

भारतीय प्रौद्योगिकी संस्थान जम्मू INDIAN INSTITUTE OF TECHNOLOGY JAMMU



# **उर्रे उर्ग्रे अन्द्र अन्तिरुग्रे**

# ANNUAL REPORT

1-4-2022 to 31-8-2022

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 28<sup>th</sup> 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 6<sup>th</sup> 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 13<sup>th</sup> April 2022 in the office Prof. Rakesh Singhai along with Cooperative representatives from Udhampur 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 9<sup>th</sup> and 11<sup>th</sup> 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 10<sup>th</sup> and 12<sup>th</sup> 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 21<sup>st</sup> 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, 17<sup>th</sup> 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



### 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 27<sup>th</sup> 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.



# 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-7and 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 21<sup>st</sup> 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



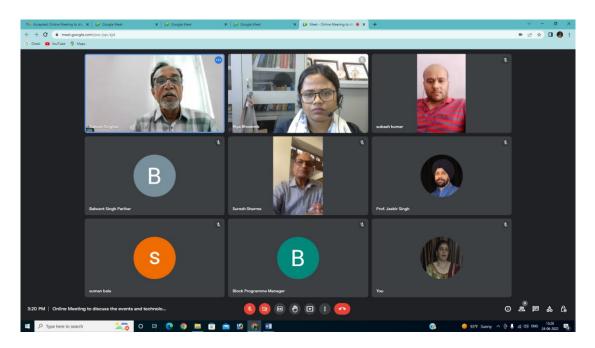


Fig-8 (c) first visit of Jagti village volunteers

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 24<sup>th</sup> 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 coordinator 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 4<sup>th</sup> 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

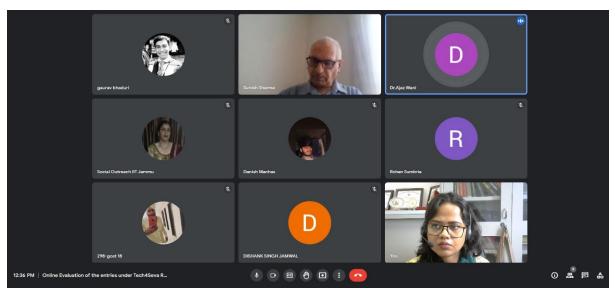


#### k) IIT Jammu Conducts Online Workshop "Tech4Seva" as a part of "Azadi Ka Amrit Mahotsav"

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 28<sup>th</sup> 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.





# 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

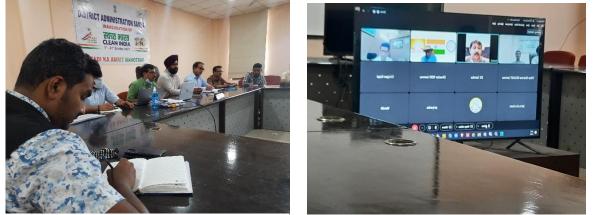


Fig-12

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-



#### m) Catch the Rain selfie:

An initiative of the National Water Mission under the Jal Shakti Abhiyan. It was launched by Shri Narendra Modi, Hon'ble 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.

S.	Name of the	Contact	Email	Designation	Institute	Status
No.	Participant					
2	Dr. Gulzar Hussain Dr. Sayed Ali	700667 9027 941921	hussaingulzaa@ gmail.com Syed.ali.mousav	PI Coordinator Assistant Professor History UBA,	Govt. Degree College Kargil, Ladakh UT Govt. Degree	Confirmed
	Musavi	5544	<u>i@gmail.com</u>	Representati ve	College Kargil, Ladakh UT	
3	Balwant Singh Parihar	968219 3631	<u>bs932272@gma</u> <u>il.com</u>	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	malgotradeeksh a@gmail.com	SHG representativ e of adopted village Panjgrain	PI, IIT Jammu	Confirmed
6	Priya Thakur	700622 7170	-	SHG representativ e of adopted village Jagti	PI, IIT Jammu	Confirmed
7	Dr. Bandana Bhasin	700622 0098	bandhana1@gm ail.com	Principal	Rajiv Gandhi PG College of	Confirmed

Table-1

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

# 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 <mark>(TBC)</mark>
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.

-	-	
Tat	ole-	.3

S. No.	Name	Designati on and	CSIR-IHBT technologies you are interested in			-	her technolo e demonstra	ogies (other ted at IHBT)
		Organizat ion				Name/T ype of Technol ogy required	Reason for selection	Potential villages where it can be implemente d
1	Dr.	PI	1 Heeng	Climate is	Village			
	Gulzar	Coordinat	(Ferula assa	Kargil is	Kharul of			
	Hussain	or and	foetida):	suitable	Kargil			

2	Dr. Sayed Ali Musavi	UBA Represent ative Assistant Professor History	Agro technology 2 Calla Lily: Agro technology	for the crop Climate is Kargil is suitable for the crop	District of Ladakh UT Village Ando of Kargil District of Ladakh			
		Govt. Degree College Kargil, Ladakh UT	3 Ponies Floriculture ( not in the list but demonstrat ed there)	Climate is Kargil is suitable for the crop	UT All five villges are ready to accept this technolog y			
3	Balwant Singh Parihar	PI Coordinat or	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 technolog y	Tonda Village			
4	Deeksha Malgotr a and Priya Thakur	SHG represent atives 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:

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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



