by way of becoming one of the options of livelihoods in 111 villages in 13 blocks of 5 hill districts of the Garhwal region of Uttarakhand viz. Rudrapur, Tehri, Chamoli, Uttarkashi and Pauri .

The following section of this report outlines the value chain based activities that have been conducted over the period 2017-18 in all the 3 sectors viz. Oak, Eri and Mulberry.

1.A. OAK TASAR SILK SECTOR

➤ Seed production - Oak Tasar



Despite of all the efforts made by CSB units i.e. REC Palampur and also RTRS Bhimtal, Uttarakhand the availability of disease free oak tasar seeds remains a major constraint. However, to some extent, seed production was managed successfully, during the financial year, by the efforts put together by AT India, DOS Uttarakhand, REC Palampur, and RTRS Bhimtal.

Intensive monitoring was conducted by the committee constituted to monitor seed production and rearing which monitored the activities tirelessly conducting examination of the individual moth across all the stages while the rearing was underway.

Controlling the disease in Oak tasar seed remains a major challenge to be tackled even today.

Due to the above stated reasons, AT India could preserve a total of only 1.99 lakhs oak tasar cocoons for seed production during the

entire period.

➤ **Spinners capacity buildings-Oak and Eri Silk Yarn production**



Silk yarn production initiative was introduced in 38 villages spread across the 2 districts of Pauri and Rudrapur under the supervision of the technical team of AT India and DNPPCL instituting a unique approach for decentralized production of silk yarn covering the total value chain across cocoon distributions, yarn collection, quality control, payment system etc.

Regular trainings were conducted for the stakeholders in post cocoon sector in order to ensure quality production. A total of 120 women spinners were trained who now produce silk yarn on order basis being placed by DevBhumi Natural Products Producers Co. Ltd (DNPPCL).

DNPPCL extends the desired critical marketing support including collections, storage, processing, product design / development, finishing, labelling, packaging and distribution and it has been striving to create a sustainable market for the stakeholders operating in the sericulture sector.

1.B. MULBERRY SILK SECTOR

Based on its encouraging experience in Oak and Eri Silk and in line with the demand of the stakeholders, Mulberry silk value chain program, jointly promoted by CSB – DOS, was introduced during the year 2015. The program covers 400 households across 20 villages of Rikhnikhal, Jaiharikhal and Doggada Blocks of the Pauri districts, clustered together and named as the Dhountiyal cluster. AT India shouldered the responsibility of implementing the program, under which initially bio-mass cultivation, infrastructure development, training and capacity building of the stakeholders were carried out in the said cluster.

As part of the action plan, 400 interested farmers were selected, post a Focused Group Discussions (FGDs) at the village level, from the Jaiharikhal and Rikhnikhal blocks for planting mulberry saplings and rearing of mulberry silkworms. Based on its learnings from the past experience that though at the onset, several farmers show their interest in undertaking an activity; it is only those that are in earnest financial needs, self-motivated and willing to make extra efforts are instrumental and committed to make the project successful so as to improve their financial conditions, the selection was done based on their interest levels in the activity, land availability and their present income levels.

▶ PLANTATION



150 saplings per farmer were provided and a total of 18150 saplings of mulberry planted.

All the 18150 mulberry saplings, used for gap filling plantation by 119 farmers in the previous mulberry plantation carried out in their own lands were developed by our 5 SHG members in their nurseries. The pit digging, culture development, and other labour aspects were financed through MNREGA to the 119 targeted farmers under convergence activity for the project.

To ensure survival, trainings on plantation management, composting and maintenance of plants was provided to all the 119 farmers.

After conducting survival assessment it was found that 60 % percent survival rate has been achieved by these farmers.

➤ Rearing house, appliance and Chawaki rearing centre.



A total of 206 farmers are being assisted to construct the rearing houses.

During the year 2017-18 all the 206 farmers have constructed rearing houses and have started rearing the mulberry silk worms.

In addition of rearing house support all the 206 farmers have been assisted with rearing appliances to equip them to help them achieve quality rearing.

To develop the related infrastructure further 1 Chawaki Rearing Centre (CRC) was constructed in the project area to assist the rearers in conducting the rearing activity up to the 2nd stage. This larvae is then distributed amongst the farmers to conduct the 3rd -5th stage

rearing in the rearing houses.

➤ **Rearing of silk worms and cocoon production and training.**



Since mulberry plantation has a gestation of two years, to orient the farmers with rearing, it was envisaged that silkworm rearing would be conducted in small quantities during the initial period. Thus the rearing was started with 350 DFLs.

Today 206 farmers in the area are involved in rearing and rear 10,000 DFLs and the initial cocoon production recorded merely at 44 Kg has gone up to 5714 Kg.

The major achievement during this short period of implementation is that the yield has enhanced from 12 Kg per 100 DFLs to 57.1 Kg per 100 DFLs. The cocoon production in this region is done twice in a year (Sept-Oct and March-April).

As part of capacity building of the stakeholders to optimise foliage and maintain the appliances properly, various trainings on nursery development, pruning and maintenance of mulberry plants, disinfection methods for rearing equipment and rearing houses including sanitation of the surrounding where the rearing takes

place have been conducted in collaboration with DOS Uttarakhand and CSB.

Impacts of the program

The program has been promoting the sericulture value chain in the hill districts of Uttarakhand, under which bio-mass regeneration, cocoon production, yarn production, weaving, product & design development, finishing, dyeing, value addition, promotion, placement and marketing are the major activities providing employment to participating households and building their knowledge skill base. While the value chain has been developed in silk sector, the implementation strategy has equally focussed on economic, ecological and cultural aspects of the mountain region with due sensitivity which has been effective in addressing ecological issues along with generating employment opportunities in mountain villages by raising significant numbers of Q. Serrata and castor plantation. The backward linkages has been developed in terms of raising bio-mass, developing trained nurseries growers, involving SHGs in plantation, promoting Eri and oak Tasar rearers, spinners, weavers and dyers equally forward linkages for silk sector stakeholders has been created due to participation of DNPPCL.

