

DLR PRERNA



Darjeeling Ladenla Road Prerna Annual Report

1 April 2022 to 31 March 2023

Vision Statement

Darjeeling Ladenla Road Prerna believes in a world that sees the need to live as one family where the environment is preserved and protected, where conscious efforts are made to remove unjust structures while striving to build a just and humane society.

Our **Mission** is to build sustainable human communities in the Darjeeling hills and the adjoining areas by promoting people's participation, gender equality and living in harmony with the environment.

Goals

- i. Promote, facilitate and strengthen people's organisations.
- ii. Promote sustainable agro-ecology and appropriate technology
- iii. Undertake Development and Environment Education with educational institutions and community based organisations.
- iv. Provide support to other organisations.
- v. Undertake research, development and dissemination on developmental issues pertinent to the Darjeeling Hills with special focus on conservation and climate change.
- vi. Promote well being of children and communities through health and mental health interventions especially in partnership with educational institutions.

DLR Prerna Activities Undertaken in the year 2022-2023:

1. Agroforestry

Supported by PUR Projet

Objectives

Restore ecosystems through implementation of agroforestry systems that includes reduction of monoculture production systems through the plantation of indigenous trees within the agro-ecological landscape of small farmers. The planted trees are chosen specifically to allow the farmers to diversify their incomes and thus stabilize their revenues during the year and off season timber, fuel wood and fruits.

Activities:

Introductory socialization meetings were conducted with farmer partners of 2 communities of Kolbong and Padang.

Nursery: Team visited commercial nurseries to set up an order for the Wave2022.

Temporary nurseries: 1 temporary nursery was set up in Kolbong for the distribution of saplings for the Wave2022.

Distribution of Saplings: Distribution of 22,005 saplings was done with 56 farmer partners of Kolbong and Padang.

Monitoring I and II: Monitoring I visits of 56 parcels with the total land of 224724 square meters were conducted in the month of October 2022 and Monitoring II was conducted in the month of February 2023 to check the survival rate of 22,005 saplings.

Agroforestry Wave 2022 was a success with the survival rate of 82% which is 18250 saplings.

2. Sustainable Menstruation Health and Hygiene Management

Supported by Pussimbing's Fairtrade Welfare Trust (Chamong)

Activities:

Inception meetings were conducted in the month of April 2023 with management staff, committee members and dispensary workers of Marybong, Lingia and Tumsong tea plantations through the partnership of Fair Trade and Chamong Group.

A baseline survey was conducted to gauge knowledge, attitude, behavior and practice on sustainable menstrual health and hygiene prior to the training.

Peer educators across three tea plantations were identified and selected by the management for the training on Sustainable Menstrual health and hygiene. They were selected to be representative of different divisions of the tea plantations as well as on the basis of their interest, their leadership and communication skills. The roles of the peer educators was to create awareness among the women workers and adolescent girls regarding sustainable menstruation health and hygiene management.

Two days training of trainers was conducted in the month of May with the selected peer educators of each of the three plantations of Marybong, Lingia, and Tumsong of Chamong Group. After the capacity building workshop, the peer educators undertook awareness sessions with women workers and adolescent girls of their respective villages where they talked about menstrual health and hygiene, ill effects of disposable products and also alternative sustainable products.

3. Managing human wildlife conflict through alternative crops and bio-fences in Singalila National Park, Darjeeling, India.

Supported by the Department of Science and Technology, Government of India.

Human wildlife conflicts are becoming more frequent due to various factors such as conservation in islands without people lens, land use land change and habitat loss, human population growth, arable land expansion and climate change. Farm lands are raided and grazed on by wild animals and sometimes even ruining the farms overnight. Forest villagers and forest fringe villagers bear the biggest brunt of this conflict and have had limited recourse to redress this loss of livelihood.

We have partnered with the forest villages that fringe Singalila National Park on community-based conservation and sustainable agro-based livelihoods since 2008 and incorporated management of HWC as an integral part of our intervention .

