



विद्याधनं सर्वधनं प्रधानम्

भारतीय प्रौद्योगिकी
संस्थान जम्मू
INDIAN INSTITUTE OF
TECHNOLOGY JAMMU



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ANNUAL REPORT

1-4-2022 to 31-3-2023

Regional Coordinating Institute (RCI)

Indian Institute of Technology Jammu

Jammu & Ladakh Region

Prof. Rakesh Singhai

(RCI Coordinator)

Dr Riya Bhowmik

(PI Coordinator)

Mrs Jeyoti Kaul

(UBA Project Assistant)

Name of RCI	Indian Institute of Technology Jammu
AISHE CODE	U-0906

Physical Progress Report of IIT Jammu as Regional Coordinating Institute and Participating Institution:

a) Skill Training in Screen Printing on files, bags, stationary etc. in adopted village Panjgrain:

A 10 Days training program in Screen printing started on 28th May 2022 in one of the adopted village Panjgrain. This program was initiated by Unnat Bharat Abhiyan cell of IIT Jammu in association with National Rural Livelihood Mission (NRLM). The training was imparted with an objective to generate employment for the youth of our adopted village Panjgrain. The UBA team initiated this training program soon after meeting Mr. Suresh Sharma, Chairman Gandhi Sewa Sadan, who assured the team that their organization have the market for screen printing trade.

For the formation of this SHG we have made a mixed SHG, a group of 2 male and 3 female members just to make it sustain, because mixed SHGs have better mobility and it will help them to explore their market and get orders.

We are hopeful that this skill training generated sustainable employment for the willing youth at their door step and moreover has ground visibility to build trust where we have the advance market of Gandhi Sewa Sadan and local market too.

Since the third day of their training, the SHG got an order of printing 5500 bags from local NGO's. This order was put forth to them by the network of NRLM and the order was for the occasion of World Environment Day and were to be completed before 6th June 2022.

The enthusiasm of the SHG members can be seen in fig-1.

The UBA team IIT Jammu, the NRLM team and the NGO teams congratulated group on completing the order on time. The training support for completing the order was again given by resource person arranged by UBA cell of IIT Jammu.

Glimpses of Screen Printing



Fig-1

After a month this self-help group was again given a big order and opportunity to be a part of **HAR GHAR TIRANGA** Movement. This was again a challenge for the newly learnt group to take up this order to print blue chakra of white central strip of tricolor flag of more than 35000 thousand flags. This target was also completed by the SHG with the hand holding of NRLM and IIT Jammu as can be seen in fig-2



Fig-2

b) Meeting with RuTAG: A meeting was scheduled with Mr. Sumit Kumar, project Assistant, RuTAG IIT Delhi on 13th April 2022 in the office Prof. Rakesh Singhai along with Cooperative representatives from Udampur with whom RuTAG is already working. This meeting was scheduled with the intension as how the SHGs of UBA adopted villages can be networked and formed in cooperatives for the sale of products.

C) Visit to Palli village by the UBA Team: A visit to Palli village of block Bari Brahmna of district Samba was scheduled before the visit of honourable Prime Minister to Palli Panchayat to celebrate National Panchayati Raj Day 2022.

The RCI, UBA team of IIT Jammu was intimated about this by Madam Uma Moorthy, Project Manager, Sansad Aadarsh Gram Yojana (SAGY) on her visit to the institution along with the UBA team of Central University and representative of state administration Samba district of Jammu province can be seen in fig-3.

An interactive/ counselling session with the students of 9th and 11th standard of Palli panchayat was planned by the local administration, just to make them aware about the ideas of planning future in terms education. The students of 10th and 12th were busy in their board exams.

The session was taken by UBA, RCI coordinator Prof. Rakesh Singhai, UBA, PI Coordinator Dr. Riya Bhowmik and the team. During interactive session the Prof. Singhai told the students, “to dream your future and you should dream big and then follow it” as can be seen in the glimpses of the visit fig-4. He also shared his achievements and made the students comfortable in expressing their future plans. He also mentioned that it you should not always wait for the govt. job, but shall try take up small business ventures as well. Most of the students shared that they want to join Army and serve the country.



Fig-3

Glimpses of the visit



Fig-4

d) Meeting with ICICI Foundation: A Meeting was scheduled with Program Officer, ICICI Foundation on 21st April 2022. This meeting was scheduled after Prof Rakesh Singhai, RCI Coordinator, Unnat Bharat Abhiyan came to know about this foundation in a budget review meeting of the institution. The foundation have a history of providing funding support for the sustainable livelihood to underprivileged sections of the society through its various skill training programs in their skill academies. The Foundation also works to address environmental challenges and promote sustainable practices. The UBA Team of IIT Jammu have requested the foundation to plan such sustainable livelihood programs for our adopted village too. During the interaction, it was decided that rainwater harvesting and milk collection units can be initiated in our villages very soon.

e) Online Session on Working Mechanism of Wool Carding

Machine: A Portable wool carding machine designed by Mr. Yashwant Prasad from IIT Delhi. The working mechanism/ demonstration of the machine was planned in an online interaction session on Tuesday, 17th May 2022 between 3.00-4.00pm. Mr. Naresh Katal, Financial Advisor, Gandhi Sewa Sadan, J&K attended the meeting on behalf of weavers of Kathua district shown in fig-5



Fig-5

f) Online meeting with Sarpanch of village Muni, district Kathua, J&K:

Online meeting with the Sarpanch, Mr. Romesh Sharma of Muni Panchayat of Kathua district of J&K. The meeting was scheduled on 27th May 2022, at 1.30pm by the UBA team of IIT Jammu to know the major immediate requirements of the panchayat. NCI team was also taken into confidence to get the solution of the problem faced by the villagers and to suggest the remedial measures can be seen in fig-6. Mr. Ashish from NCI team attended the said meeting and suggested to get the village of the panchayat adopted by some nearby higher educational institution.

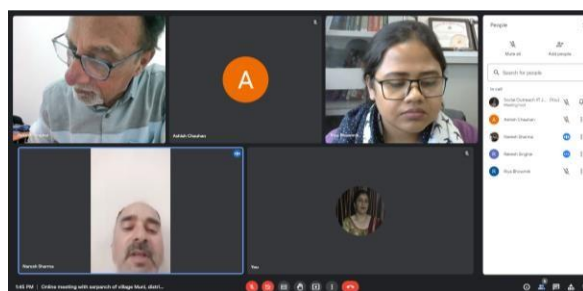


Fig-6

g) **Attended Brainstorming and Orientation workshop in SVNIT Surat**

This brainstorming workshop organized as part of a collaboration between YOJAK-UBA was held on 9th-10th June 2022 in SVNIT, Surat in a physical mode. In the workshop developmental workers, KVK scientists, and other practitioners interact with UBA RCI teams. There were sessions to convey the technology and science solutions needed for sustainable rural development keeping rural development in perspective. The NGO's working in the field mostly in tribal belt of India shared their field work with presentations. From RCI IIT Jammu Prof. Rakesh Singhai, Regional Coordinator and Mrs. Jeyoti Kaul attended the workshop can be seen in Fig-7 and it was an excellent podium for sharing experiences for both sides. RCIs also shared their viewpoints with respect to the above-mentioned program.