Rearing of Disease Free Laying (DFLs) during 2017 - 18

Sl.	Particulars	Total DFLs	No. of Rearers	Cocoon Production	Income (Rs.)
1	Oak Tasar	7.2 (KG)	27	106017 (Nos.)	1500-4500
2	ERI	4500 (DFLs)	47	512 (Kg)	1000-2500
3	Mulberry	10000 (DFLs)	201	5714 (Kg)	3500-8000

Marketing of Silk Products:

DevBhumi Natural Products Producer Company Ltd. (DNPPCL) extends market support to stakeholders in terms of mobilizing orders and conducting promotional activities in leading national and international exhibitions. In 2017-18 DNPPCL has attended more than 6 exhibitions to promote the DevBhumi silk across the country and abroad. The brand "DevBhumi" for silk products from Uttarakhand has become quite popular over the years and has established a unique identity in the market. Today DNPPCL has developed market relation with 35 parties and supply silk products which generates revenue of more than Rs. 85.00 Lakh per annum.

Weaving: Silk Fabric Production:



A group of 35 weavers, mostly women, have been trained to operate the handlooms and produce commercial production of silk fabric and products such as shawls, stoles, mufflers and saris.

The trainings on product design and weaving were conducted under the supervision of a team of 6 Master Weavers, who have trained the weavers adequately and developed their skills to weave fine silk fabric / products.

The weavers process orders of silk fabric / products placed by DNPPCL every month. DNPPCL provides marketing support which includes, pricing, packaging, product development, designing, dyeing, finishing and marketing. Hence DNPPCL mobilizes orders from different markets /customers and places regular orders.

We are proud to state that production capacity has increased to 12000 meters from 8000 meters per annum attributed by the well-developed infrastructure and capacity building of the stakeholders.

Status of post cocoon sector:

Particulars	Achievement of 2017 - 18
Spinning Villages (Nos.)	38
Spinners Involved (Nos.)	120
Weavers (Nos.)	35
Weaving Centres (Nos.)	06
Dyers (Nos.)	03
Silk Yarn Production (KG)	631
Shawls (Nos.)	721
Stoles (Nos.)	1933
Mufflers (Nos.)	2896
Caps (Nos.)	893
Throws (Nos.)	52
Foot mats (Nos.)	64
Cushions (Nos.)	149
Fabric (Meters)	194
Saris (Nos.)	08

groups and trained in post-harvest management to achieve economies of scale.

To end the financial year 5975 households were actively engaged in the cultivation of varieties of organic spices. The spices cultivation was preferred by women due to being less labour intensive, cash generating activity and less wild life interference to the crops, in comparison to other crops. Over the years the area under spices cultivation in these 568 villages has increased from initial 15.6 hectare to 261 hectare, generating an average annual income per crop of Rs. 3000 to Rs. 4000.

During the year

- i. Field based trainings were conducted for the spices producers in pre- and post-harvest management techniques such as reduction of risk in cultivation by introducing biological control mechanisms, networking with institution like Krishi Vigyan Kendra (KVK), Pant Nagar University and horticulture department. Composting technology has been given special importance as it helps reduce the workload of women in terms of carrying kuccha gobar and also reduces the white grub menace, a pest that damage the crops.
- ii. Extensive awareness exercises were carried out to inculcate improved cultivation and harvesting practices for which literature highlighting the risks in spices value chains and steps to be adopted to mitigate the same was published and distributed. Organic cultivation trainings and certification for the spices producers was extended in collaboration with Uttarakhand Organic Certification Agency (USOCA) which conducts field inspection with us jointly twice in a year.
- iii. Special trainings on safe and hygienic storage were imparted which has enhanced the understanding of the producers about the safe and hygienic storage to protect the produce from rats, fungal and mold infections and rotting. Seed storage was given due weightage during the trainings as it is necessary to maintain moisture without fungal infection until the next showing season. AT India demonstrated seed storage in a few locations in Rudraprayag, Chamoli, Uttarkashi, Tehri and Pauri to ensure availability of quality seeds for the new producers.

➤ **Impacts of the organic spices sector**

5975 households in the 5 mountain districts of the state of Uttarakhand namely Rudraprayag, Chamoli, Uttarkashi, Tehri and Pauri are actively engaged in the cultivation of organic spices which can be attributed to the concerted efforts put together by AT India and DNPPCL in building the capacities of the farmers on every aspects of the spices value chain such as improved cultivation techniques, nursery establishment, organic cultivation practices, disease prevention and seed production.

To counter the major challenge, as faced in the hill village, of getting quality seeds, an innovative approach was introduced by selecting and assisting a few women for production of seed of the spices. As a result approximately 8 hectare of land was taken under seed cultivation and 49 women have assumed the role of Seed Business Service Providers (BSPs).

The intensive capacity buildings, exposure and awareness exercises undertaken by AT India, DNPPCL and UMM augmented the technical, managerial, marketing and distribution capacity of stakeholders.

The program reportedly indicated

- i. reduced labour and drudgery of mountain women in agriculture.
- ii. Reduction in crop damaged by wild animals and
- iii. cash generating activity due to producer skills in sorting, grading and primary processing besides improved cultivation practices.

The outcome / impacts at a glance in the 5 districts viz. Rudraprayag, Chamoli, Tehri, Uttarkashi and Pauri Garhwal is as under:

Sl.	Particulars	Unit	Rudraprayag	Chamoli	Tehri	Pauri	Uttarkashi	Total
1	Block	Nos.	3	4	4	4	2	17
2	Valley	Nos	11	6	4	7	3	31
3	Village	Nos	149	100	155	122	42	568
4	Total Producers	Nos.	2180	874	766	1643	512	5975
5	Turmeric	Nos	1449	364	461	797	184	3254
6	Ginger	Nos	848	139	216	974	104	2281
7	Garlic	Nos	727	508	158	986	104	2483
8	Chilli	Nos	704	126	124	832	36	1822
9	Coriander	Nos	594	245	30	21	75	965
10	Large Cardamom	Nos	33	18	10	78	10	149

3. BUSINESS DEVELOPMENT SERVICES- DAIRY SUB SECTOR



The dairy development program spans over more than 7702 households in the 6 districts viz. Rudraprayag, Chamoli, Tehri, Uttarkashi Dehradun and Pauri Garhwal of Uttarakhand. 5872 producers (mostly women) are actively engaged in commercial production. To generate the economics of scale AT India follows

Business Development Service (BDS) based approach, under which the producers are organized as a dedicated dairy producers groups (PGs) and the BDS provides access of the required services to the producers helping to enhance the production, productivity and marketing.