List of the major problem animals in the fringe villages of SNP 2022-2023

- Wild pig
- Leopard
- Himalayan Black Bear
- Monkey
- Yellow throated marten
- Raptors
- Porcupine
- Hare
- Birds - Treepie

The problem animals vary from one community to another and also across time scales.

Objectives:

- 1) Promotion of bio-fences that reduce the intrusion of problem animals of human wildlife conflict into the farmlands in the forest fringe villages of Singalila National Park.
- 2) Introduction of *Swertia chirrata*, Berginia, tea, as a livelihood option that has market value and is not destroyed by problem animals of human wildlife conflict in the forest fringe villages of Singalila National Park.
- 3) Enhancement of sustainable agro-ecological knowledge and skills of communities including sustainable energy options in the forest fringe villages of Singalila National Park.

Key Interventions

- Need assessment and technology gap for conservation and livelihood
1. Conducted Inception Meetings in April and May 2022 in the five Forest Villages; Namla, Gurdum, Bich Gaon, Dara Gaon (Kalyan), Samanden and five Revenue Villages; Lek Kharka, Baklo Gaon, Upper Jauley Gaon, Tarey Bhir, Bhulbulay. Community needs were prioritized through the inception meeting as well as planning for intervention.
 2. Two community mobilisers were selected after consultation with the community members for the execution of the project.
 3. Visited the Divisional Forest Officer, Darjeeling division along with the representative from WWF-Darjeeling field office.

- HWC mapping and Planning

1. Planning with focus group discussions were done with the 10 communities and the Samaj representatives. During the FGD community mapping, resource mapping, seasonal mapping and identifying of vulnerable areas for HWC were drawn. A HWC map was generated with extensive data of animal intrusion, crop damage and its impact on the lives of the 10 communities. Coming out of the inception meeting it was decided to initiate the bio-fence in the most vulnerable parts of the villages in the first year.

- Bio fencing that includes planning, planting and maintenance.

The planting period in the Darjeeling Himalayas is very limited from June to July for best survival rate, thus preparing and maintaining it is extremely critical. Plant species selected for the bio-fence were discussed based on each community because of altitudinal differences, the most common species were *chutro kara*, *aasaray* and *faledo*.

Bio fencing was done in 6 villages first by the SHGs namely Gurdum, Dara Gaon (Kalyan), Lek Kharka, Upper Jauley Gaon, Bhulbulay, Samanden. Regular visits were done to monitor the bio-fences.

- Trainings March 2023

1. Training on Soil Health was conducted by our in-house resource Mr. Sailesh Sharma. The training was conducted in Sepi with 30 farmers from Namla, Gurdum, Bich Gaon, Dara Gaon (Kalyan), Samanden, Lek Kharka, Baklo Gaon, Upper Jauley Gaon, Tarey Bhir, Bhulbulay.

2. Training on Integrated Pest Management was conducted by our in-house resource Mr. Sailesh Sharma. The training was conducted in Gurdum with 25 farmers from Namla, Gurdum, Bich Gaon, Dara Gaon (Kalyan), Samanden, Lek Kharka, Baklo Gaon, Upper Jauley Gaon, Tarey Bhir, Bhulbulay.

The follow up training on soil health, crop and cropping pattern, integrated pest management would be started as per the calendar drawn in consultation with the community members.

- Tea Nursery development.

The bio fence also comprises of tea because it is not destroyed by the problem animals and can also be used for own consumption or sold in the market. Since tea bushes are evergreens, remaining healthy and green throughout the year, it makes an excellent barrier from the problem animals and also, they stand out against their surrounding environment making it an excellent boundary marker as well.

To construct a proper nursery for tea saplings the following items were distributed in the 10 communities: Silpaulin, Agro net, Water Tank, Watering can, Binding wire, Poly pipe. The nurseries were constructed in all the 10 communities successfully and 10 kg of tea seeds were also distributed.