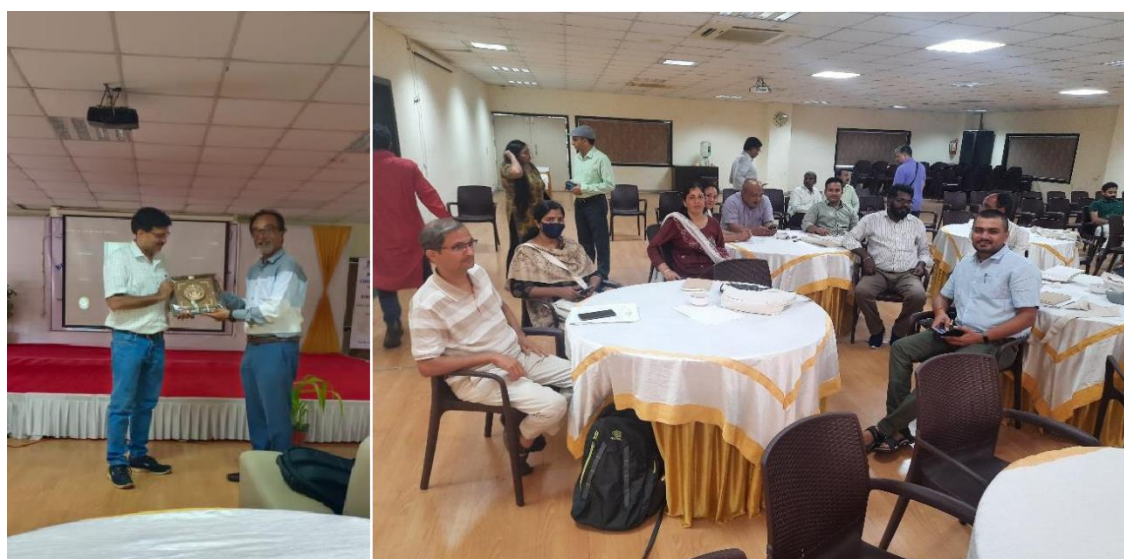


Fig-7

h) **Meeting with volunteers of IIT Jammu who want to contribute in social cause:**

A meeting with volunteers of IIT Jammu was scheduled by the team of Unnat Bharat Abhiyan on 21st June 2022 with the intension that each volunteer group will be assigned an adopted village and they volunteer group have to make frequent visits along with UBA team to the village and identify the problem and also suggest a proposed solution to the problems observed by them. The report of the same have to be prepared for finding a solution and further discussion. So far UBA cell of IIT Jammu have assigned three villages, Tanda, Jagti and Panjgrain to three volunteer groups, two volunteer groups have made a sole visits to their respective assigned

villages while as volunteer group of Panjgrain have made two visits in their village to identify the core problems of the villagers. They visited the high school, the primary school and dispensary. Interacted with students took part in their morning assembly too to reach them and made them comfortable. The volunteers in action can be seen in fig-8(a, b, c, d)



Fig-8 (a) first visit of Panjgrain volunteer group



Fig-8 (b) second visit of Panjgrain volunteer group



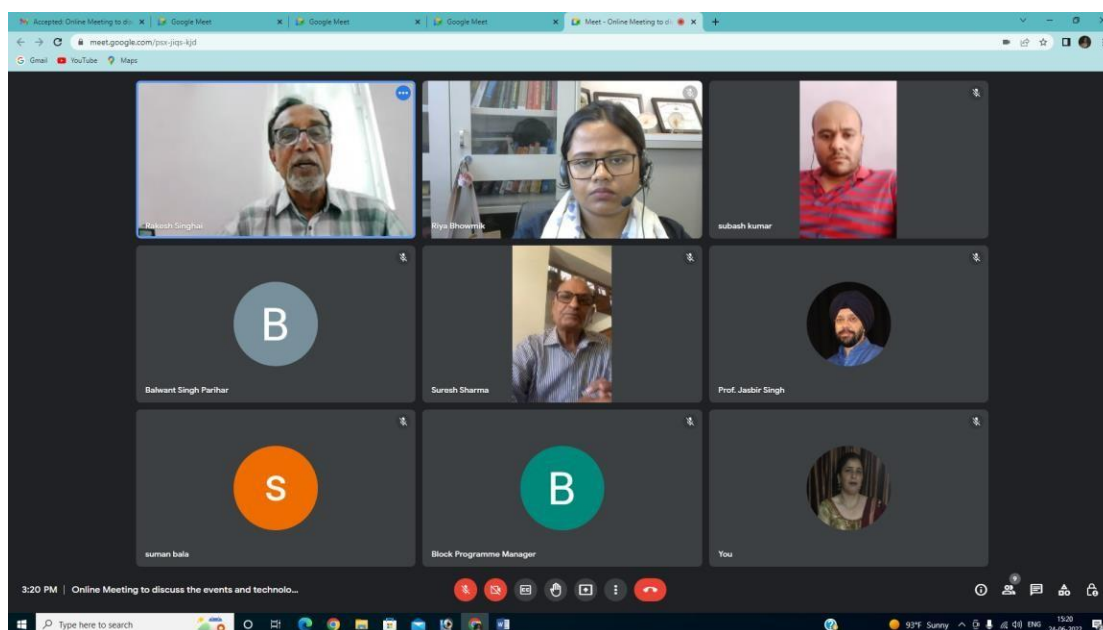
Fig-8 (c) first visit of Jagti village volunteers



Fig-8 (d) first visit of Tanda village volunteer

i) PI Interaction:

A PI interaction meeting was called by RCI Coordinator in an online mode due to summer break in most of the higher educational institution on 24th June 2022. The PI coordinators were briefed about the events initiated at the NCI. The progress done so far was reviewed and further plan of action was discussed. The PI coordinators were encouraged to make sure to take part in NCI initiated events like 'Catch the Rain', 'Tech4seva' and visit to CSIR IHBT Palampur.



j) Internship visit cum observation to Innovation Centre of IIT Jammu:

An Internship visit cum observation to innovation Centre of IIT Jammu was planned on the request of management and worthy Principal, Dr. Bandana Bhasin of Rajiv Gandhi Memorial College of Education of district Kathua (Jammu & Kashmir) under the guidance of Sr. Prof. Rakesh Singhai, Regional Coordinator, Unnat Bharat Abhiyan, Dean Social Outreach and Continuing Education, IIT Jammu.

Being a Post Graduate Teacher Education Institution offering M.Ed., B.Ed. & 4Year Integrated B.A. B.Ed. Program and as a part of Internship the institution intends for exposure visit cum observation for students of B.Ed. 2nd Semester (2021-23). The Institution is a Participating Institution under Unnat Bharat Abhiyan and have come to network in the year 2021. A group of 60 students escorted with two faculty members, Priyanka Verma and Mrs. Bandana Sharma, visited on 4th August 2022. The main objective of the visit was to enlighten the students about the innovative activities being conducted in the National Repute Institution Innovative Centre of Indian Institute of Technology Jammu.

Dr. Riya Bhowmik Assistant Professor Civil Engineering Department, PI Coordinator Unnat Bharat

Abhiyan, Associate Dean Social Outreach IIT Jammu welcome student. She while continuing the session briefed the students about the innovative activities at the institutional end and also highlighted the activities being conducted by IIT Jammu under Unnat Bharat Abhiyan, a flagship program under Government of India as Regional Coordinating Institution and as Participating Institution. Mrs. Jeyoti Bhat Kaul, UBA, RCI Assistant, IIT Jammu coordinated and facilitated visit. The students were divided into three groups. They started with Central Workshop where Mr. Naveen Kumar demonstrated the working mechanism of Turning, Milling, CNC Turning and Drilling machines followed by Mr. Harish Bhardwaj, who demonstrated CNC/VMC, surface grinding, cylindrical grinding and CNC EDM wire cut machine, Mr. Mayur gave the demonstration of fitting section and Carpentry section, while Mr. Rajeev took the Welding section. The students were also exposed to latest 12EDC (TINKERS Lab), this section was an eye opening for almost all the student, they were experiencing this section for the first time, there the experience the working mechanism of 3D Printer, Dual 3D Printer, 3 in one 3D Printer, PCB Engrave machine, CO2 LASER Engrave Machine, CNC Router, Conventional lathe, Desktop foaming machine and Vinayle printing machines, this session was solely taken by Mohammad Israil. The lab staff demonstrated the lab functioning and also addressed all the queries raised by the students. The students were happy and enthusiastic to see the functioning and behavior of IIT Faculties and staff. At the end the refreshment was served to the gathering and a group certificate was issued fig-9 and the glimpses of the activity can be seen in fig-10

Glimpses of Activity



Fig-10

k) IIT Jammu Conducts Online Workshop “Tech4Seva” as a part of “Azadi Ka Amrit Mahotsav”

Indian Institute of Technology Jammu, being the Regional Coordinating Institute of Unnat Bharat Abhiyan 2.0 (an initiative of Govt. of India) conducted the Workshop ‘Tech4Seva’ on 28th July 2022 in online mode to mark the journey of ‘Azadi ka Amrit Mahotsav’. The esteemed Jury included Mr. Suresh Sharma, Chairman, Gandhi Sewa Sadan; Senior Professor Rakesh Singhai, RCI Coordinator, and Dean, Outreach and Continuing Education programs, IIT Jammu; Dr. Gaurav A Bhaduri, Assistant Professor, Chemical Engineering Department, and UBA founder Coordinator, IIT Jammu; and Dr. Riya Bhowmik, Assistant Professor, Civil Engg. Dept., Associate Dean, Outreach and Skill Development Programs, and UBA PI Coordinator, IIT Jammu. The session was inaugurated by Dr. Riya Bhowmik with her warm welcome to the Jury and participants. She elaborated the importance of the event and explained the parameters of the evaluation to the participants.