#### भारतीय प्रौद्योगिकी संस्थान जम्मू INDIAN INSTITUTE OF TECHNOLOGY JAMMU

विधायन संपर्यन प्रयानम्			Table-4		
PARAMETERS	SAMPLE-1	SAMPLE-2	SAMP LE-3	TAP Water (FROM ENVIRONM ENTAL ENGINEERI NG LAB)	Acceptabl e limit (10500 : 201 2)
рН	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	Pictures	Remarks
5.110	Sample		Tictures	itemar K5
		colonies/100ml		
		(Incubation		
		period-48hrs)		
				Unfit for
			and the star	drinking
01	Sample-1	12		purpose
				unfit for
			a start and	drinking
02	Sample-2	20		Purpose
				Unfit for
				drinking
03	Sample-3	22		purpose

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

# Physical Progress Report of Participating Institutions under RCI IIT Jammu:

#### 1) Govt. Gandhi Memorial Science College, Canal Road, Jammu

#### a) "One Day Awareness Seminar on Digital Awareness" "Digital India- A vision that will connect every village, every town and every citizen of India"

#### Narendra Modi

Digital India is a flagship program of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. To celebrate this digital transformation, a Digital Week is being celebrated wef 25th – 31st July 2022 across all districts in the UT. In this connection, a digital awareness Programme has been organized in GGM Science College by the NCC SW unit in collaboration with Department of Computer Sciences, under the patronage of the worthy Principal Dr. Ravender Tickoo. The motive of organizing this Awareness program is to familiarize the students to the digital platforms like payment gateways like UPI, BHIM, PayTM, GPay etc and other similar services that have contributed to the "ease of living" as citizens get services online without going to government offices or approaching middlemen. This has also given relief to the poor from corruption. Dr. (Capt.) Anjana Sharma., Associate NCC Officer initiated the proceedings and offer warm welcome to Mr Rajdev Singh, Resource person from SEBI, representing his esteemed department since 2014 in J&K UT. He enlightened the participants with his knowledge and experience and covered different facets of digital platforms. He further stressed upon how digital India is empowering the common citizen by reducing the gap between government and people, system and facilities, problems and solutions. He emphasized upon the solutions how fraud prevention benefits your company or organization. He further stressed upon the detection and prevention of frauds like ATM fraud, File sharing and piracy, Do's and Don'ts in Common Crimes and Risks Online, Hacking etc. this can be seen in Fig-A1



Fig-A1

#### b) HAR GHAR TIRANGA and Old age home visit:

#### Har Garh Tiranga is our pride, It represents Bharat's progress ride".

In connection with Har Ghar Tiranga campaign under the aegis of "Azadi Ka Amrit Mahotsav", for encouraging people to bring the Tiranga home and to hoist it to mark the 75<sup>th</sup> year of India's independence, several events like flags donation and flag hoisting has been organized by NCC cadets and NSS volunteers of GGM Science College under the guidance of worthy principal of the college, Dr. Ravender Tickoo and the supervision of NCC ANO's Dr. (Capt.) Anjana Sharma and NSS POs Dr Narinder Kumar along with 50 NCC SW cadets and NSS Volunteers of the college.

More than 50 NCC cadets and NSS volunteers visited the old age home in Amphalla Jammu for the flags donation and hoisting for the inmates in order to symbolize not only an act of personal connection with them and to the Tiranga but also an embodiment of Commitment to nation-building. The NCC cadets and NSS volunteers interacted with the inmates and enquired about the problems faced by them so that they can find out some solutions in the upcoming visits.

Some eatable items were also donated to more than fifty old age inmates. The interaction was also done by ANO Dr.(Capt) Anjana Sharma and Dr Narinder Kumar NSS PO after the Rastragaan and NCC song. The inmates felt so proud and happy after receiving flags and other items etc. The worthy principal appreciated the ANO, PO, NCC cadets and NSS Volunteers for the success of the event. In the end, formal vote of thanks was given by Dr. (Capt.) Anjana Sharma to the Secretary, old age home Mr Vijay Ji, Mr Pritam and all others present there for their support and cooperation and can be seen in Fig-A2



Fig-A2

#### c) POSTER MAKING AND LECTURE ON WORLD HEALTH DAY "The earth is not dying. It is being killed, and the people killing it have names and addresses." Bruce Duncan Phillips.

#### 7th APR, 2022

On the occasion of World Health Day, various events like Poster making and a lecture has been organized today by the NCC SW Cadets of GGM Science College, Jammu under the patron ship of worthy principal of the college, Dr. Ravender Tickoo and supervision of Associate NCC Officer Dr. (Capt.) Anjana Sharma. The resource person Dr Monika Bhardwaj, from The Law School, University of Jammu, spoke on the topic "Human Health and Global Environmental Change". She stressed upon the facts that the Climate change affects the social and environmental determinants of health - clean air, safe drinking water, sufficient food and secure shelter. These specific environmental issues can impede human health and wellness which includes chemical pollution, air pollution, climate change, disease-causing microbes, lack of access to health care, poor infrastructure, and poor water quality. Moreover, global warming can result in many serious alterations to the environment, eventually impacting human health. It can also cause a rise in sea level, leading to the loss of coastal land, a change in precipitation patterns, increased risks of droughts and floods, and threats to biodiversity. More than forty NCC girl cadets participated in the above events. The cadets through their posters, tried to create awareness on the above topic can be seen in Fig-A3. They emphasized on maintaining a healthy environment which is essential for helping people live longer and for enhancing their quality of life. The worthy principal appreciated the ANO and the NCC cadets for the event. In the end, formal vote of thanks was given by Dr. (Capt.) Anjana Sharma.