The members of the dairy PGs were firstly trained on improved dairy / animal husbandry practices & technology and secondly they were exposed to demonstrations of relevant input services such as herd up-gradation through artificial insemination (AI), natural breeding, fodder (tree and grass) development, cattle feeds, stall feeding technology, animal health, vaccination and composting etc. Subsequent to the demonstrations business services in dairy sector, at micro level, were developed by selecting local youths and involving them in commercial extensions of these critical services. For this to happen, AT India has extensively build the capacity of local youths in order to promote them as Business Services Providers (BSPs). At the same time output services, which includes collection services at village level and distribution services at market level, are being created. AT India facilitates the entire process while the BSPs operate as standalone enterprises and provide the commercial services to the dairy producers / PGs. The key highlights of the outcomes of the dairy sector in the 6 districts of Uttarakhand are as under:

Sl.	Particulars	Rudraprayag	Chamoli	Tehri	Uttarkashi	Pauri	Dehradun	Total
1	Block (Nos.)	3	4	4	2	4	1	18
2	Valley (Nos.)	11	6	4	3	7	3	34
3	Village (nos.)	156	92	50	48	1136	60	542
4	Total No of Producer (Nos.)	2484	751	465	1526	1744	732	7702
5	Milk production/ day / litre	10697	1995	1345	2332	3096	1048	20513
6	Milk marketing / day / litres	5605	1198	805	992	1700	450	10750
7	Producer link to milk marketing (Nos.)	1898	337	285	425	772	190	3907
8	Average monthly income of per producer (Rs.)	2746	3306	2626	2170	2047	2202	2559
9	Collectors (Nos.)	28	10	5	8	12	4	67
10	Dairy shops (Nos.)	15	1	1	1	1	0	19

11	Feed BSP (Nos.)	10	6	2	5	6	4	33
12	Progeny Developed (Nos.)	650	412	513	365	735	0	2675

The dairy PGs were imparted various trainings including technical know-how and awareness about the improved animal husbandry practices in collaboration with technical expert from reputed institutions like Krishi Vigyan Kendra (KVK) and Govt. Veterinary Department. The inputs were demonstrated widely at the village level. The dairy PGs were given support to construct / renovate the cattle shed and start stall feeding. As a result they started functioning as milk producers effectively.

Composting technology was demonstrated in each and every household as low yielding varieties of animal were mainly reared in huge numbers for cow dung to be used as manure in the agriculture fields. The cow dung often create the problem of pest attack, carrying head loads of cow dung to agriculture fields and rearing large size herd meant an additional work load specifically for women. The project with the aim to reduce work load of women introduced Vermicomposting, a simple technology in 472 villages.

To reduce the dependency of local communities in mountain areas on forest based fodder grass a two pronged approach i.e. short term and long term was adopted. The short terms approach included the cultivation of seasonal grasses and the long term approach focused on tree fodder development. A total of 5.6 hectare land was thus brought under fodder cultivations of seasonal fodder grass varieties, perennial grass species and fodder tree plantation.

To improve the health and productivity of animals, cattle feed services were introduced by developing the Business Service Provider (BSP). The dairy producers purchase the cattle feed from 33 BSPs operational in the area. AT India in collaboration with Krishi Vigyan Kendra (KVK) and veterinary department arranged 162 training and animal husbandry camps to raise awareness on management and health care. The trainings covered all aspects including cattle sheds, sanitation, feeding, drinking water requirement and nurture of the animals. The training also covered the inoculation requirement / preventive health care aspects and minor treatment, where in the stakeholders were given knowledge on identification of various symptoms of illness amongst the cattle, first aid and treatment facilities available in the local veterinary hospitals.

The inputs described above had a positive impact on the milk production for which milk marketing activity has been created by developing fresh milk collection and distribution services. A total of 67 collectors and 19 dairy shops in 6 district Garhwal region.

4. BEEKEEPING / ORGANIC HONEY PRODUCTION SUB SECTOR

AT India pioneered to move the beekeeping sector from barter to a commercial activity and secured the organic certification for the Himalayan beekeepers in the Garhwal region of Uttarakhand. The organic honey production has become a recognized source of livelihood for approximately 4280 households in the mountain villages of Uttarakhand. The program covers 429 villages in Chamoli, Pauri, Rudraprayag, Tehri, Dehradun and Uttarkashi districts of Uttarakhand. The beekeepers which now numbers 4280, including 1702 women, have been organized as dedicated honey producer groups (PGs) and are actively engaged in honey production. The PGs receive technical support and facilitation from AT India, financial services from UMM and marketing services from DNPPCL. The capacity building training that are conducted ranges from seasonal management, swarms catching, stopping absconding, and division of colonies including the harmless extraction of honey.

The sector generate an annual average income of Rs. 4000- 5000 per annum for the honey producers. The over view of beekeeping / honey sector in the 6 districts of Uttarakhand is as under:



Outcome						
Sl.	District	Village	No. of Producer	No of Bee Colonies	Honey Production	Honey Procurement
1	Rudraprayag	128	1750	3879	12016	7754
2	Chamoli	75	632	3244	9141.6	5153
3	Tehri	49	303	496	1947.6	806
4	Uttarakashi	28	164	339	913	429
5	Pauri	129	1208	1962	9183.6	6293
6	(Dehradun)	20	223	394	0	0
Total		429	4280	9414	33201.8	20435

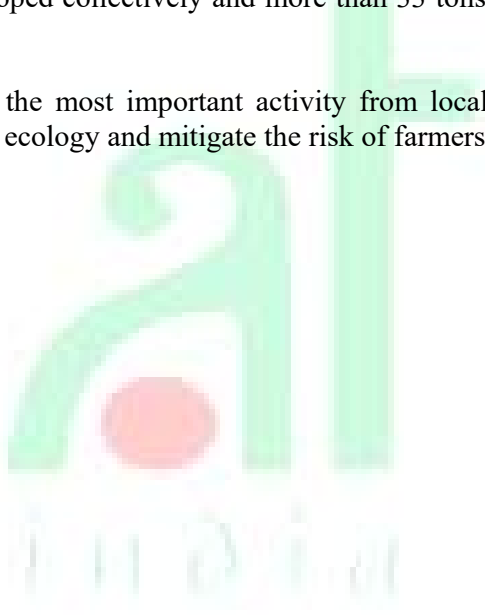
As part of field extensions, the program focused on development of beekeeping infrastructure and community Resources Persons (CRPs) from the local communities, who were selected and trained in beekeeping / honey production in order to supervise and monitor the activities on day to day basis at the village level. CRPs form a critical link for ensuring sustainability in the long term. The trainings and mentoring provided to CRPs have manifold impacts in the village in terms of quality production, continuity and linkages development.