The workshop took place in seven sessions: Mr. Gulzar Hussain, Faculty from Govt. Degree College, Kargil, Ladakh UT was the speaker of first session. His presentation was based on ‘Cultivation of Medicinal Plants’ in high altitude area of Ladakh area. Mr. Balwant Singh Parihar, UBA PI, Dogra Degree College, Bari Brahmana, addressed the second session with his demonstration on Development of ‘Digital Class Rooms in Govt. Schools’. Ms. Sonal Sharma from National Rural Livelihood Mission, Nagrota cluster, followed the session with her presentation on ‘Waste to Value: Use of flowers from religious shrines’. The fourth session was taken by Dr. Ajaz Wani, UBA PI Coordinator, Govt. Degree College, Doda and his presentation was on ‘Installation of Bio Gas Plant and Distribution to Household’ of adopted villages. The fifth session was taken by Mr. Mandeep Singh, final year student of Mechanical Engineering, Govt. College of Engineering and Technology, Jammu on ‘Saathi- A problem to yours solution’. Later, Mr. Nikansh Panotra, student from GCET Jammu presented his model of ‘Krishi Yantra’. The final session was on ‘Use of Waste Brick Powder in place of fine aggregates in concrete’ by the Civil Engineering students of SMVDU, Katra. Dr. Riya Bhowmik concluded the workshop by declaring the results of the competition as evaluated by the esteemed Jury. Ms. Sonal Sharma secured the first position, followed by Mr. Gulzar Hussain and the third position was secured by Mr. Mandeep Singh of GCET Jammu. The winners will be conferred with the cash prizes of Rs. 11,000, Rs. 7,000 and Rs. 5,000, respectively, along with the opportunity to demonstrate and discuss their ideas and technologies at Indian Institute of Technology Delhi, National Coordinating Institute of UBA.



UNNAT BHARAT ABHIYAN

Regional Coordinating Institute, IIT Jammu
Organizes
Tech4Seva

Technology Outreach as Enabler for inclusive, Sustainable and Affordable Healthcare

THEMES

- Sustainable Agriculture System
- Water Resource Management
- Rural Energy System
- Artisans Industries and Livelihood
- Basic Amenities (Infrastructure, Education, Healthcare etc.)

CALL FOR ENTRIES



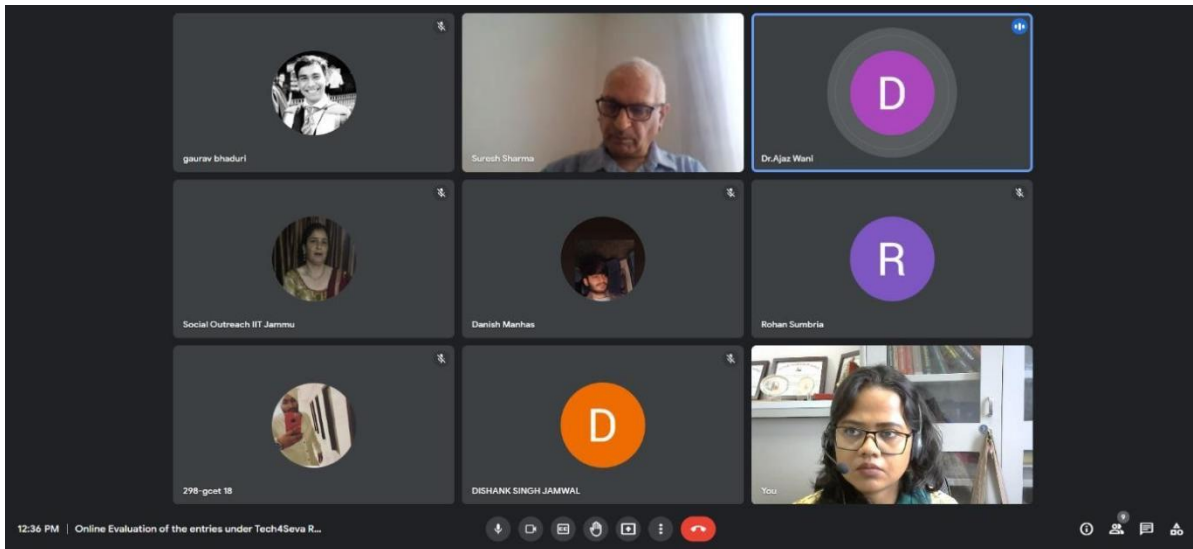
ITEMS TO NOTE

- Participation: Open to all
- Technology: Developed
- Theme Demonstration: One or Multiple
- Participants need to share his/her consent for UBA rights on usage of the entries received.

Certificate for Participation

Cash Prize For winners
1st - Rs 11000/-
2nd -Rs 7000/-
3rd - Rs. 5000/-

LAST DATE
15TH JULY 2022



I) Palli Residential Energy Utilization and Waste Generation Survey by Regional Coordinating Institute Indian Institute of Technology Jammu

Palli, a small hamlet located in the Samba district of UT of Jammu and Kashmir, made history on 24th April 2022 when honorable Prime Minister of India, Sh. Narendra Modi declared the panchayat as India's first carbon-neutral panchayat. Keeping in line with this vision, Ministry of Panchayati Raj and Samba district administration deputed the work of surveying and analyzing the residential energy utilization and waste generation in Palli panchayat to the Unnat Bharat Abhiyan (UBA) Regional Coordinating Institute (RCI): Indian Institute of Technology (IIT) Jammu. The first meeting was called by Ministry of Panchayati Raj and state administration of Samba and the same was attended by the Unnat Bharat Abhiyan RCI team of IIT Jammu headed by Dr. Gaurav Bhaduri, Dr. Prasun Haldar and UBA staff Mrs. Jeyoti Kaul. This meeting was also attended by MoPR officials and state administration. Some of the dignitaries from all over India including Prof. V K Vijay, National Coordinator, Unnat Bharat Abhiyan, can be seen in fig-12

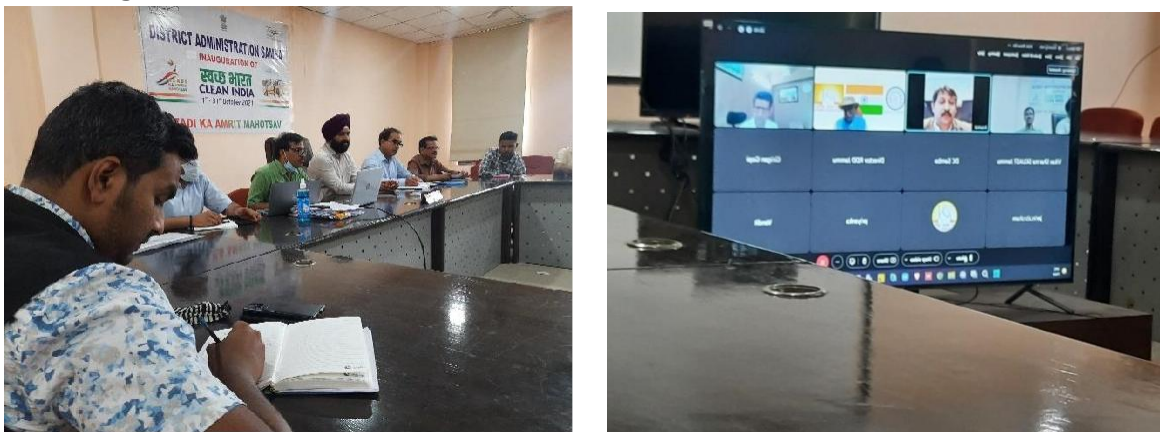


Fig-12

This report presents the details of the conducted survey and the analyzed outcomes for assessment of residential energy utilization and waste generation in Palli panchayat. The Participating Institutes (PIs): Dogra Degree College and Government Polytechnic Jammu under RCI IIT Jammu volunteered to conduct the field survey. Under the guidance of Mr. Balwant Singh, PI Coordinator, Dogra Degree College, and Mr. Subhash, PI Coordinator, Government Polytechnic Jammu, two teams of 23 and 18 students, respectively, conducted the 'Energy Survey' and 'Waste Survey' of 724 households in the entire panchayat.