Fig-A3

#### d) Celebrated Digital transformation Week:

To celebrate this digital transformation, a Digital Week is being celebrated w.e.f.25th – 31st July 2022 across all districts in the UT. In this connection, a Painting Competition on the themes "Digital J&K, e-Governance, e-UNNAT, Digi locker etc.", has been organized in GGM Science College by the Department of Computer Sciences and NCC SW, under the patronage of the worthy Principal Dr. Ravender Tickoo.

The concept of organizing this Awareness competition is to familiarize the students and cadets to the digital platforms like Aadhaar, UPI, Cowin and Digi locker as examples of services that have contributed to the "ease of living" as citizens get services online without going to government offices or approaching middlemen. This has also given relief to the poor from corruption.

The competition was attended by more than fifty students including NCC SW cadets from the College. Prof Meena Gupta, Electronics Deptt, Prof Sunita Kumari, Department of English were the judges for the event. The first position was bagged by Ms. Tania Sharma , BCA IInd SEM, second prize is a tie between Rakshit and Isha Chib (NCC Cadet) of BCA and BSc IInd Sem and third prize is bagged by Kudrat Manhas BCA IV Sem.

#### 2) Dogra Degree College Bari Brahmna, District Samba



#### a) Two- Days Technology Demonstration and Networking meet jointly organised by CSIR-NIScPR, UBA and VIBHA at IHBT, Palampur.

I Balwant Singh, UBA Coordinator of Dogra Degree College attended a two-day workshop at Palampur on 29<sup>th</sup> and 30<sup>th</sup> of June 2022. The above said event was organized by NCI, IIT Delhi at CSIR Institute of Himalayan Bio Resource Technology for implementation of CSIR-IHBT Technology demonstration. A team of 10 members including myself had been shortlisted by IIT Jammu, RCI Unnat Bharat Abhiyanto attend the same at Palampur. I proceeded on 28<sup>th</sup> June, 2022 at 12:00 noon from Jammu and attended the workshop on 29<sup>th</sup> and 30<sup>th</sup>June 2022 in Palampur.

Session 1: Inaugural

A Two days Technology Demonstration and Networking meet started at 9:30 A.M. on 29<sup>th</sup> of June 2022 with the sansthan Gaan, CSIR- IHBT. This meet was organized by CSIR-NIScPR, UBA and VIBHA. Dr. Sanjay Kumar, Director CSIR-IHBT, Palampur addressed the audience regarding his experiences of delivering technology to farmers and people of remote areas. He said that waste degradation is a big problem in cold areas. Waste degradation and use of microbes for waste degradation of local toilets in remote areas was among those topics which gained my attention. Dr. Sanjay Kumar's experience on waste degradation can be useful for our adopted villages under UBA.

National Coordinator of UBA, IIT Delhi Prof Vivek Kumar talked about transforming rural livelihood through science and technology. He said the future of India is in our villages. Director, NIT Raipur, Professor A.M Rawani, shared the reason behind choosing educational institutions for delivering technologies to farmers and connecting lab to land. The professor stated that sense of responsibility about sharing knowledge and accountability on providing technologies to the society are the main two reasons behind this decision. The 39 participating institutions are trying hard to understand the problem of farmers and translate it for scientist of labs to develop the required technology. He also talked about the efforts of UBA-RCI during Covid-19 situations. At the end, Prof. Vivek Kumar invited the audiences to come forward and talk about the technologies.

Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, New Delhi, talked about land-labland mission, under which the UBA is trying to identifythe problems of land and transfer it to lab and deliver the solutions, technologies and innovations of labs to the land. In this way the technologies of institutions like IHBT, Palampur can easily become available at the field and solve real time problems. Self-help groups, NGO's, Companies and even the individual farmers can get the benefit of this technologies to improve their activities. He said science and society cannot understand each other's language and UBA and NISC can play the role to bridge science and society. This is needed to discuss the technologies, Problems, solutions and developmental updates of the existing innovations. Guest of Honor, Sh. Praveen Ramdas, National secretary, Vijnana Bharati, New Delhi. According IHBT/CSIR is the institution which started Heeng cultivation for the first time in India. India as one of the largest consumers of Heeng is importing a large amount of Heeng from Iran and Afghanistan.

Dr. Shashi K Dhima, Vice- Chancellor of Himachal Pradesh Technical University, Hamirpur, HP, a scientist of Nuclear Physics said the UBA is distributing the Technologies to the field. According to Dr. Shashi k Dhima we need to put our efforts on developing organic farming. Sikkim as the organic state and Punjab & Haryana as the most polluted states in terms of agriculture are the two opposite poles in this field. According to him 70% of water resources are locked in a type of glacier. Therefore, we need to be thoughtful about management of water through technologies. To achieve this objective a researcher must put his/her research in support of locals and societies.

Session 2: Technology Demonstrations Labs/ Field Visit

During the demonstration session we had a visit to **the food processing unit, Bamboo Museum, Pilot plant, spray dryer for herbal processing, Nurseries, Experimental Tea Processing unit, K Jain Block, Shiitake mushroom: vitamin D2 etc.** 

Dr. Mahesh Gupta Principal Scientist CSIR familiarized and guided all about fruits dehydrating machine and crispy apple. Fruits dehydrating machines were among those technologies which I think is very helpful to farmers for reserving and sending their products to a longer distance in a longer time. Food processing unit and gravy packaging unit was one of the best units as a start-up idea. With the help of some planning and modifications in this unit, we can use it as a solution to provide better opportunities to self-help groups and local farmers.