- Bee nurseries were setup as part of risk management in honey value chains which produces bee colonies and reduces risk of poor swarming keeping the weather vagaries of the mountains in mind. The 25 bee nursery care takers were identified, trained and extended necessary assistance in order to setup, maintain and undertake commercial supply. It has generated employment for 25 local youth,
- The Honey PGs have been linked to DNPPCL and UMM who provide marketing and financial services respectively. AT India continues to provide the inputs (trainings, exposure, technology and guidance) and forward linkages with Horticulture department and KVKs.



➤ **Impacts of beekeeping / organic honey production program**

- Due to the extensive field exposure today women participate equally in all the activities of the honey value chain right from production to harvesting and trading.
- Interest of the mountain women and men in beekeeping is visible and is evidenced by the participation of 4280 households. A production base of more than 9414 Bee colonies have been developed collectively and more than 33 tons of honey produced per annum, while conserving the native bee “Indica”.
- Along with economic benefits beekeeping is the most important activity from local ecology point of view as it renders the vital pollination services. Organic cultivation supports the local ecology and mitigate the risk of farmers in agriculture.



CONSERVATION PROGRAMS

NATURAL DYE PRODUCTIONS FROM INVASIVE WEEDS-EUPATORIUM



AT India developed a program of elimination of the environmentally damaging weeds called Eupatorium (Adenophorum), a tenacious and invasive weed spreading rapidly in mountain region and destroying local bio-diversity including agriculture in the hilly area. For this to happen, the weed had to be converted into natural dye in which local community has been involved thus generating livelihood and ensuring conservation of the environment.

A 2 pronged approach of uprooting and coppice management was thus applied to curb its rapid growth and provide leaves as the raw material for dye manufacturing. The technology involved in manufacturing natural dyes from eupatorium is low cost and simple to use. The weeds are collected from the plots, identified for monitoring and is processed in Community Facility Centre (CFC), established in Akashkamini valley with state of art facilities.

Eupatorium leaves proved to be a good source of dye and all types of silk yarns such as Oak Tasar, Eri, mulberry, wool and cotton are being dyed in different colours extracted from the weed. The dye powder made from eupatorium gives beautiful colour shades, with different mordents, ranging from light green to golden yellow. The eupatorium thus serves the purpose of raw material, abundantly available in mountains, for manufacturing natural dyes and involvement of local community in curbing its rapid growth.

- The monitoring plots selected for harvesting of eupatorium are today inhabited with indigenous varieties of grasses and plants, indicating the effectiveness of the methodology applied for eliminating the weed.
- The community facility centre (CFC) operates with a capacity of manufacturing more than 1.7 quintal dye powder per month. The natural dyes being produced, is used for dyeing different types of silks, woollen and cotton yarn for manufacturing different types of fabric and products under the aegis of DNPPCL.
- DNPPCL promotes and markets the natural coloured silk and wool blended products such as fabric, stoles, shawls, mufflers, saris in different parts of the country and has been receiving good response due to its quality and uniqueness.
- The production of natural dyes was one of the pilot initiatives of AT India which has shown impacts at two levels i.e. generating employment opportunities and curbing rapid growth of the invasive weed.
- This initiative of addressing the weed menace, its management and utilization into an economic product has been the first of its kind. The monitoring studies revealed that uprooting and coppice management are an effective methodology to eliminate the weeds and protect the local agri-biodiversity and forest.

SECTION 2

Annual Report 2017-18

DEVBHUMI NATURAL PRODUCTS PRODUCER CO. LTD. (DNPPCL)

DevBhumi Natural Product Producer Company Ltd (DNPPCL) was registered as a producer company under part IX A of Companies Registration Act, 1956. It has been supporting the stakeholders involved in the economic activities by providing the critical marketing support viz. collection, procurement, processing, labeling, packaging, promotion, placement, branding and distributions etc. The Company is owned by rural producers of Uttarakhand as its shareholders who now numbers 8561 comprising men and women of 6 districts of Uttarakhand (Chamoli, Rudraprayag, Tehri, Dehradun and Uttarkashi). The production and processing operations of DNPPCL is spread across 6 districts with head office is located in Guptkashi and sales and admin office in Dehradun. The board of DNPPCL is democratically drawn from producers / shareholders and is guided by an advisory committee comprising professional from private, public and development sectors. DNPPCL has bagged the best micro-enterprise award instituted by Citi Bank Foundation in 2012

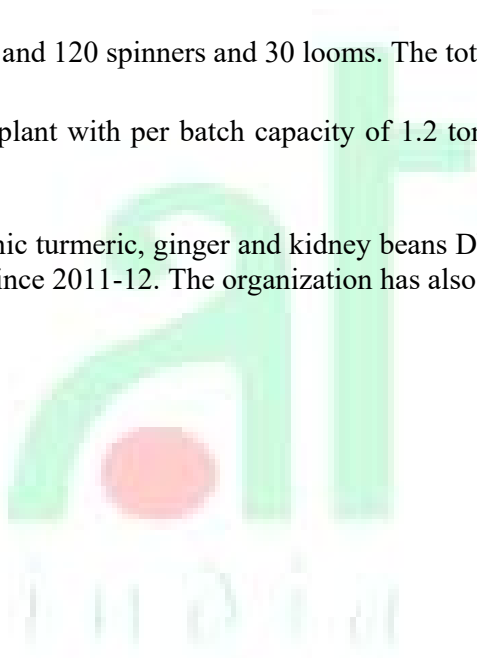
DNPPCL main activities are to support the rural producers in production, processing and marketing of the following Himalayan Products:

- Hand woven natural silk & wool blended fabrics including Himalayan Oak tasar, Eri, Mulberry silk
- Organic certified and conventional honey;
- High value selected varieties of organic spices and kidney beans,
- Dairy – Fresh milk supply

- **Key highlights of DNPPCL's operations:**

- **Annual turnover:** During 2017, DNPPCL had an annual turnover of INR 245 Lakhs by way of sale of Hand woven natural silk & wool blended fabrics (and products such as shawls, stoles, mufflers and Sarees); sale of organic honey; and organic spices (such as turmeric and ginger, Rajma and milk and milk products) coming from rural producers.