3. Comprehensive Health and Hygiene Improvement Program (CHHIP) Broadleaf HEA and Vadham Teas

INTRODUCTION

CHHIP is a health education and improvement program with the following three interrelated components implemented and/or facilitated by trained, community-level School Health Activists: 1) health education curriculum taught in partner schools, 2) health monitoring and early intervention, and 3) improvement of the school health environment.

Partnering with Schools and Communities

COMMUNITY	SCHOOLS	YEAR
Marybong Tea Estate	Marybong&Kyel Primary School (public)	2022-2023
	Laxmi Memorial School (private)	2022-2023
	New Light Academy (private)	2022-2023
Lingia Tea Estate	Saila Dhura Primary School (public)	2022-2023
Singrimtam (Agricultural Area)	Sai Ratna English School (private)	2022-2023
	Angel English School (private)	2022-2023
Manaydara (Agricultural Area)	Upper Manaydara Primary School (public)	2022-2023
	Sunrise Nursery School (private)	2022-2023
Lingten (Agricultural Area)	Bal Sai Academy (private)	2022-2023
	Padeng Primary School (public)	2022-2023
	Murmidang Primary School (public)	2022-2023
	Kolbong Primary School (public)	2022-2023
	Sahara English Academy (private)	2022-2023

	Karmi Public School	2022-2023
Shelpu (Agriculture Area)	KN Memorial (private)	2022-2023
Latpanchar (Cinchona plantation)	Magnolia English School (private)	2022-2023
Gopaldhara (Tea Estate)	Brindavan Boarding School	2022-2023
Jungpana-Mahanadi (Tea Estate)	Cambridge Academy	2022-2023
	Little Angel English School	
	Oxford English School	
Mahalderam (Tea Estate)	Village Montessori School	2022-2023

In 2022, the total number of students in these schools was 1302. In 2023, the total number of students impacted by CHHIP is 1408.

School Health Activists

The goals of CHHIP are accomplished through the work of the School Health Activists (SHA) chosen from the community itself. CHHIP has 7 SHAs in the communities, each SHA is responsible for 3 to 4 schools and they visit each school once a week for implementing health education and health interventions. Two new SHAs were hired during the month of February 2023. SHAs Raksha Chettri from Gopaldhara community, in place of Devi Sharma. SHA Bishan Sewa from Mahanadi community in place of Namita Tamang.

PROGRESS BY OBJECTIVES

Objective 1: To improve the health knowledge, attitude, behavior, and skills of children in targeted communities

CHHIP Health Education

The CHHIP Health Curriculum includes a total of 120 lessons covering concepts of basic health and hygiene. The curriculum is based on an active, student-centered learning model and incorporates a great deal of teaching and learning tools to enhance the students' education and joy in learning.

The SHAs was able to deliver 44 lessons of the CHHIP curriculum in partner schools.

The Project Officers Kriti Rai and Ujjain Moktan, organized 3 days Educator Teacher Training for School 'Health Activist (SHAs) on 1st, 2nd and 3rd February 2023. The purpose of this training was to provide and discuss the overarching tools, strategies,

and knowledge to effectively implement and encourage the joyful learning of CHHIP curriculum in the CHHIP schools.

The Project Officer Ujjain Moktan organized 1 day training on basic usage of the RedCap mobile app on 3rd February 2023. The purpose of this training was to introduce and train them on how to use RedCap. RedCap is an application used to create systematic data collection, to help the user collect and store data both online/offline.

Student Health Knowledge Test

To assess student knowledge acquisition CHHIP conducted Student Health Knowledge Test. A post-test was given to students in November 2022 to the students we work with to analyze what students have learned during their experiences in the CHHIP curriculum and program. Additionally, the post-tests will be assessed as data and compared to their pre-tests from Lesson 1 to demonstrate their learning throughout the program. A baseline pre-test was given to students in March 2023 prior to implementing the curriculum. The mean score achieved by students on the post-test was 65.9%; scores on the health knowledge exam increased by 24% over the 2022 academic year.