Plantation of Heeng, mushroom and Bamboo are among other topic of site visits which gained our attention. I think there is a possibility to start few units in our adopted villages, Samba JK UT including the floriculture especially Bamboos, for which we are going to submit adetailed project very soon

Session- 3 {Stakeholder interactions on the diffusion of CSIR-IHBT Technologies}

During the third session we had an interaction with the scientist/expert panel about the need-based project such as Bamboo, Heeng, Mushroom, crispy apple food dehydration machine etc. and the utilization and implementation of technology. The queries of the audience were taken and answered back in a kind way with proper explanation. The common suggestion of all the participants was that they could not afford machine worth Rs. twenty lakh or more. Another suggestion of participants regarding the machine that a setup should be planned for farmers which provide farmers opportunities to learn out new things and give training to them. The glimpses of the program can be seen in Fig-A4

Note-On the basis of this entire workshop which was quite knowledgeable. PI DDC have decided that we will submit a project or twoin near future after having a conversation with our adopted village Sarpanch and farmers.

#### FEW GLIMPSES OF THE EVENT

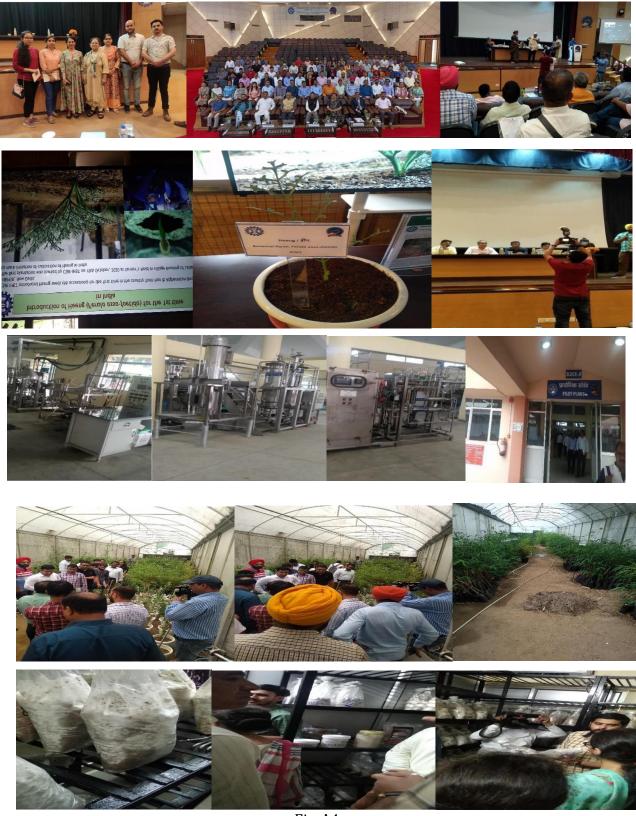


Fig-A4

#### b) Physical Survey of two villages of 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 enthusiast volunteers can be seen fig-A5, A6. The data was submitted by Mr. Balwant Singh, PI coordinator Dogra Degree College to RCI UBA Team IIT Jammu and can be seen in fig-A7



Fig A5



Fig-A6



Fig-A7 Mr. Balwant Singh PI coordinator, Dogra Degree Collage Bari brahmna, submitting the survey data for Analysis

c) Participated in "Tech4Seva" Rural Technology workshop: 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'. His technology idea was appreciated, but was not part of winning list. We have suggested him submit the said technology SEG proposals, hence waiting for SEG portal to open

#### 3) Govt. Polytechnic Jammu, Jammu:

#### a) Attended training workshop at CSIR-IHBT Palampur.

This CSIR-NIScPR collaboration with UBA was organized to demonstrate and showcase event for rural technologies developed by CSIR-Institute of Himalayan Bio resource Technology (IHBT), Palampur on the June 29-30, 2022 at CSIR-HBT, Palampur in physical mode. Er. Subash Gupta, PI coordinator Unnat Bharat Abhiyan attended the workshop and submitted the report of event. The report can be seen in fig-A8 and A9.

#### Report of two days Demonstration and Networking meet at IHBT, Palampur Regarding the CSIR Technologies for Rural Livelihood

Two days Technology Demonstration and Networking meet was started at 10:00 A.M. on 29th of June 2022. This meet was organized by CSIR-NIScPR, UBA and VIBHA. When I reached the auditorium of IHBT Palampur, Dr. Sanjay Kumar, Director CSIR-IHBT, Palampur were addressing the audience regarding his experiences of delivering technology to farmers and people of remote areas. Waste degradation and use of microbes for waste degradation of Dr. Sanjay Dr. Sanjay Automatical Structure attention. Dr. Sanjay Dr. Sanjay Automatical Structure attention Dr. Sanjay Compared Structure attention. local toilets in remote areas was among those topics which gained my attention. Dr. Sanjay Kumar's experience on waste degradation can be useful for Jammu rural areas.

National Coordinator of UBA, Prof Vivek Kumar talked about transforming rural livelihood through science and technology.

Director, NIT Raipur, Professor A.M Rawani, shared the reason behind choosing educational institutions for delivering technologies to farmers and connecting lab to land. The professor stated that sense of responsibility about sharing knowledge and accountability on providing technologies to the society are the main two reasons behind this decision. The 39 participatin institutions are trying hard to understand the problem of farmers and translate it for scientist of labs to develop the required technology. They also talked about the efforts of UBA-RCI during Covid-19 situations. At the end, Prof. Vivek Kumar invited the audiences to come forward and talk about the technologies.