The team of IIT Jammu then first accomplished the mammoth task of digitizing the entire data from the physical copies of the form. This was done with the help of 16 student volunteers from IIT Jammu under the guidance of Prof. Rakesh Singhai, Dean, Outreach and Continuing Education Programs, and RCI Coordinator, IIT Jammu. After the digitization of the data, it was compiled and analyzed thoroughly by Dr. Riya Bhowmik, Asst. Prof. Civil Engg. Dept., and Associate Dean, Outreach and Skill Development Programs and Mrs. Jeyoti Kaul Bhat, Project Staff, UBA, IIT Jammu. The present report provides detailed information about the state of energy access, energy use patterns, and various modes of waste generation in Palli homes. The analyzed records of survey were presented before the state administration by Dr. Riya Bhowmik can be seen in the fig-13

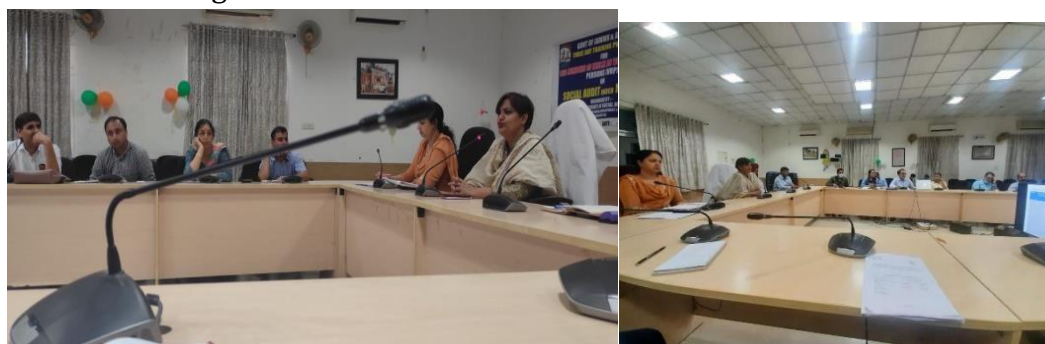


Fig-13

m) Catch the Rain selfie:

An initiative of the National Water Mission under the Jal Shakti Abhiyan. It was launched by Shri Narendra Modi, Honorable Prime Minister on the occasion of World Water Day, March 22, 2021, with the objective of nudging states and stakeholders to create appropriate rainwater harvesting structures before monsoon with the active participation of people. The initiative aims to enumerate all water bodies in a district and remove encroachments throughout the country.

Unnat Bharat Abhiyan collaborated with the NWM and VIBHA on June 5, 2021, to support 'Catch the Rain' mission activities around four focus areas:

- Awareness of on-field implementation of water conservation projects
- Groundwater recharging projects
- Projects for maximizing surface water usage
- Promotion of sustainable agricultural activities

The campaign is about clicking selfies with water bodies or locally existing structures for conserving water. These will be uploaded on social media with a view to create

awareness and draw the attention of concerned stakeholders toward the water body/ conservation structure

IIT Jammu as RCI shared this information with all its PIs and as PI took part in this campaign in its adopted villages and around can be seen in fig-13. The most of the population are comfortable with English language, hence the poster was designed in English language only. The poster of the event can be seen in fig-14.

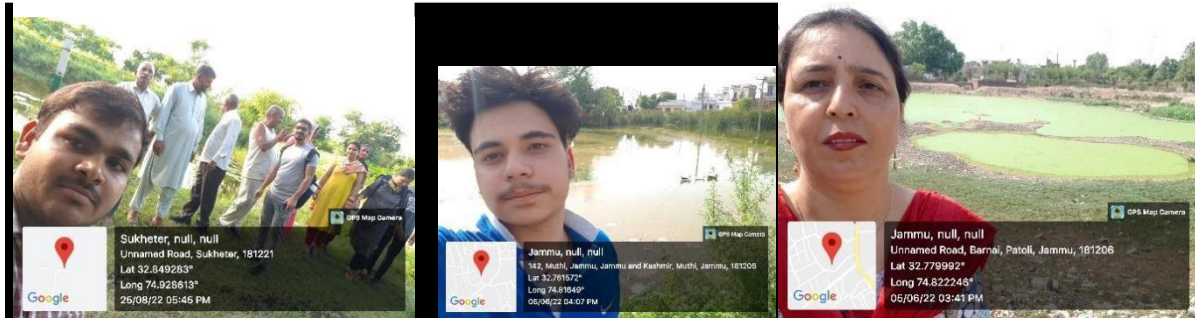


Fig -14



Fig-15

n) Technology Demonstration and Business Networking Meet at CSIR-IHBT Palampur

CSIR-NIScPR in collaboration with UBA organized a technology demonstration and showcasing event for rural technologies developed by CSIR-Institute of Himalayan Bio resource Technology (IHBT), Palampur on the June 29-30, 2022 at CSIR-IHBT Palampur in physical mode. The event comprised of technology demonstration sessions, laboratory and production centre visits, experience-sharing by current users of those technologies, and identification of potential avenues of technology

dissemination. The event was initiated by NCI for the UBA PIs through RCI network, grass root representatives, and entrepreneurs interested in dissemination of these technologies. We a team of UBA RCI, IIT Jammu were happy to see the participation of our PIs in this event can be seen in Table-1. There participants from Kargil, Ladakh despite the bad weather conditions in both UTs. The list of Technologies can be seen in Table-2.

Table-1

S. No.	Name of the Participant	Contact	Email	Designation	Institute	Status
1	Dr. Gulzar Hussain	700667 9027	hussaingulzaa@gmail.com	PI Coordinator Assistant Professor History	Govt. Degree College Kargil, Ladakh UT	Confirmed
2	Dr. Sayed Ali Musavi	941921 5544	Syed.ali.mousavi@gmail.com	UBA, Representative	Govt. Degree College Kargil, Ladakh UT	Confirmed
3	Balwant Singh Parihar	968219 3631	bs932272@gmail.com	PI Coordinator Assistant Professor Sociology	Dogra Degree College, Bari brahmna, District Samba, J&K UT	Confirmed
4	Er. Subash Kumar	946922 5326	Subash17aug@gmail.com	PI Coordinator Assistant Professor	Govt. Polytechnic Jammu, Vikram Chowk	Confirmed
5	Deeksha Malgotra	700657 3912	malgotradeeksha@gmail.com	SHG representative of adopted village Panjgrain	PI, IIT Jammu	Confirmed
6	Priya Thakur	700622 7170	-	SHG representative of adopted village Jagti	PI, IIT Jammu	Confirmed
7	Dr. Bandana Bhasin	700622 0098	bandhana1@gmail.com	Principal	Rajiv Gandhi PG College of	Confirmed

					Education, kathua	
8	Upasana Sharma	941910 0356	Upasanasharma 74@gmail.com	PI Coordinator Assistant Professor	Rajiv Gandhi PG College of Education, kathua	Confirmed

List of Technologies for Showcased by CSIR-IHBT Palampur (Table-2)

1.	Shiitake Mushroom: Vitamin D2 Enriched
2.	Gluten Free Foods (Buckwheat Bars And Noodles)
3.	Iron and zinc enriched spriluna based bars
4.	Iron enriched fruit bars and candies
5.	Multigrain high protein mix for beverages
6.	Protein and fibre enriched cereal bars
7.	Ready to eat crispy fruits and vegetables
8.	Canning technologies for ready to eat foods
9.	Food products from bamboo (TBC)
10.	Technology for dietary fibres extraction from apple pomace
11.	Stevia : Agro and processing technology
12.	Monk Fruit(Siraitia grosvenorii) Low calorie sweetener
13.	Heeng (Ferula assa foetida): Agro technology
14.	China Hybrid Tea(Camelia sinensis): Agro technology package
15.	Damask Rose(Rosa Damascena): Agro and Processing technology
16.	Wild Marigold: Agro and Processing technology
17.	Lilium: Agro technology
18.	Calla Lily: Agro technology
19.	Gerbera : Agro technology
20.	Micro propagation protocols: Industrially important crop plants
21.	Micro propagation protocols for Picrorhzia kurroa
22.	Production technology for quality root stock for apple
23.	Crispy Fruits And Vegetables For Avoiding Post Harvest Losses
24.	Ready To Eat Foods For Ethnic Cuisines

25.	Improved beehive for quality and hygienic extraction of honey
26.	Tea Based Products (Ready To Drink Teas, Tea Wine, Tea Catechins, Tea vinegar, Tea mouthwash, Tea based hand sanitizer)
27.	Stevia Powder And Stevia Liquid Drops (Low Calorie Sweetener)
28.	Herbal Lipstick
29.	Lip Balm
30.	Herbal Soap And Herbal Oil
31.	Herbal Incense Cones/ Dhoop
32.	Herbal Formulation For Immunity Modulation: Immust Pro (Immunity Modulator), product
33.	Perfumes/ Pocket Perfumes
34.	Bamboo Charcoal
35.	Commercially Important Enzymes (Super Oxide Dismutase, L- Asparaginase)
36.	Sapium Based Products
37.	Products Launched By Starts-Ups/ Incubatees
38.	Barley coffee – Roasted barley grain beverages
39.	Edible colors
40.	Mobile essential oil distillation unit
41.	Mini Distillation unit – Herbostill
42.	Tea withering machine (TBC)
43.	Bamboo Nursery

In addition to above: Heeng Seeds/ Plants, Saffron Planting material, Flower planting material, Medicinal and Aromatic Plants etc.