- **Membership:** The Company is registered with the central silk board for Silk Mark, AIACA for Craft Mark, National Bee Board (Please mention other licensing such FSSI etc.)
- **Permissions and license:** The firm has obtained all Trade Licenses, PAN and GSTIN Nos. , FSSAI, Agmark and Organic Certification.
- **Production capacity: Silk, Honey and Spices.**
 - **Sericulture sector:** DNPPCL has 4 master weavers and 120 spinners and 30 looms. The total production capacity per month is 5,000 Metres.
 - **Honey sector:** DNPPCL owns a honey processing plant with per batch capacity of 1.2 tonnes which essentially mean as total production capacity of about 50 tonnes per year.
 - **Spices:** After successful trials for marketing of organic turmeric, ginger and kidney beans DNPPCL has obtained organic certification for these products which are being sold through commercial channels since 2011-12. The organization has also been registered with the Spice board of India.



SECTION 3

USHAMATH MAHILA SELF RELIANT COOPERATIVE MAHASANGH LTD. (UMM)

UshamathMahilaMahasangh Ltd. (UMM) is a federation of women SHGs, established in 2003 and registered under Uttarakhand Self-Reliant Cooperative Society Act 2003 in 2005 has been working with the objectives to cater the unmet financial needs of the poor women living in one of the most remote areas of Uttarakhand state. Structured as a community based microfinance institution UMM's mandate is to focus on the solutions that help improving socio economic status of the marginalized and low-income households.

Thus UMM has pioneered to introduce affordable, convenient and door steps financial services for mountain women especially those who remained beyond the reach of the formal financial services. UMM, as community owned micro-finance institute relentlessly catering the financial needs of the women since its inceptions. It has mobilized a total loan of Rs. 1.73Crore.from Rangde,NABARD, RastriyaMahilaKosh, SBI and Cooperative Banks.

UMM has institutionalized its microfinance program through Self Help Groups (SHGs) method which has been organized as valley /cluster association similar to what most of MFIs follow. UMM has got altogether 30 valley level informal associations. As a growing microfinance institution UMM has made reasonable progress in the microfinance operation in terms of its increased outreach and portfolio. It has been working with 1319 SHGs having 11439 women members, with cumulative saving of Rs. 3.15 Crore.

Vision: Elimination of poverty in hilly areas by providing financial facilities to the poor who are neglected by the traditional financial system.

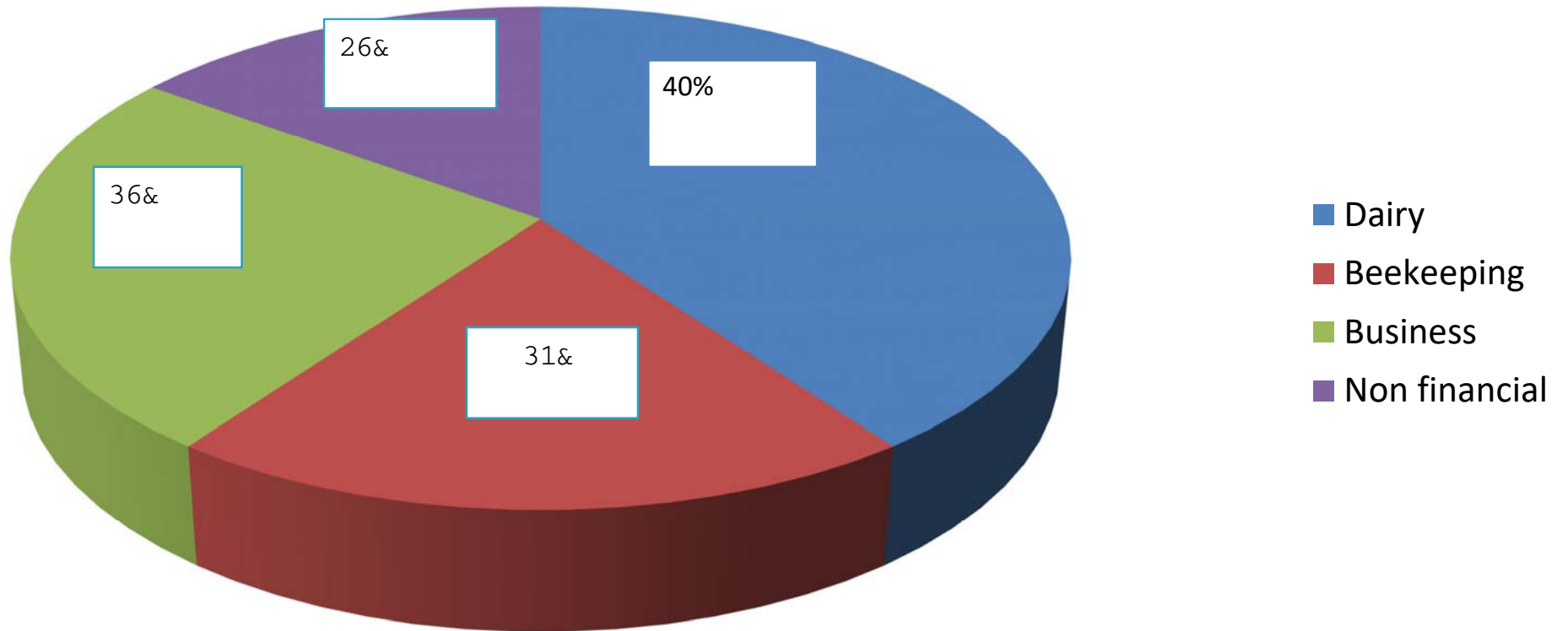
Mission: To provide convenient banking facilities to its members and other non-members needy individuals.

Objective:The central objective of UMM is to bring social, economic, cultural and political development of the poor who are mainly neglected by traditional financial system.

Area of Operation:588 villages of 6 mountain districts viz. Rudraprayag, Chamoli, Tehri, Uttarkashi Dehradun and PauriGarhwal.

Loan Clients:UMM has a loan client base of 6233 women SHGs members. The repeat loan clients of UMM at present number 971.