Prof.Ranjana Aggarwal, Director, CSIR-NIScPR, New Delhi, talked about land-lab-land mission, under which the UBA is trying to identify the problems of land and transfer it to lab and deliver the solutions, technologies and innovations of labs to the land. In this way the deriver the solutions, technologies and innovations of labs to the land. In this way the technologies of institutions like IHBT, Palampur can easily become available at the field and solve real time problems. Self help groups; NGO's, Companies and even the individual farmers can get the benefit of these technologies to improve their activities. He said science and society can not understand each other's language and UBA and NISC can paly the role to bridge science and society. This is needed to discuss the technologies, Problems, solutions and developmental understand each other's language. developmental updates of the existing innovations.

Guest of Honour, Sh. Praveen **Ra**mdas, National secretary, Vijnana Bharati, New Delhi. According to him, IHBT/CSIR is the **In**stitution which started Heeng cultivation for the first time in India. India as one of the largest consumers of Heeng is importing a large amount of Heeng from Iran and Afghanistan. She also accentuated on land to lab to land mission and our responsibility to achieve the objectives of UBA

Dr. Shashi K Dhimam, Vice- Chancellor of Himachal Pradesh Technical University, Hamirpur, HP, a scientist of Nuclear Physics said the UBA is distributing the Technologies to the field. According to Dr. Shashi k Dhiman we need to put our efforts on developing organic farming. Sikkim as the organic state and Punjab & Haryana as the most polluted states in terms of agriculture are the two opposite poles in this field. According to him 70% of water resources are locked in a type of glacier. Therefore, we need to be thoughtful about management of water through technologies. To achieve this objective a researcher must put his/her research in support of locals and societies.

Second session of this meet specified site visits and technology demonstrations of IHBT.

During the demonstration session we had a visit to the food processing unit. Fruits and cereals dehydrating machines were among those technologies which I think is very helpful to farmers for reserving and sending their products to a longer distance in a longer time. Food processing

#### Fig-A8

unit and gravy packaging unit was one of the best units as start-up ideas. With the help of some planning and modifications to this unit, we can use it as a solution to provide better opportunities to self help groups and local farmers.

Plantation of Aromatic Crops where there is problem of wild animals for farmers, Shiitake mushroom: Vitamin D2 enriched and Gluten free foods (Buckwheat bars and noodles) are among other topic of site visits which gained our attention.

Regards - va

07/07/2022 Er Subash Kumar

PI Coordinator UBA

Govt. Polytechnic College, Jammu

Fig-A9

#### b) Physical Survey of one village of Palli Panchayat:

The Participating Institutes (PI): Government Polytechnic Jammu under RCI IIT Jammu volunteered to conduct the field survey. Mr. Subhash, PI Coordinator, Government Polytechnic Jammu. A team of 30 students, respectively, conducted the 'Energy Survey' and 'Waste Survey' of 225 households of Bassi Khurd village of Palli Panchayat.

#### 2) Rajeev Gandhi PG College of Education Kathua, J&K UT:

a) Interaction with Sarpanches and villagers of Adopted villages: Students and Faculty Members, Mrs. Upasana Sharma, Mrs. Rubina Jamwal and Ms. Arushma of Rajiv Gandhi Memorial College of Education, Kathua visited the village under Unnat Bharat Abhiyan. They interacted with the Sarpanches of adopted villages: Prithichak, Chak Sardar Desa Singh, Logate, Kathera and Changran from July 20 to August 1 2022, to know about the village resources, their livelihood, tried to know their problems. This Door to Door campaign was conducted to fill the baseline household survey form under UBA. The survey teams were facilitated with appreciation certificates by the College Management. We can see the glimpses of an activity in Fig- A10

On 3rd August, 2022- Students and Faculty Members; Mrs. Rubina Jamwal and Mrs. Tamanna of Rajiv Gandhi Memorial College Of Education, Kathua again visited village Logate and interacted with the Sarpanch Mr. Raja Ram and other community members of the village.

Door to door campaign was conducted to acknowledge about the basic information of the village. Drainage system, Waste Collection System, Sanitation facilities and related information about the village was collected.

Students also visited Primary Health Centre of the village in order to get acquainted with the major health problems prevailing in the village Logate.





Fig-A10

#### **b)** NUKKAD NATAK on "TB Harega Desh Jitega" Campaign. Nukkad Natak performed by NSS Unit of Rajiv Gandhi Memorial College of Education, Kathua in collaboration with District TB Centre Kathua, under the flagship of "TB Harega Desh Jitega" Campaign.

The maxims of campaign is to spread disease awareness about TB and encourage people with TB symptoms to seek medical attention and remain adherent to treatment. The Natak was performed in Panchayat Garh were the local population were he target group. Natak Mandli group can be seen in Fig-A10-1



#### c) Attended training workshop at CSIR-IHBT Palampur:

This CSIR-NIScPR collaboration with UBA was organized to demonstrate and showcase event for rural technologies developed by CSIR-Institute of Himalayan Bio resource Technology (IHBT), Palampur on the June 29-30, 2022 at CSIR-HBT, Palampur in physical mode. Dr. Bandhana Bhasin, Principal of the College went to attend the workshop herself by taking out the time from her busy schedule. Mrs. Upasana Sharma PI coordinator Unnat Bharat Abhiyan of the said institute also attended the workshop and submitted the report of event. The report can be seen in fig-A11 and A12.