The feedback from the participants was taken and Potential of implementation of these learnt technologies in the villages associated with our network of institutions was taken as can be seen in Table-3, already shared with NCI for further perusal.

Table-3

S. No.	Name	Designation and Organization	CSIR-IHBT technologies you are interested in			cope of other technologies (other than those demonstrated at IHBT)		
						Name/Type of Technology required	Reason for selection	Potential villages where it can be implemented
1	Dr. Gulzar Hussain	PI Coordinator and	1 Heeng (Ferula assafoetida):	Climate is suitable	Village Kharul of Kargil			
		UBA Representative	Agro technology	for the crop	District of Ladakh UT			
2	Dr. Sayed Ali Musavi	Assistant Professor History	2 Calla Lily: Agro technology	Climate is suitable for the crop	Village Ando of Kargil District of Ladakh UT			
		Govt. Degree College Kargil, Ladakh UT	3 Ponies Floriculture (not in the list but demonstrated there)	Climate is suitable for the crop	All five villages are ready to accept this technology			
3	Balwant Singh Parihar	PI Coordinator	4 Bamboo Nursery	Climate of Jammu is suitable for Bamboo	Palli Village			
		Assistant Professor Sociology	5 Food products from bamboo	-	Palli and Tonda villages			
		Dogra Degree College, Bari brahmna, District Samba, J&K UT	6 Shiitake Mushroom: Vitamin D2 Enriched	there is potential of this technology	Tonda Village			
4	Deeksha Malgotra and Priya Thakur	SHG representatives of adopted villages of IIT Jammu				7 Waste to Valuable : Used Flowers in religious Shrines.	Jammu is a place of temples, so flower waste is available in large quantity	all five adopted villages of IIT Jammu

o) Water Testing Quality Report of Adopted villages:

The water samples of Makhanpur village of Vijaypur block of UBA adopted village (GGM Science College, Jammu), one of the PIs under RCI, IIT Jammu were taken for quality testing in IIT Water Testing Lab to get to know the if the water quality is appropriate to drink. The three samples from different sources were taken from the village. The test report were shared by the lab officials. The test reports suggest that water is not fit to drink. The report can be seen in Table-4



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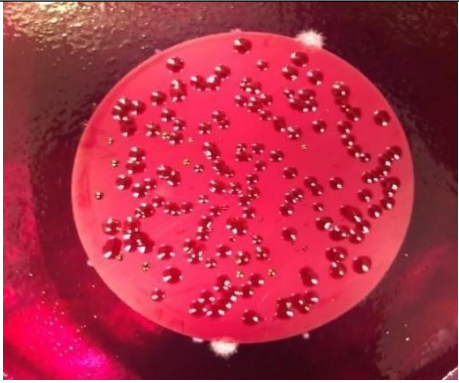

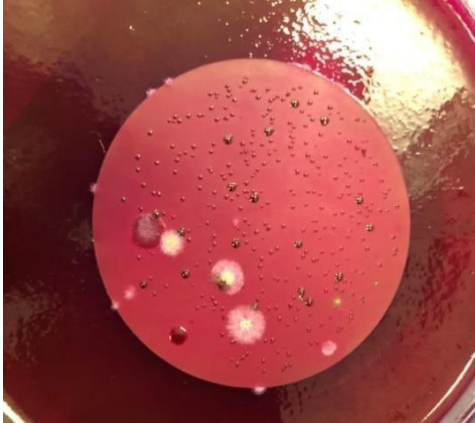
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Table-4

PARAMETERS	SAMPLE-1	SAMPLE-2	SAMP LE-3	TAP Water (FROM ENVIRONM ENTAL ENGINEERI NG LAB)	Acceptabl e limit (10500 : 201 2)
pH	7.31±0.03	8.20±0.03	7.40±0. 03	7.83±0.02	6.5 – 8.5
Conductivity (ms/cm)	0.701±0.004	0.720±0.004	0.758± 0.004	0.560±0.002	-
TDS(mg/L)	352±4	365±4	380±4	280±3	500
Salinity(mg/L)	530±3	554±3	573±3	421±3	-
Alkalinity (as caco₃),mg/L, Max	408±5	400±5	408±5	296±5	200
Chloride content(as cl), mg/L, Max	94±1.6	96±1.6	99±1.6	24±±1.6	250
Total Hardness (as caco₃,mg/L, Max	448±5	436±5	432±5	268±5	200
Acidity (as caco₃),mg/L, Max	32±5	28±5	48±5	20±5	-
Iron	0.24ppm	0.38ppm	0.80pp m	-	0.3 ppm

Biological test:

COLONIES OBTAINED FROM MEMBRANE FILTRATION TECHNIQUE

S.no	Sample	No. of colonies/100ml (Incubation period-48hrs)	Pictures	Remarks
01	Sample-1	12		Unfit for drinking purpose
02	Sample-2	20		unfit for drinking Purpose
03	Sample-3	22		Unfit for drinking purpose

Any queries regarding the results may be consulted directly with the Project Officer of WQTL, IIT Jammu @iitjmu80102@iitjammu.ac.in.

Palli Survey:

This report presents the details of the conducted survey and the analyzed outcomes for assessment of residential energy utilization and waste generation in Palli panchayat. The Participating Institutes (PIs): Dogra Degree College and Government Polytechnic Jammu under RCI IIT Jammu volunteered to conduct the field survey. Under the guidance of Mr. Balwant Singh, PI Coordinator, Dogra Degree College, and Mr. Subhash, PI Coordinator, Government Polytechnic Jammu, two teams of 23 and 18 students, respectively, conducted the 'Energy Survey' and 'Waste Survey' of 724 households in the entire panchayat.