CHHIP Annual Exercise Day

The Exercise Day promotes an active and healthy lifestyle while giving children the opportunity to compete in a variety of games and win educational prizes. The Exercise Day took place in all the partnering communities during the month of November 2022. CHHIP partner schools within the same community gathered at a single school to participate. Games included pick the ball and run race, frog race, spoon and marbles, wearing the shoes, book balance, kicking the ball, Relay race, wearing the sweater and tug of war. Parents came to watch the events and school staff were helpful in organizing the children and running the games.

Improvements to the School Health Environment

In February 2023, CHHIP provided all CHHIP partner schools with school kits which include sports kits and hygiene kits for promoting a healthy school environment. The kits included:

Bucket	Soap	Mug	Toilet Cleaning Brush
Odonil	Harpic	Football	Football pump
Skipping rope	Racket	Shuttle	

Improve the health status of Children

Through a series of treatment and screening protocols performed by the SHA, CHHIP seeks to provide students with a full package of basic primary health service over the course of a school year.

Deworming

In August 2022, deworming medication was administered to children and school staff of 21 CHHIP partner schools with the collaboration of Primary Health Care of the community. This involved administering the deworming drug Albendazole to eligible participants. Dosage amounts were given according to WHO standards. **1308 children received treatment for intestinal parasites** which is an evidence-based approach to increasing their school attendance and engagement.

Iron Supplementation

The intervention targets all students enrolled in CHHIP partner schools age 5+ years, as well as all female teachers/adults employed by partner schools. Iron supplementation should be given for three consecutive months followed by an “off period” of three consecutive months during which no supplements are administered.

In 2022, the iron supplementation implementation began in August to November. CHHIP achieved a 99% coverage rate for children enrolled in CHHIP and 90 % coverage rate for total eligible students.

Vision Screening

Children at CHHIP schools were screened for potential vision problems using a Tumbling ‘E’ chart. SHAs additionally examined children’s eyes for any obvious eye problems that would indicate a need for referral. Referrals were made to an ophthalmologist or, in the case of eye infections, to a community-level primary healthcare center (PHC). CHHIP screened 99% of children enrolled in CHHIP, and 85% of total eligible students.

Student Eye Camp

In June 2022 we organized a Student Eye camp at Kolbong, Manaydara and Gopaldhara communities in collaboration with Greater Lion Eye Vision Center. 10 CHHIP partnering schools attended the camp to examine their eyes. The common eye problem among the students were refraction and allergies leading to redness and itching eyes. The serious problems were ptosis, farsightedness, cataract, and limited movement of the eye. The

students with vision and eye problems were referred to Greater Lion Eye Vision Center of Mirik, Takdah, Bijanbari and Siliguri for further treatment.

Preventive Health Screening & Wellness Promotion Examination

CHHIP seeks to improve the health of targeted children. As part of this effort all children received the Preventive Health Screening once annually. These exams provide a well-rounded and thorough health check that will help provide early identification of acute and chronic health concerns. They are designed to help the CHHIP SHAs improve the overall health and well-being of the children that they serve.

In July 2022, SHAs administered Preventive Health Screening in CHHIP partner schools. A total of 1302 students were listed for further assessment by the SHAs. Health problems like headaches, teeth cavities, skin rashes and stomach problems were mostly identified from the screening, the problems were addressed to the parents of the students and further referrals were initiated.

Epilepsy Screening

CHHIP implemented Epilepsy Screening in schools during the months of August and September 2022. The SHA screened children for possible epilepsy using the caregiver-based Epilepsy Screening Survey and referred students to a physician for further evaluation and treatment. The 6 SHAs and 2 Project officers screened students and no students were identified with positive epilepsy.

Training on Motivational Interviewing

One day training on Motivational Interviewing was organized for the health workers of our 6 partnering communities and 7 SHAs on 19th October 2022. The training was facilitated by PA Priscilla Giri and POs Kriti Rai and Ujjain Moktan. This training was designed to teach them various communication techniques to enable deeper conversation to help build trust with families and understand barriers to action in order to promote change and improve the health of communities, particularly the children they serve. This deeper conversational process has an objective of promoting positive behavioral change in the client.