Date: June 29-30, 2022

Mode: Physical mode

#### Venue: CSIR-IHBT Palampur

First of all I would like to thank Prof. Rakesh Singhai RCI Coordinator, IIT Jammu and Madam Jeyoti Bhat for giving us an opportunity to attend Technology Demonstration and Networking Meet' at Palampur. The meeting gave me the opportunity to learn how CSIR technologies can be used in rural areas for livelihood generation, evolving appropriate solutions for accelerating sustainable growth and prosperity of the country. I find it was a very enriching experience and really a commendable and knowledge sharing meet.

I will describe briefly below some elements of the networking meet.

In Session-1, the key speakers for this programme were Dr. Sanjay Kumar, Director, CSIR-IHBT, Prof. Ranjana Aggarwal, Director, CSIR-NIScPR, Prof. Vivek Kumar, National Co-Coordinator, Unnat Bharat Abhiyan,IIT Delhi (online), Dr. Yogesh Suman, Senior Principal Scientist, CSIR-NIScPR(online), Shri Praveen Ramdas, National Secretary, Vijnana Bharati, Prof. A.M Rawani, Director, NIT Raipur Dr. Shashi K. Dhiman, Vice-Chancellor, Himachal Pradesh Technical University. In session 2, CSIR-IHBT showcased and demonstrated about 43 Technologies to the participants. Technology demonstration sessions included laboratory and production centre visits, experience-sharing by current users of those technologies, and identification of potential avenues of technology dissemination. Main technologies showcased by CISR-IHBT were ready to eat crispy fruit and vegetable, Gluten free food(Buckwheat bars and noodles), Iron enriched fruit bars and candies, Protein and fibre enriched cereal bars, stevia: agro and processing technology, Monk fruit(low calorie sweetener), Heeng: Agro Technology, damask rose: agro and processing technology, Tea based products, Shiitake mushroom: Vitamin D2 enriched. First of all, participants were shown drying technology in which ready to eat crispy fruits and vegetables were prepared which have shelf life approximately six months, participants tasted it and liked very much and appreciated the efforts of CSIR for developing this technology. After that Glutton free

Title: CSIR Technologies for Rural Livelihood Showcasting CSIR-IIIBT Technologies Two-Day Technology Demonstration and Networking Meet jointly organized by CSIR-NSePR, UBA and VIBHA

products and processing unit of ready to eat products packed in tins with intact food value like Rajmas, kari etc. were also shown. Tea processing unit in which ready to drink tea, Tea wine, Tea catechins, Tea vinegar, Tea mouthwash were prepared, Aromatic technology, Agro and processing technologies, Floriculture crops and other products like Heeng, Cinnamon, Saffron, Bamboo nursery and other nurseries were also explored.

On Day 2 of the Meet there was an interaction between scientists and the PI representatives. All the queries raised by stakeholders were answered by scientists some of participants also shared their experiences working over problems in villages adopted. The meet disseminated beneficial knowledge to the participants.

The meet was attended by academicians, researchers, experts, and students from all over India.

Dr. Bandhana Bhasin Principal, RGMCE PI, Id: C-23002

Upasana Sharma (PI, Coordinator)

#### Fig-A12

#### 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 4<sup>th</sup> 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. The certificates were distributed among the students and can be seen in Fig-A13



Fig-A13

## 4) University of Jammu, Jammu

### a) Interaction with Panches and Sarpanches of adopted villages:

UBA team from the University of Jammu interacted with Sarpanch s of five adopted villages. After discussions many common issues were identified to take up for providing technical support and marketing help to the people who wanted to take up local trade and production. The Sarpanches who attended the meeting were from Gho Manasa, Jagti, Parshoti, Bajalata and Chatha can been seen in the Fig-A14 and A15.





Fig-A15

# b) Took Part in Har Ghar Tiranga Movement:

In connection with Har Ghar Tiranga campaign under the aegis of "Azadi Ka Amrit Mahotsav", for encouraging people to bring the Tiranga home and to hoist it to mark the 75<sup>th</sup> year of India's independence, several events like flags donation and flag hoisting has been organized by Prof. Jasbir Singh, PI Coordinator, University of Jammu involving the village volunteers, NCC cadets, NSS Volunteers to make it a public campaign as can be seen in fig-A16 and A17



Fig-A16



Fig-A17

# Central University of Jammu, Jammu

Central University of Jammu UBA Cell celebration of Har Ghar Tiranga movement at village Jhang, Jhang Panchayat of Vijaypur Block, met Panches, Sarpanches and village volunteers and distributed flags and can be seen in fig-A18



Fig-A18

# 5) Govt. Degree College Kargil, Ladakh UT

## a) Participated in Har Ghar Tiranga

Independence Day celebration at GDC Kargil Ladakh. After Flag hoisting at college the NCC cadets and NSS Volunteers took a Tiranga rally at Kargil War Memorial Drass. Faculty members also participated in the event. There was a full enthusiasm among the students and the faculty members. The village volunteers were also invited for participation. The rally was routed through two adopted villages just to feel their presence. Refreshment was served after the rally took over. The event activities can be seen n fig-A19



# b) Talk on archaeological site Yoqma Kharboo

GDC Kargil, September 10, 2022.