Loan Disb.-FY-2017-18



Financial Report F.Y. 2017-18

HS. RATRA
(F.C.A)

HS RATRA & CO.
CHARTERED ACCOUNTANTS
65A-Guru Road, Dehradun
ksratra@gmail.com

Ph. 0135-2763626 (OFF)
91-9837003626(MOB)

We have Audited the account of **Appropriate Technology India , 106 Yamuna Apartments, Alaknanda, New Delhi 110019** (FCRA Registration No-231650996 Dated 07/07/1995) for the Financial year ending the 31st March 2018 and examined all relevant books and vouchers and certify that according to the audited account:

- (i) The brought forward foreign contribution at the beginning of the financial year was Rs.11,48,480/-
- (ii) Foreign contribution of / worth Rs. **33,873,744.00** /- was received by the association during the financial year 2017-18
- (iii) Interest accrued on foreign contribution and other income derived from foreign contribution or interest thereon of Rs.2,60,201/- was received by the association during the financial year 2017-2018
- (iv) The balance of unutilized foreign contribution with the association at the end of the financial year 2017-2018 was Rs 84,79,690/-
- (v) Certified that the association has maintained the accounts of foreign contribution and records relating thereto in the manner specified in section 19 of the foreign contribution (regulation) act, 2010 (42 of 2010) read with rule 17 of the foreign contribution (regulation) rules, 2011.
- (vi) The information in this certificate and in the enclosed balance sheet and statement of receipt and payment is correct as checked by us.
- (vii) The association has utilized the foreign contribution received for the purpose(s) it is registered/ granted prior permission under foreign contribution (regulation) act, 2010

PLACE: DEHRADUN

DATE: 28-10-2018

For For M/s H. S. Ratra and Co.
Chartered Accountants
Firm Registration No.: 609227C
GURU ROAD,
DEHRADUN
CA H S Ratra
Proprietor
Membership No.: 077134

H.S. RATRA
(F.C.A)

HS RATRA & CO.
CHARTERED ACCOUNTANTS
65A-Guru Road, Dehradun
hsratra@gmail.com

Ph. 0135-2763626 (OFF)
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INDEPENDENT AUDITOR'S REPORT

To

Board of Directors of Appropriate Technology India

We have audited the accompanying financial statements of **Appropriate Technology India**, which comprise the Balance Sheet as at 31st March 2018 and the Statement of Income & Expenditure Statement of Receipt & Payment for the year ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these financial statements that give a true & fair view of the financial position, Financial Performance and cash flow of the Society in accordance with the accounting principles generally accepted in India. This responsibility also includes maintenance of adequate accounting records for safeguarding the assets of the society and for preventing & detecting frauds & other irregularities; selection & application of appropriate accounting policies make judgment & estimates that are reasonable and prudent; and design implementation & maintenance of adequate internal financial controls that are operation effectively for ensuring the accuracy and completeness of accounting records relevant to the preparation & presentation of Financial Statements that give a true & fair view and are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with the applicable Standards by The Institute of Chartered Accountants of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Society's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



H.S. RATRA
(F.C.A)

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CHARTERED ACCOUNTANTS
65A-Guru Road, Dehradun
hsratra@gmail.com

Ph. 0135-2763626 (OFF)
91-9837603626(MOB)

Opinion

6. In our opinion and to the best of our information and according to the explanations given to us, in the manner so required for the society gives a true and fair view in conformity with the accounting principles generally accepted in India:

(i) In the case of the Balance Sheet, of the state of affairs of the society as at 31st March 2018

(ii) In the case of the Statement of Income & Expenditure of excess of income over expenditure for the year ended on that date; and

(iii) In the case of the Statement of Receipt & Payment of all the Receipt & Payments for the year ended on that date

We report that:

(a) We have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purpose of our audit and have found them to be satisfactory.

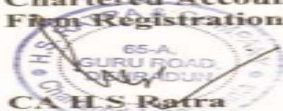
(b) The transactions of the Society, which have come to our notice, have been within the powers of the Society.

(c) The returns received from the offices and branches of the Society have been found adequate for the purposes of our audit.

Emphasis of Matter

We would like to bring to your kind attention that we have written off the funds balances which were standing in the books of accounts of Appropriate Technology India since opening. The Management Representation Letter has been also taken with respect to the same. Our opinion is not modified in respect of this matter.

Thanking you,
For M/s H. S. Ratra and Co.
Chartered Accountants
Firm Registration No.: 009227C



CA H.S. Ratra
Proprietor
Membership No.: 077134

APPROPRIATE TECHNOLOGY INDIA

Registered Office: B-106, Yamuna Apartment, Alaknanda, New Delhi-110019

Head Office: Mandir Marg Guptkashi, Distt. Rudraprayag, Garhwal, Uttarakhand

Balance Sheet as at 31st March 2018

Liabilities	Schedule	As at 31st	As at 31st	Assets	Schedule	As at 31st	As at 31st
Capital Fund		30,563,646	30,563,646	Fixed Assets	5	1,984,735	2,125,888
Reserves & Surplus	1	(6,841,185)	(6,994,839)	Investments	6	16,825,000	17,350,000
Unspent Grants in Projects	2	8,904,899	1,222,012	Overspent Grants Recoverable from Projects	2	587,082	1,665,620
Current Liabilities				Current Assets, Loans and Advances			
Sundry Creditors	3	130,000	429,596	Cash & Bank Balances	7	11,155,676	2,079,298
Expenses Payable & Provisions	4	2,865,458	2,937,131	Loans & Advances	8	4,959,976	4,910,541
				Security Deposits	9	110,349	26,199
Total		35,622,818	28,157,546	Total		35,622,818	28,157,546

For and on behalf of Board

Bharat Singh
Executive Director



Date:

Place : Dehradun

As per our separate report as on even date

For M/s H. S. Ratra and Co.