Focus Group Discussion on Motivational Interviewing

A focus group discussion was organized in November 2022 at Marybong, Manaydara and Kolbong Health Dispensary. The discussion was facilitated by Project officers Kriti Rai and Ujjain Moktan. The purpose of this discussion was to find out the outcomes, opportunities, and feedback of Motivational Interviewing Training. After the discussion, health workers found the Motivational Interviewing very helpful. They were keen on

having more colleagues join in the next training to keep everyone on the same page and ensure that everyone utilizes the technique in the community. They even suggested having a refresher training to clear up any doubts they might have

Events

World Environment Day Celebration

On 6th June 2022, we celebrated World Environment Day at Village Montessori School, Mahalderam. We organized an interactive session with the students where we discussed and shared about the importance of protecting our environment and ways in which to protect it. This discussion was followed by a drawing competition.

Nutrition Week

CHHIP celebrated Nutritional Week on 8th September at Little Angels English School, Mahanadi for students above 5th standard. We organized an interactive session, where we discussed and shared about Balanced Healthy Eating, ill effects on eating junk food and promotion of local food culture.

4. Tealeaf Mansik Swastha

Supported by Marwala Health Initiative and Broadleaf HEA

Parents and Caregiver Workshop

The Tealeaf intervention incorporates several components, including promoting trusting relationships between parents and team. As stigma has been associated with the delivery of targeted mental health services, the intervention is designed to minimize stigma. In the intervention teachers will also work with families to guide development of positive parental relationships and reinforcement of positive behavior in their home.

9 parents and caregiver workshops with parents, samaj (community) leaders, Self Help Group (SHG), and institutes were conducted in the months of July and August 2022 to sensitize the community on issues of mental health and wellbeing. Caregivers and the school staff were receptive to discuss mental health issues they and their children experienced during the COVID-19 pandemic. The participating group also shared that there is a need to give attention to their own and their child's mental health. Most of the caregivers were interested to get together in a group and discuss this issue and further talk about other issues they were experiencing most importantly their child's food and nutrition.

45 parent workshops with parents, samaj (community) leaders, Self Help Group (SHG), and institutes were conducted in the months of March and April 2023 to sensitize the community on issues of mental health and wellbeing. 979 parents from schools in Kalimpong District and Darjeeling District participated in the Parents workshop organized in partnering schools and communities.

This was the second round of interaction with the parents and caregivers, which led to acceptance and openness to share their thoughts and experiences. The team's interaction with the parents focused on 'Managing Emotions and Behavior at Home'. Parents and Caregivers shared challenges such as their child having difficulty memorizing and disobeying their parents were commonly shared. They also were worried about their child's preference for packaged food and engagement with games on mobile phones. The team discussed ways to manage the challenges shared by the parents and caregivers during this interaction as well.

World Mental Health Day

The World Health Organization (WHO) organizes a global campaign every year since 2013 for World Mental Health Day. This day is marked every year on October 10th where efforts are made to raise worldwide awareness on mental health and support those who experience mental health issues. As per The World Federation of Mental Health (WFMH) this year's (2022) theme for World Mental Health Day is "Make mental health for all a global priority."

In line with our objective and the year's theme of "make mental health for all a global priority" we hope to celebrate World Mental Health Day 2022 by creating a space for celebration, collaboration and cooperation and learn from each other. We organized an event on 17th Oct where we had guest speakers as school principals, teachers, students, and government officials to share their perspectives and experiences on mental health and well-being followed by open house discussions. There were more than 80 participants from partnering schools and colleges from Darjeeling and Kalimpong District, Government, NGO's, DLRPrerna Board. With this we also hope that mental health and well-being becomes a priority not just for a particular day but becomes a crucial aspect of our lives every day.