Department of History and Unnat Bharat Abhiyan Unit GDC Kargil hold talk on renowned archaeological site Yoqma Kharboo famously known as 'Api Stringjhangmoe Baho'. The cave is renowned for abundant number of human skeletal bones and rock art therein. A team of experts namely Quentin Devers from Farnce, Dr Vena Mushrif and Dr Sonam Dolma from Deccan College of Post Graduate and research Institute, Pune Maharashtra addressed the session. The team was formally welcomed by Assistant Professor, Archo Fatima Nisa.

In his talk on topic titled 'The Cave of the Old Lady Spider in Yoqma Kharbu' Quentin Devers threw light on the objectives and idea behind the exploration of the cave which has historical and archaeological remains in form of human bones and rock art to reconstruct the history of the area. Dr. Sonam Dolma, Ph D scholar told the audience about the survey methods, the process of collection and assessment. Dr Veena Mushrif briefed the session about the analytical techniques being used to find out the age, sex, stature and biological profiles of each and every bone recovered from the cave. It was enlightened by the team that size and texture of the bones indicate the presence of human bones of all ages. A question answer session was also held on the occasion. The session concluded with vote of thanks by Assistant Professor, Dr Azra Khatoon. The glympses can be seen in Fig-A20





Fig-A20

# **c)** Attended training workshop at CSIR-IHBT Palampur: Report of 2days demonstration and networking meet at IHBT, Palampur.

Two days Technology Demonstration and Networking meet was started at 10:00 A.M. on 29<sup>th</sup> of June 2022. This meet was organized by CSIR-NIScPR, UBA and VIBHA. When I reached the auditorium of IHBT Palampur, Dr. Sanjay Kumar, Director CSIR-IHBT, Palampur were addressing the audience regarding his experiences of delivering technology to farmers and people of remote areas. Waste degradation and use of microbes for waste degradation of local toilets in remote areas was among those topics which gained my attention. Dr. Sanjay Kumar's experience on waste degradation can be useful for Ladakh rural areas such as Sankoo, Saliskote, Parka Chik, Etc.

National Coordinator of UBA, Prof Vivek Kumar talked about transforming rural livelihood through science and technology.

Director, NIT Raipur, Professor A.M Rawani, shared the reason behind choosing educational institutions for delivering technologies to farmers and connecting lab to land. The professor stated that sense of responsibility about sharing knowledge and

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Guest of Honor, Sh. Praveen Ramdas, National secretary, Vijnana Bharati, New Delhi. According to him, IHBT/CSIR is the institution which started Heeng cultivation for the first time in India. India as one of the largest consumers of Heeng is importing a large amount of Heeng from Iran and Afghanistan. As the geographical conditions of those areas are similar to Kargil Ladakh, I think cultivation of Heeng in Kargil is an achievable task. She also accentuated on land to lab to land mission and our responsibility to achieve the objectives of UBA.

Dr. Shashi K Dhima, Vice- Chancellor of Himachal Pradesh Technical University, Hamirpur, HP, a scientist of Nuclear Physics said the UBA is distributing the Technologies to the field. According to Dr. Shashi k Dhima we need to put our efforts on developing organic farming. Sikkim as the organic state and Punjab & Haryana as the most polluted states in term of agriculture are the two opposite polls in this field. According to him 70% of water resources are locked in type of glaciers. Therefore, we need to be thoughtful about management of water through technologies. To achieve this objective a researcher must put his/her research in support of locals and societies.

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During demonstration session we had a visit to food processing unit. Fruits Dehydrating machine was among those technologies which I think is very helpful to farmers for reserving and sending their products to longer distance in a longer time. Food processing unit and gravy packaging unit was one of the best units as a start-up idea. With the help of some planning and modifications to this unit, we can use it as a solution to provide better opportunities to self-help groups and local farmers.

Plantation of Heeng, mushroom and Bamboo are among other topic of site visits which gained our attention. We think there is a possibility to start these units in villages of Kargil including the floriculture especially pionees and lilies for which we are going to submit a detailed project in future.

PI. Mr. Gulzar Hussain UBA Representative. Mr. Syed Ali Mousavi

# d) Participated in "Tech4Seva" Rural Technology workshop:

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. His Technology Idea was appreciated by the Jury and stood 2<sup>nd</sup> in the race by winning a cash prize of Rs. 7000/- at the regional level competition. His application is further forwarded for nation level competition to NCI, waiting for NCI result declaration, wishing wish him best of luck.

# 7) Padma Shri Padma Sachdev Govt. PG College for Women, Gandhi Nagar, Jammu

# a) Awareness drive conducted on Segregation cum 3R's of Plastic Waste in Adopted Village

An Awareness Drive regarding Plastic Waste Segregation and 3R's (Reduce, Reuse and Recycle) was conducted on 19 June, 2022 at adopted Village Sarore in Collaboration with Kitab n Kalam Foundation & District Administration Samba. 20 NCC cadets of 2 J&K Girls Bn. NCC of Padma Shri Padma Sachdev Govt PG College for Women Gandhinagar Jammu went for door to door collection of Plastic waste and motivated locals to reuse plastic in an innovative manner as eco-bricks, boundaries etc. Mr. Guneet Singh, Founder Kitab n Kalam led the team and ANO Lt. Suman Bala Coordinated the programme under the able guidance of Prof. Minu Mahajan, Principal of the College.

# b) Awareness and application of Cleanliness drive

Three days Cleanliness cum beautification drive initiated at Padma Shri Padma Sachdev Govt. PG College for Women Gandhi Nagar Jammu on 23rd June 2022.

Day 1

Around 50 NCC cadets participated enthusiastically by cleaning the different areas assigned to them and contributed their bit in making Campus clean and green.