Chartered Accountants

Firm Registration No.: 009227C



CA H S Ratra

Proprietor

Membership No.: 077134

Appropriate Technology India
Registered Office: B-106, Yamuna Apartment, Alaknanda, New Delhi-110019
Head Office: Mandir Marg Guptkashi, Distt. Rudraprayag, Garhwal, Uttarakhand
Statement of Income and Expenditure for the year ended 31st March 2018

Expenditure	Year ended 31st March 2018	Year ended 31st March 2017	Income	Year ended 31st March 2018	Year ended 31st March 2017
To Staff Cost	2,950,649	2,018,632	By Indirect Expenses Allocated in Projects (Baseline Survey)	400,300	408,000
To Gratuity Expenses	442,275	-	By Project Implementation Charges recovered	731,864	-
To Staff Welfare	125,822	53,000	By Interest on Income Tax Refund	13,219	35,175
To Staff Travel	7,533	-	By Interest in FDR's	-	143,475
To Bank Charges and Commission	5,788	22,407	By Interest received on Bank Account	54,111	7,574
To Postage and Telegram	-	2,356	By Interest Received on Sweep Account	12,968	4,259
To Depreciation	141,149	159,779	By Misc. Receipts	31,134	-
To Office Expenses	2,065	-	By Interest Received on Mutual Fund	1,308,116	-
To Rent and Electricity	76,000	206,923	By NABARD Donations	1,822,006	2,195,000
To Printing and Stationery	8,771	-	By UGVs Donation	504,350	907,740
To Telecommunication Expenses	371,654	194,281	By Amount received for Training Exposure/Baseline Survey	2,629,110	1,228,491
To Vehicle Fuel and Repair	6,916	29,335	By JICA Donation	-	513,260
To Establishment Expenses (Rearing)	98,589	3,150	By Excess of Expenditure over Income	-	1,896,602
To Amount Written Off	-	476,648			
To Interest on TDS Expenses	1,019	42			
To Computer Maintenance	106,201	103,200			
To Audit Expenses	102,631	118,765			
To Retainership Expenses	120,000	120,000			
To NABARD Expenses	1,924,521	2,269,076			
To UGVs Expenses	861,941	1,292,227			
To JICA	-	269,755			
To Excess of Income over Expenditure	153,654	-			
Total	7,507,178	7,339,576	Total	7,507,178	7,339,576

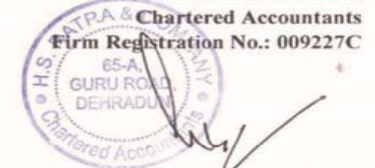
For and on behalf of Board

Bharat Singh
Executive Director



Date:
Place : Dehradun

As per our separate report as on even date
For M/s H. S. Ratra and Co.



CA H S Ratra
Proprietor
Membership No.: 077134

Appropriate Technology India
Registered Office: B-106, Yamuna Apartment, Alaknanda, New Delhi-110019
Head Office: Mandir Marg Guptkashi, Distt. Rudraprayag, Garhwal, Uttarakhand
Schedules forming for the year ended 31st March 2018

Particulars	31.03.2018	31.03.2017
Annexure No. 1		
Reserves and Surplus		
Opening Balance	(6,994,839)	(5,098,237)
Less: Excess of Expenditure over Income	-	(1,896,602)
Add: Excess of Income over Expenditure	153,654	-
TOTAL	(6,841,185)	(6,994,839)
Annexure No. 3		
Sundry Creditors		
B C Dasgupta	-	27,000
M/s Gurung	-	45,000
Souvenir Technologies Pvt. Ltd.	-	145,211
H S Ratra and Co.	130,000	140,000
Sun Info System	-	72,385
TOTAL	130,000	429,596
Annexure No. 4		
Expenses Payable & Provision		
Expenses Payable Construction House	1,494,751	1,637,875
EPF Payable (Employer Contribution Charges Payable)	137,706	131,064
EPF Payable (Employee Contribution Charges Payable)	121,656	115,560
Expenses Payable	1,659	105,920
Saheb Anand & Co.	(80,000)	-
Vodafone UMM	(30,561)	-
Office Rent Payable	-	19,500
Salary Payable	58,754	136,280
Shikha Ghosh	-	(9,200)
Statutory Audit Fees Payable	21,000	21,000
TDS Payable	25,443	56,357
Gratuity Payable	1,115,050	722,775
TOTAL	2,865,458	2,937,131



APPROPRIATE TECHNOLOGY INDIA

Registered Office: B-106, Yamuna Apartment, Alaknanda, New Delhi-110019
Head Office: Mandir Marg Guptkashi, Distt. Rudraprayag, Garhwal, Uttarakhand

Name of the Project	Opening Balance of Unspent Grant	Opening Balance of Overspent Grant	Grant Recd. During the Year	Interest Earned	Project Expenditure	Overspent Grant transferred to ATI	Underspent Grant Transferred to ATI	Closing Balance of Overspent Grant	Closing Balance of Unspent Grant
Royal Bank of Scotland (RBS) Livelihood	16,493	-	20,073,000	195,066	13,286,721	-	-	-	6,997,838
Royal Bank of Scotland (RBS) Mulbery	258,351	-	-	-	181,500	-	-	-	76,851
UWCDS	-	-	1,041,500	-	186,569	-	-	-	854,931
UWCDS (OLD)	-	277,189	269,500	-	-	-	-	7,689	-
Dountiyal Mulbery Development Cluster (CSB/DOS)	-	122,654	-	-	-	-	-	122,654	-
Integrated Livelihood Support Project, Bhatwari	-	606,675	5,510,686	-	4,861,792	-	-	-	42,219
Integrated Livelihood Support Project, Chamba	-	494,722	5,170,839	-	4,106,097	-	-	-	570,020
Shri Bhuvneshwari Mahila Ashram- Pauri	-	131,159	-	-	-	-	-	131,159	-
Shri Bhuvneshwari Mahila Ashram- Champli	-	33,221	-	-	-	-	-	33,221	-
Swedish Organization for Individual relief (SOIR-IM)	152,968	-	4,040,876	7,525	3,981,232	-	-	-	220,137
The Hans Foundation	787,741	-	6,349,653	57,610	7,052,101	-	-	-	142,903
ABSO	-	-	2,686,373	1,595	2,947,339	-	-	259,371	-
Charity Aid Foundation (CAF)	6,459	-	3,410,215	-	3,449,662	-	-	32,988	-
TOTAL	1,222,012	1,665,620	48,552,642	261,796	40,053,013	-	-	587,082	8,904,899



APPROPRIATE TECHNOLOGY INDIA

Registered Office: B-106, Yamuna Apartment, Alaknanda, New Delhi-110019
Head Office: Mandir Marg Guptkashi, Distt. Rudraprayag, Garhwal, Uttarakhand