Case Discussion

The team had case discussions with Dr. Christina Cruz, for cases the teachers experienced difficulty managing in their classroom setting during the months of August and September 2022. Teachers expressed difficulty managing certain behavior such as difficulty speaking in a full sentence; needing a lot more attention compared to other

students; weak in academics; bullied at school and home; and physical health difficulties. The team followed up over the phone and in-person visits on a regular basis with teachers and caregivers to support them in supporting their children.

School Principal's Meeting

The Tealeaf Intervention started with the School Principal's online meeting on 25th January 2023. The objective of the meeting was to firstly start the interaction with the School Principal's secondly to share the yearly activity plan for 2023 and create a space for feedback and discussion from the Principals to improvise according to their perspectives.

Questions were discussed on the selection of schools for the 6-Day Tealeaf, the process of filling the BTST form by the teachers. The possibility of a teacher working with the same child they had worked with last year or can they work with a new student? Also questions on if the student with whom the teacher worked with last year moved to class five, how do they continue giving support? The conveyed queries were discussed and conversation to continue the partnership.

Tealeaf Training

The second year of the RCT trial started with the planning process for the two rounds of 6-Day Tealeaf Training in the month of January and was delivered in February 2023. In the year 2022 itself 20 schools were randomly selected from the 60+ partnering schools to move the schools from EUC (Enhanced Usual Care) to Tealeaf Intervention group.

In the first round 29 teachers from 12 schools participated in the 6-Day Tealeaf Training in three locations Darjeeling, Kurseong and Kalimpong from 1st to 6th Feb 2023. In the second round 9 teachers from 5 schools participated in the training in Darjeeling from 13th to 18th Feb 2023.

The 6-Day Tealeaf Training encompassed discussion around the following topics:

- Understanding Behaviour and creating a Behavioural Plan for Students
- Understand three categories of Behavior Anxious, Disagreeable and Withdrawn
- Understanding and application Cognitive Behaviour and Cognitive Behavioral Play Therapy

Daily reflection discussion after delivering the training was undertaken. The purpose of the reflective discussion was for the facilitators to be more observant of the training delivery and improvise as the 6 days continued. In the end of the training the team came up with the decision to adapt and improvise the training content for the next year by

expanding the section on Cultivate in the 4C's Behaviour Plan and include relevant cases shared by the teachers for the training to be more relatable for the future participants.

Behavior Type and Severity Tool (BTST) Collection

The team visited 53 schools and 132 teachers filled the BTST with the participating teachers. The BTST tool systematically captures the teachers' clinical impression of each student in their class. Using their judgment, aided by the BTST, the teachers select students whom they believe have the highest mental health needs to receive care. This process of teacher nomination results facilitates a transdiagnostic selection process across a range of disorder and disability classifications and across a spectrum of distress to illness.

The number of teachers enrolled to participate in the study was determined by the size of the school. In schools where teachers indicated a desire to participate in the study than required, a random selection procedure was conducted. Teachers who were not enrolled will continue to receive training and support in intervention delivery but will not be involved in additional study activities.

The eligible teachers filled the BTST based on their observations of their students in the months of March and April 2023. The teachers screened 1478 students in classes Nursery to four, 233 students were nominated to receive mental health care. In the study 221 students were randomly allocated for participation using a roster of the remaining students for whom the enrolled teacher is responsible.

RESEARCH:

- **Teacher Consent and Demographic Collection**

The data collection process started with Parent Consenting and Student Assent during the months of July, August and September 2022 in partnering schools.

Teacher Consent and Demographic Collection of teachers in the Tealeaf group started in the 6-Day Tealeaf Training in February 2023. 37 teachers from 15 schools were consented in the Tealeaf group.

- **Universal and Individual Caregiver Consent**

In 2022 the team held a parents workshop in the community to introduce the study and individually consented parents and caregivers after the workshop. The School Principals discouraged the team from making contact with parents for fear of losing the family's enrollment, especially as their child may be identified as needing mental health support. This resulted in pushing back the timeline of child getting care and data collection.