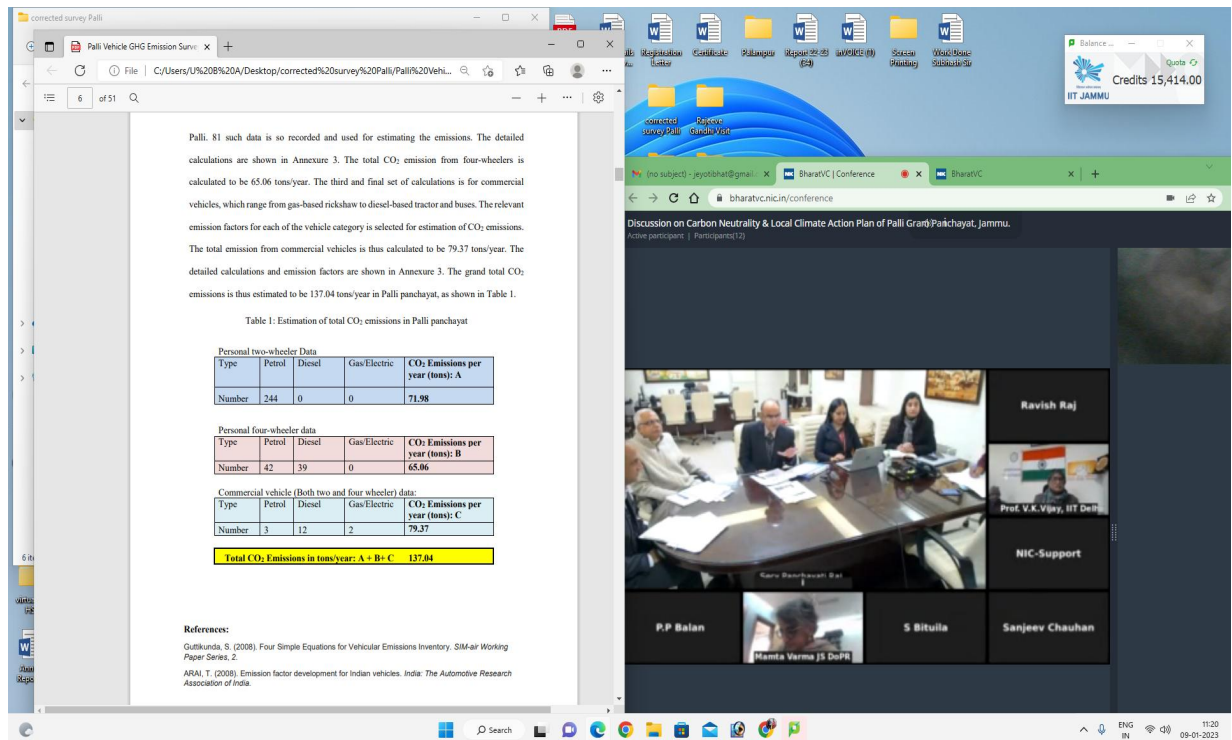
The team of IIT Jammu then first accomplished the mammoth task of digitizing the entire data from the physical copies of the form. This was done with the help of 16 student volunteers from IIT Jammu under the guidance of Prof. Rakesh Singhai, Dean, Outreach and Continuing Education Programs, and RCI Coordinator, IIT Jammu. After the digitization of the data, it was compiled and analyzed thoroughly by Dr. Riya Bhowmik, Asst. Prof. Civil Engg. Dept., and Associate Dean, Outreach and Skill Development Programs and Mrs. Jeyoti Kaul Bhat, Project Staff, UBA, IIT Jammu. The present report provides detailed information about the state of energy access, energy use patterns, and various modes of waste generation in Palli homes. The analyzed records of survey were presented before the state administration by Dr. Riya Bhowmik





Another Survey for Vehicular GHG (CO₂) Emissions in Palli Panchayat:

UBA team of IIT Jammu received another request from the Department of Rural Development and Panchayati Raj early in the month of December 2022 for conducting a survey to assess the vehicular Greenhouse Gas Emissions, especially, Carbon dioxide, in the village Palli. This report presents the details of the conducted survey and the outcomes of the analysis of the surveyed data. Details of Survey for the present survey, the UBA team utilized the data of contact details of the resident household heads already available from the previously conducted survey. Mrs. Jeyoti Kaul, Project Associate, UBA, IIT Jammu led a team of student volunteers of IIT Jammu to conduct the survey telephonically. All 641 household heads were called and asked for their details of personal or commercial vehicles and their corresponding usage per month. The survey took nearly half a month to complete. Out of 641 households, 244 heads confirmed using petrol based two-wheeler vehicles, 81 heads said yes to using petrol- or diesel-based four wheeler vehicles, while only 17 heads confirmed plying some mode of commercial vehicles. Annexure 1 shows the details of the data collected from this survey.



Technology Demonstration and Business Networking Meet at CSIR- IHBT Palampur

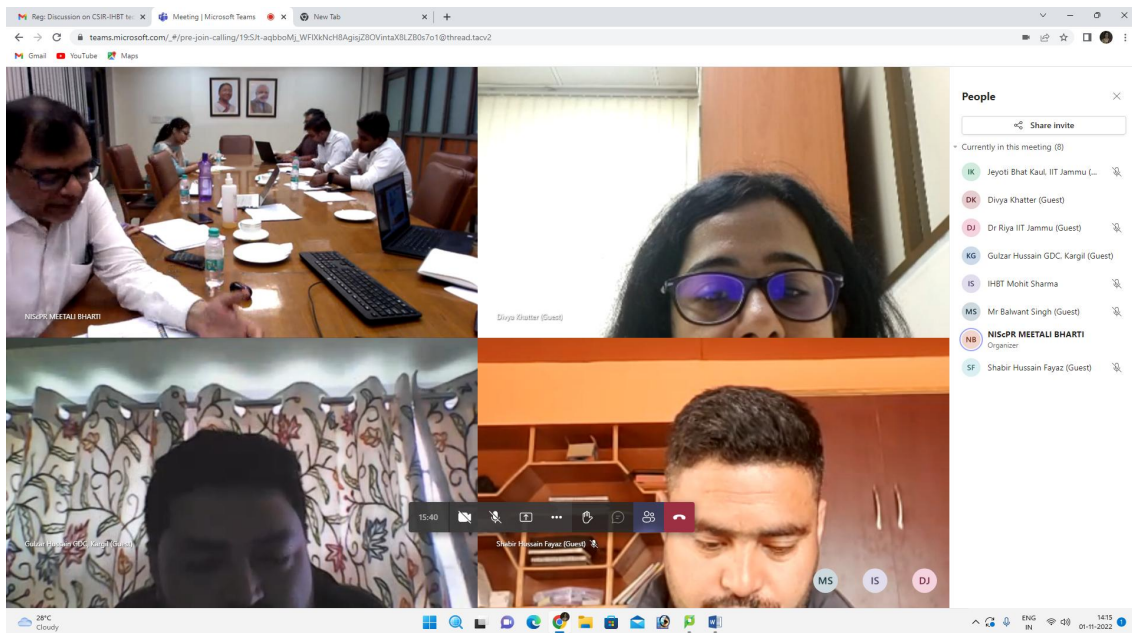
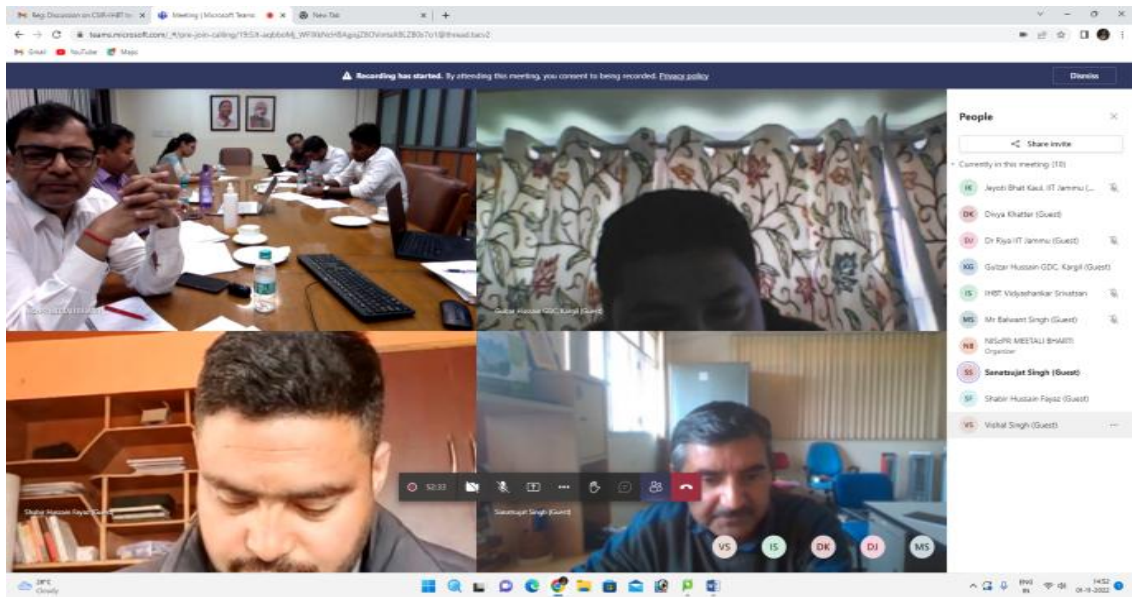
CSIR-NIScPR in collaboration with UBA organized a technology demonstration and showcasing event for rural technologies developed by CSIR-Institute of Himalayan Bio resource Technology (IHBT), Palampur on the June 29-30, 2022 at CSIR- IHBT, Palampur in physical mode. The event comprised of technology demonstration sessions, laboratory and production centre visits, experience-sharing by current users of those technologies, and identification of potential avenues of technology dissemination. The event was initiated by NCI for the UBA PIs through RCI network, grass root representatives, and entrepreneurs interested in dissemination of these technologies. We a team of UBA RCI, IIT Jammu were happy to see the participation of our PIs in this event can be seen in Table-1. There participants from Kargil, Ladakh despite the bad weather conditions in both UTs.