**Schedule- " " Fixed Assets
For the period ended 31st March, 2018**

S.No.	Particulars	WDV As On 01/04/2017	Additional/ (Sales)		Total Amount	Depreciation		WDV As On 31/03/2018
			Before 30/09/17	After 30/09/17		Rate	Total Amount	
1	Land							
	- Land At Village Pothi	39,079.00			39,079.00	0.00%	-	39,079.00
	- Land At Guptkashi	587,100.00			587,100.00	0.00%	-	587,100.00
	- Land At Village Sankri	226,600.00			226,600.00	0.00%	-	226,600.00
	Total	852,779.00			852,779.00			852,779.00
2	Building							
	- Building Office	921,888.00	-	-	921,888.00	10.00%	92,188.00	829,700.00
	Total	921,888.00			921,888.00		92,188.00	829,700.00
3	Furniture & Fixtures							
	- Almirah	1,316.00			1,316.00	10.00%	131.00	1,185.00
	- Other Furniture	73,944.00			73,944.00	10.00%	7,394.00	66,550.00
	- Project Assets	38.00			38.00	0.00%	-	38.00
	Total	75,298.00			75,298.00		7,525.00	67,773.00
4	Plant & Machinery							
	- Mobile Phones	2,694.00	-	-	2,694.00	15.00%	404.00	2,290.00
	Total	2,694.00			2,694.00		404.00	2,290.00
5	Office Equipments							
	- Generator	570.00	-	-	570.00	15.00%	85.00	485.00
	- Project Assets	12.00	-	-	12.00	0.00%	-	12.00
	Total	582.00			582.00		85.00	497.00
6	Computer & Printer							
	- Laser Printer and Modem	4.00	-	-	4.00	40.00%	1.00	3.00
	- Laptop	226.00	-	-	226.00	40.00%	90.00	136.00
	- Project Assets	31.00	-	-	31.00	0.00%	-	31.00
	Total	261.00			261.00		91.00	170.00
7	Vehicle							
	- Vehicle UK-07-AB-5157	25,184.00	-	-	25,184.00	15.00%	3,777.00	21,407.00
	- Vehicle UK-07-BP-5237 Bolero	162,195.00	-	-	162,195.00	15.00%	24,329.00	137,862.00
	- Project Assets	7.00	-	-	7.00	0.00%	-	7.00
	- Vehicle Scorpio	85,000.00	-	-	85,000.00	15.00%	12,750.00	72,250.00
	Total	272,386.00			272,386.00		40,856.00	231,526.00
	Grand Total	2,125,888.00			2,125,888.00		141,149.00	1,984,735.00



Appropriate Technology India
Registered Office: B-106, Yamuna Apartment, Alaknanda, New Delhi-110019
Head Office: Mandir Marg Guptkashi, Distt. Rudrapur, Garhwal, Uttarakhand

Schedules forming for the year ended 31st March 2018

Particulars	31.03.2017	31.03.2018
Annexure No. 6		
Investment in Mutual Funds		
Franklin India Flexi Cap - G	1,050,000	1,050,000
Franklin India Prima plus	2,000,000	2,000,000
HDFC Growth G	1,050,000	1,050,000
Prudential ICICI Dynamic - G	1,050,000	1,050,000
Reliance Growth - G	1,050,000	1,050,000
SBI Magnum Balanced Fund - G	525,000	525,000
HDFC MIP Long Term G	1,050,000	1,050,000
HDFC Mid Cap Opportunities fund	2,000,000	2,000,000
ICICI Prudential Income Focused Bluechip Equity Growth	2,000,000	2,000,000
Birla Sunlife Frontline Equity Fund	2,000,000	2,000,000
Reliance Equity Opportunities Fund	2,000,000	2,000,000
FT India Balanced Fund - G	1,050,000	1,050,000
HDFC Prudence - G	-	525,000
Total (A)	16,825,000	17,350,000
Annexure No. 7		
Cash and Bank Balances		
SBI Ukhimath (A/c No. 11786525148)	10,001.00	375,892
ICICI Bank Dehradun (A/c No.016401015887)	7,175,890.00	884,592
SBI (A/c No. 10901525942)	(182,419.00)	42,388
SBI (A/c No. 10901525953)	1,886,218.94	194,081
SBI (A/c No. 34962549884)	(693,129.95)	152,968
HDFC (A/c No. 225111000104)	12,020.00	12,020
DCB A/c No. 6150	-	2,364
SBI A/c No. 34175996473	9,794.32	6,356
SBI A/c No. 34635432868	14,199.50	10,001
SBI A/c No. 34635435031	(105,019.50)	149,552
SBI A/c No. 37077504552	713,357.00	-
SBI Dehradun (A/c No. 30176254327)	15,431.00	16,080
Sweep A/c No. 36326627877	-	1,000
Sweep A/c No. 36428181008	-	28,000
Sweep A/c No. 36605592528	-	19,000
Sweep A/c No. 36701878744	-	100,000
Sweep A/c No. 36717452153	-	18,000
Sweep A/c No. 35872462317	13,894.00	13,000
Sweep A/c No. 37173686973	5,000.00	-
Sweep A/c No. 37238736763	17,000.00	-
Sweep A/c No. 37314240321	1,000.00	-
Sweep A/c No. 37323122180	89,028.00	-
Sweep A/c No. 37572159748	133,000.00	-
Sweep A/c No. 37576370585	16,000.00	-
Sweep A/c No. 37585118195	105,000.00	-
Sweep A/c No. 37600060384	105,000.00	-
Sweep A/c No. 37604607267	97,673.00	-
Sweep A/c No. 37613232897	486,000.00	-
Sweep A/c No. 37156127666	8,256.00	-
Sweep A/c No. 37604761525	235,000.00	-
Sweep A/c No. 37576249425	912,000.00	-
Cash in hand	55,482.00	54,006
Total	11,855,676	2,079,398
Annexure No. 8		
Loans and Advances		
Devbhumi Natural Products Producers Company Ltd	4,156,000	4,276,000
TDS AY 2018-19	431,117	-
TDS AY 2016-17	-	188,851
TDS on Sweep Recoverable from SBI	109,507	109,507
TDS from Shri Bhuvneshwari Mahila Ashram	74,970	74,970
TDS AY 2017-18	154,325	154,325
FICCI	19,919	19,919
RBS Services India Pvt. Ltd.	14,138	14,138
Staff Imprest	-	72,831
Total	4,952,976	4,910,541
Annexure No. 9		
Security Deposits		
Security Telephone	6,199	6,199
Security Deposits (Sales Tax)	-	20,000
Security Deposits (Bal Vikas)	104,150	-
Total	110,349	26,199