Day-2

On the second consecutive day, around 30 NCC cadets started beautification of the campus by painting pots, tyres and railings, water points etc. Playing with coloursblissful experience for all the cadets.

Day-3

The enthusiastic team accomplished the work on 25 June, 2022 by painting tree trunks, terracotta pots on the 3rd consecutive day and enhanced the ambience of the College.

Prof. Minu Mahajan, the Principal of the College appreciated the cadets and motivated them to not to be the part of change rather be the pioneer of change and Cleanliness should be started from home - the College.

# c) Awareness on Drug Abuse:

The Cadets of 2 J&K Girls Bn. NCC of Padma Shri Padma Sachdev Govt PG College for Women Gandhinagar Jammu observed International Day against Drug Abuse and Illicit Trafficking on 26 June, 2022. The cadets disseminated the message that emphasized the Theme "Addressing drug challenges in health and humanitarian crises" through various activities.

About 80 cadets along with ANO took online pledge ' Say Yes to Life, No to Drugs' to create awareness among masses and contributed towards their Social responsibility of awaking the youth to boycott Drugs and Choose Life. 24 Cadets made Posters to address this vulnerable issue and posted them on Social media and digital forum for raising alarm among youth against Drugs and their vulnerability.

### d) Beautification of Govt. Primary School in adopted village:

15 NCC cadets and ANO of 2J&K Girls Bn. of PSPS Govt PG College for Women Gandhinagar Jammu were felicitated with Appreciation Letter and Certificate by Deputy Commissioner, Samba for their selfless contribution in Sustainable Beautification Project at Govt. Primary School, Sukhyani Talab, Sarore (Adopted Village) in Collaboration with NGO Kitab Aur Kalam Foundation headed by Mr. Guneet Singh under the Patronage of District Administration Samba.

# 8) Govt. Degree College Doda, J&K

ome address by Principal GDC Doo h Kotwal. All the dignitaries, profes

olars

, prominent citizens ar ion were formally well

he session were formally v pitality. Organizing Secre onference, Dr Ajaz A Wani on "About the Conference". oology for year 2021-22 wa ccasion. Different dignita asion and threw light on th

#### Participated in "Tech4Seva" Rural Technology workshop:

Dr. Ajaz Wani, UBA PI Coordinator, Govt. Degree College, Doda. His presentation was on 'Installation of Bio Gas Plant and Distribution to Household' of adopted villages. His technology idea was appreciated, but was not part of winning list. We have suggested him submit the said technology SEG proposals, hence waiting for SEG portal to open **Organized Two Days National Workshop:** The Press note of the activity can be seen in fig-A21



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the vote of thanks by Dr Tabassum Saleem, Astt. Prof. Deptt. of English GC Doda. "Inaugural was soon followed by technical sessions where 55 research scholars, faculty members and students from than 10 invited invited speakers in 7 technical session Valedictory program of the conference was held in afternoon in Community Hall of Doda on 4th of August 2022. SSP Doda Mr Abdul Qayoom acted as the chief guest. Principal GDC Doda acted as Guest Security GU. New Delhi. Captain Dr Satish Minocha, Chairman IASR, Kolkata, West Bengal. Dr Noor Ali Principal GMC Doda, Ex Principal, Drof. Zaheer Abbas Hashmi and others. Report of the whole conference was presented by Organizing Secretary. oral presentation awards, IASR awards announced by IASR through brochure of the conference were also given to the professors and delegates. Whole valedictory tunction of the conference left indelibel impressions on the hearts of arrived guests, scientists, professors, resord is conference to be organized in future as wells, DD in the tonfen. Dr-Sarvajeet singh and Dr. Tabassum Saleem were also grant and they wished such conferences to be organized in future as wells, DD ing the tonfen. Sarvajeet singh and Dr. Tabassum Saleem were also granted in Sant and Dr. Tabassum Saleem were also granted in Sant and Dr. Tabassum Saleem were also granted in Sant and Dr. Tabassum Saleem were also granted in Sant and Dr. Tabassum Saleem were also granted in Sant and Dr. Tabassum Saleem were also granted singh and Dr. Tabassum Saleem were also forleased. Program ended with the votor fit hanks by Dr Tasir Sharief Head Department of Botany GDC Dada.

Fig-A21

# 9) Govt. College of Engineering and Technology, Jammu, Jammu

#### a) Participated in "Tech4Seva" Rural Technology workshop:

Mr. Mandeep Singh, final year student of Mechanical Engineering, Govt. College of Engineering and Technology, Jammu on 'Saathi- A problem to yours solution'. His Technology Idea was appreciated by the Jury and stood 3<sup>nd</sup> in the race by winning a cash prize of Rs. 5000/- at the regional level competition. His application is further forwarded for nation level competition to NCI, waiting for NCI result declaration, wishing wish him best of luck.

# 10) Shree Mata Vaishno Devi University Katra, Reasi, J&K

### a) Participated in "Tech4Seva" Rural Technology workshop:

The Final Year Civil Engineering Students of Shree Mata Vaishno Devi University Katra, Reasi also took part in the competition. This was a sole group application. Their presentation was on 'Use of Waste Brick Powder in place of fine aggregates in concrete' of adopted villages. Their technology idea was appreciated, but was not part of winning list. The Jury has suggested them to submit the said technology under SEG proposals, hence waiting for SEG portal to open

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**Signature** Sr. Prof. Rakesh Singhai UBA Regional Coordinator, IIT Jammu