Discussion cum meeting on CSIR-IHBT technologies of interest with UBA stakeholders of Jammu Province and Ladakh UT

Further to the Technology Demonstration meeting held on June 29-30, 2022 at CSIR-IHBT Palampur, where RCI IIT Jammu had deputed 8 PI participants from different districts of Jammu province and Ladakh UT and the enthusiasm of the attendants have attracted attention of esteemed organization like CSIR-IHBT Palampur to work out a prospective plan for dissemination of those technologies in their work areas, therefore a brief online discussion just to have clarity on the specific requirements and the existing resources for potential technology dissemination was scheduled with stakeholder, CSIR-IHBT scientists, RCI staff and interested UBA PI Coordinators on 1st November 2022.

The said discussion revolved around two points:

Shared potential technological/ consultancy solutions to the participant requests,
and their scope of implementation
Identified end users interested in implementing the proposed solutions



Screen Shots of the interaction

Repeat samples collection for the drinking water quality testing of village Makhanpur, Bishnah block of Jammu:

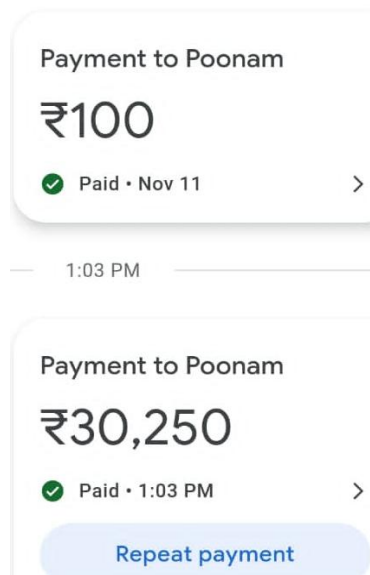
This is in continuation with our earlier water testing reports of village Makhanpur, a UBA adopted village of GGM Science College Jammu. The test reports suggest that the water is not fit to drink. The Lab staff of IIT Jammu suggested that if we need to get to the details of the impurities, another test series were proposed as to find the source of the impurities and this time it was decided that the samples will be collected by the lab staff using appropriate apparatus for the sample collection at different places, sources and surface levels to get exact results. Hence a lab team of two members, representative from GGM Science College, village representatives with collective effort went the site on 14th November 22 to collect samples for further prescribed tests. The ten samples were taken at different locations of the site. The tests are under process, waiting for the result.



Self Help Group (SHG) contribution in convocations of IIT Jammu

IIT Jammu in its role as a Participating Institution under Unnat Bharat Abhiyan is striving hard to help as well as to sustain development in its adopted villages. In relation to this, since its first and second convocation in 20-21, 21-22 and now during current year convocation of 22-23 IIT Jammu has continuously believed and involved the local Self Help Group (SHG) named “Jai Laxmi Mata” which is a group of eight ladies from Jagti Panchayat. These ladies are now comfortable in making the angvastaram and robes for the students, dignitaries and marshals etc. The improved skill quality and precision can be seen that attracted the convocation dress committees in its first meeting on 8th September 22 for the repeat order. This small step is a big contribution to their family income, as most of the village families are dependent on daily wages. In addition to this another order of 220 Convocation bags with screen printing on both sides was also given to them.





Technical Assistance in protecting the old heritage values

A visit to Panjvaktar tree temple was planned by the Outreach and UBA team of IIT Jammu on the request of the Chairman Temple Committee (appointed by Honorable High Court of J&K) for 19th September 2022.

The UBA and outreach team of IIT Jammu headed by Prof. Rakesh Singhai put forward this value added request to the concerned department heads of the Institute, because this particular Panjvaktar Mahadev Mandir is of immense heritage value in Jammu, where Mahadev has self-manifested in form of AAP-Shambhu and the Sikh Guru, Guru Nanak Dev Ji is believed to have visited this Mandir and stayed here for three days. This temple have an old Ber tree, more than six/ seven hundred years old standing inside the Mandir, under which Guru Nanak Dev Ji is believed to have delivered sermon to the then Dogra King, Raja Khokhar Dev on Raj Dharma. This tree being very old and had been supported on supports of crude form, which appear to be getting tilted precariously. It is imperative to save and protect this Ber tree considering its heritage, religious and historical importance and values. Hence a request was submitted and circulated among faculties for suggestive technical assessment and measures as how to protect this tree on scientific lines. The temple committee have ample funds to get requisite interventions implemented.

The voluntary response came from Dr. Sameer Kumar Sarma P, Assistant Professor, Department of Civil Engineering, IIT Jammu. Dr. Sameer and UBA team visited the tree temple and met with the committee members of the temple to get to know the construction know how of the temple and the earlier support system of the holy tree. Its earlier support system is now in the air and the tree seems uprooting because of the heaviness of the long trunk and fore branches of the tree are adding weight continuously



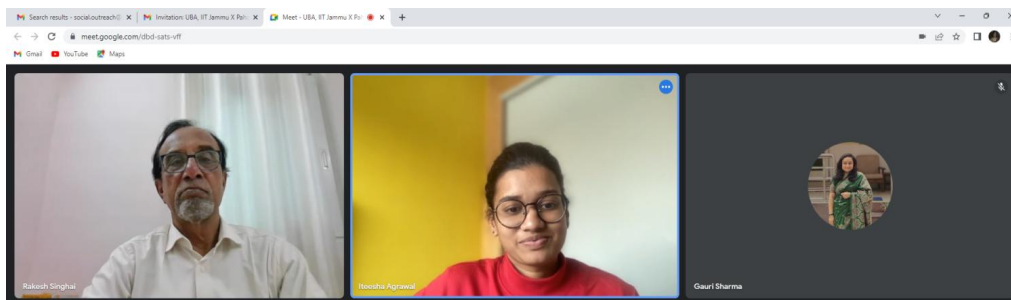
Dr. Sameer took a detailed view of the site and wanted to meet the architect and the contractor of the temple:

He also took dimensions of the tree to design a support. The architect and Dr. Sameer had a telephonic conversation about the support structure and a physical meeting was fixed at IIT Jammu premises on 15th December '22. The design details were discussed and another site visit is planned



Interaction with Pahadi Organization working for Handmade in Himalayas:

To bring UBA villages closer to the vision of financially inclusive India by bringing transformational change to the rural architecture of the country, Unnat Bharat team of IIT Jammu, headed by Prof. Singhai had an online interaction session with a team of Pahadi Organization headed by Iteesha Agarwal, the co-founder of the organization on 11th November 2022 between 4.30pm to 5.30pm. This interaction session was planned to take part in an International start-up conference extending over 2 days at Dharamshala, India in April 2023, this entrepreneurial conference will have workshops, panel discussions, and funding opportunities for selected start-ups Finding this an opportunity for our three SHGs to get associated with them to showcase their local Hand-made products in the conference. Prof. Singhai and Dr. Riya Bhowmik expressed their interest that our SHGs to some extent need design input for their ready to sell products, as during discussion, the team of Pahadi organization is a group of designers and their design ideas will definitely increase the product demand of our SHGs and the organization aims to build a resilient ecosystem for start-ups of all Himalayan States in the sectors of Handicraft - Hand loom, Beauty-Personal Care and Organic-Wellness Food with a vision to promote rural entrepreneurship in the Himalayas and thereby create an impact on the livelihoods of the local community and craft.



Kitchen Waste Composting drums designed at IIT Jammu Workshop for UBA villages, Prototype under process. Will be delivered on 30th January '23 at village Panjgrain to manage organic waste





Glimpses of event



FORM GFR 12A

GENERAL FINANCIAL RULES 2017
Ministry of Finance
Department of ExpenditureGFR 12 – A
[(See Rule 238 (1))]FORM OF UTILIZATION CERTIFICATE
FOR AUTONOMOUS BODIES OF THE GRANTEE ORGANIZATIONPROVISIONAL UTILIZATION CERTIFICATE FOR THE PERIOD ENDING 31.03.2023 IN RESPECT
OF RECURRING
GRANTS-IN-AID/SALARIES/

- Name of the Scheme – Unnat Bharat Abhiyan Regional Coordinating Institute
- Reference No- File No. IITJMU/UBA-PI/2019-20 dated 31/12/2019
- Principal Investigator- Prof. Rakesh Singhai
- Whether recurring or non-recurring grants - Recurring
- Grants position at the beginning of the Financial year
 - Cash in Hand/Bank - 305092
 - Unadjusted advances- Nil
 - Total- 305092
- Details of grants received, expenditure incurred and closing balances: (Actuals)

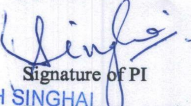
Unspent Balances of Grants received years [figure as at Sl No. 3 (iii)]	Interest Earned thereon	Interest deposited back to the Government	Grant received during the year			Total Available funds (1+2-3+4)	Expenditure incurred	Closing Balances (5-6)
			Sanction No. (i)	Date (ii)	Amount (iii)			
1	2	3	4			5	6	7
			Sanction No. (i)	Date (ii)	Amount (iii)			
305092	Nil	Nil	Nil	07.06.22	250000	1555092	679704	875388
			Limit Sanction	N.A.	1000000			

Component wise utilization of grants:


Grant-in-aid-General	Grant-in-aid-creation of capital assets	Total
875388	Nil	875388

Details of grants position at the end of the year

- Cash in Hand/Bank- Rs.239679 (Rs.635679/- as the unspent balance reversed in the PFMS as on 31.03.23)
- Unadjusted Advances- Nil
- Total- Rs.239679


Signature of PI
RAKESH SINGHAI
Dean
Date : 20.04.2023
Continuing Education & Outreach Programs
Indian Institute of Technology Jammu
Jagti, NH 44, Nagrota, Jammu-181221
J&K (India)


Signature
Name..... Assistant Registrar
(With seal) **पूजा राज्यगुरु / Puja Rajyaguru**
Date **सहायक कुलसचिव / Assistant Registrar**
भारतीय प्रौद्योगिकी संस्थान जम्मू
Indian Institute of Technology Jammu


Signature
Name..... Registrar
(With seal) Authorised Signatory
Indian Institute of Technology Jammu
Date Paloura/Jagti, Nagrota
Jammu (J&K)-181121



GENERAL FINANCIAL RULES 2017
Ministry of Finance
Department of Expenditure

FOR I GFR 12A

Certified that I have satisfied myself that the conditions on which grants were sanctioned have been duly fulfilled/are being fulfilled and that I have exercised following checks to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained as prescribed in the relevant Act/Rules/Standing instructions (mention the Act/Rules) and have been duly audited by designated auditors. The figures depicted above tally with the audited figures mentioned in financial statements/accounts.
- (ii) There exist internal controls for safeguarding public funds/assets, watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of relevant Act/Rules/standing instructions and scheme guidelines.
- (iv) The responsibilities among the key functionaries for execution of the scheme have been assigned in clear terms and are not general in nature.
- (v) The benefits were extended to the intended beneficiaries and only such areas/districts were covered where the scheme was intended to operate.
- (vi) The expenditure on various components of the scheme was in the proportions authorized as per the scheme guidelines and terms and conditions of the grants-in-aid.
- (vii) It has been ensured that the physical and financial performance under the scheme has been according to the requirements, as prescribed in the guidelines issued by Govt. of India and the performance/targets achieved statement for the year to which the utilization of the fund resulted in outcomes given at Annexure – I duly enclosed.
- (viii) The utilization of the fund resulted in outcomes given at Annexure – II duly enclosed (to be formulated by the Ministry/Department concerned as per their requirements/specifications.)
- (ix) Details of various schemes executed by the agency through grants-in-aid received from the same Ministry or from other Ministries are enclosed at Annexure –II (to be formulated by the Ministry/Department concerned as per their requirements/specifications).

Date: 20.04.2023

Place: Jammu

Signature of Pt
Date : 20/4/2023
RAKESH
Dean
Continuing Education & Outreach Programs
Indian Institute of Technology Jammu
Jagti, NH 44, Nagrota, Jammu-181221
J&K (India)

Signature
Name..... Assistant Registrar
(With seal) राज्जगुरु / Raja Rajyaguru
सहायक कुलसचिव / Assistant Registrar
Date भारतीय प्रौद्योगिकी संस्थान जम्मू
Indian Institute of Technology Jammu

Signature
Name..... Registrar
(With seal)
Date Authorized Signatory
Indian Institute of Technology Jammu
Paloura/Jagti, Nagrota
Jammu (J&K)-181121

(Strike out inapplicable terms)



GFR 12 – B
[See Rule 256 (2)]

FORM OF UTILIZATION CERTIFICATE

- (1) Certified that out of the Recurring Grant of Rs.2,50,000/- sanctioned under **Unnat Bharat Abhiyan Regional Coordinating Institute** - with Reference No- N.A. dated 07.06.2022 and Rs.10,00,000/- via limit sanction in the PFMS in favour of IIT Jammu during the year 2022-23 and Rs.3,05,092/- available as opening balance, an amount of Rs.6,79,704/ has been utilized for the purpose for which it was sanctioned, and that the balance of Rs.2,39,679/- remaining unutilized at the end of the year and Rs.635679/- has been reversed via the PFMS portal as the limit sanctioned at the end of the year has been reduced to Nil.
- (2) Certified that I have satisfied myself that the conditions on which the loan was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the following checks to see that the money was actually spent for the purpose for which it was made.

Kinds of checks exercised

1. Statement of Accounts
2. Bank Statements

Signature.....

Designation

Date
RAKESH SINGHAJ.....

Dean
Continuing Education & Outreach Programs
Indian Institute of Technology Jammu
Jagti, NH 44, Nagrota, Jammu-181221
J&K (India)

STATEMENT OF EXPENDITURE


From Date of Start to 31st March 2022

1. Sanction Order No. and Date: File No. IITJMU/UBA-PI/2019-20 dated 31/12/2019
2. Total Project Cost: Rs.10,00,000/- (Rupees Ten Lakh Only) per year
3. Revised Project Cost (If applicable): N.A.
4. Date of Commencement: 23/12/2019
5. Grant Received in each year:
 - (a) 1st Year: Rs.5,00,000/-
 - (b) 2nd Year: Nil
 - (c) 3rd Year: Rs.7,50,000/-
 - (d) 4th Year: Rs.2,50,000/- via Bank transfer and Rs.10,00,000/- via the limit sanctioned.
 - (e) Interest (If any): Nil
- (f) Total: Rs.15,00,000/- via Bank transfer and Rs.10,00,000/- via the limit sanctioned

RAKESH SINGHAI

Dean

Continuing Education & Outreach Programs
Indian Institute of Technology Jammu
Jagti, NH 44, Nagrota, Jammu-181221
J&K (India)



Statement of expenditure
To be submitted financial year wise
(i.e. DOS to 31.03.2023)

S. No.	Sanctioned Heads	Sanctioned Cost (Each Year)	Funds Received	Expenditure Incurred				Total Expenditure (IX)= V+VI+VII+VIII	Balance as on date (X)=IV-IX	Requirement of Funds (XI)
				1 st Year	2 nd Year	3 rd Year	4 th Year			
1	Salary	500000	1750000	159979	330990	361172	356802	1208943	541057	500000
2	Travel	100000	150000	0	0	52467	116617	169084	(19084)	100000
3	Meetings	200000	200000	0	0	4800	18881	23681	176319	200000
4	Contingency	200000	400000	0	0	35500	187404	222904	177096	200000
5	Total	1000000	2500000	159979	330990	453939	679704	1624612	875388	1000000

Name and Signature of the Principal Investigator:

RAKESH SINGHA
Dean

Continuing Education & Outreach Programs

Indian Institute of Technology Jammu
Jagti, NH 44, Nagrola, Jammu-181221

Signature of Assistant Registrar:

(With Seal) Pooja Pagaru

सहायक कुलसचिव / Assistant Registrar

भारतीय प्रौद्योगिकी संस्थान जम्मू

Indian Institute of Technology Jammu

*** DOS - Date of Start of Project**

Note :

- Expenditure under the sanctioned heads, at any point of time, should not exceed funds allocated under that head, without prior approval of DST i.e. Figures in Column (VIII) should not exceed corresponding figures in Column (III)
- Utilisation Certificate for each financial year ending 31st March has to be enclosed along with request for carry-forward permission to the next financial year.