Parents and caregivers were also difficult to reach due to their work demands and often with inflexible schedules.

In 2023, the team Universal Consent was taken from 979 parents and caregivers during the parent workshop in March and April. If the child was selected by the teacher for mental health care, the team contacted the 337 parent or caregiver over the phone and collected individual consent in the months of May and June. This change was adapted to address confidentiality from the community.

- School MOU and Demographic Collection

In 2023, the team signed an MOU with 46 schools (both EUC and Tealeaf) for renewal of partnership between DLR Prerna and the school. Alongside, the team also collected demographic data of the school for the new year.

- TRF (Teacher Report Form) and SDQ (Strength and Difficulties Questionnaire)

After receiving caregiver consent, parent and student demographics were collected and Baseline SDQ (Strength Difficulty Questionnaire) of students were collected from the caregivers.

Baseline Teacher's Report Form (TRF) capturing the children's behavior through the teacher's perspective were collected during the same timeframe. Endline TRF were also collected in the month of

November 2022 and data entry of TRF and SDQ is ongoing. In order to get a contextual understanding of the different communities, online interviews with the team members in Darjeeling was conducted by Dr. Debarati Sen and Dr. Rinzi Lama in the months of July and August 2022.

2) Qualitative Interviews:

Purposive sampling process was used for the qualitative interviews. 20 schools were sampled out from 64 partnering schools, with the following inclusion criteria:

1. Response from the school teachers/principals to the project. If the schools could give enough time for the qualitative interviews or any other activities involved.
2. Inclusion of both aided and unaided schools.
3. Inclusion of schools with both high and low teacher-student ratio.
4. Inclusion of schools with both primary and secondary/higher secondary classes focusing on the nature of child engagement that happens in both types of schools and the kind of activities which take place in them.
5. Inclusion of schools with very less accessibility to various amenities related to communication or student's/school needs, health care, markets, livelihood, and basic necessities.
6. Inclusion of schools from the different areas of both Kalimpong and Darjeeling districts covering at least one or more tea plantation, cinchona plantation, agricultural area, peri-urban area, plain area and areas which cannot be specifically defined into the aforementioned categories.

7. Religion, belief systems and their influence

In the month of September 2022, 50 Qualitative Interviews were conducted with 12 Principals, 21 Teachers, 17 Caregivers in 11 schools.

3)ASER:

Pilot- The team collaborated with the ASER center and piloted the ASER tool in one of the schools (not Tealeaf partner school) in rural Darjeeling with 102 students from standard I-IV. Based on the analysis result of the pilot data, ASER modified the tool and contextualized it accordingly for the Tealeaf trail.

ASER in Tealeaf partnering schools-

ASER assessment was done in 50 partner schools in the month of November. Students belonging to class I-IV who were selected by the teachers under Tealeaf were assessed on their Language and Mathematics ability. Both written and oral tools were used. The team also collaborated with St. Joseph's North Point College (Political Science department) and trained 32 students on ASER assessment. The students then accompanied the team for assessment in 29 partner schools.

4)Registration of Local Ethics committee:

The Ethics Committee registration still in process due to the following challenges:

Ethics training certificates of the members were rejected by the registration portal.

The Chairperson and Member Secretary of the committee had to be replaced as the required qualification was not fulfilled for their position. (The Member Secretary was required to be a person with prior experience in medical research and The Chairperson was required to be someone who is a part of another Ethics Committee as well.)

5) Scientific Advisory Committee:

Scientific Advisory Committee online meeting held on 10th September 2022. All the members of the SAC Amar Jesani, Jasmine Kalha, Sunita Bandewar and Mala Ramanathan attended the online meeting.

The meeting was held to discuss the challenges experienced during the consent process of Tealeaf Mansik Swastha Research. Following suggestions were made during the meeting:

- Universalize the consent process to remove/reduce stigma associated with individualized care

- Do not pursue an opt-out/passive process; make sure that the process includes an active component.

Further follow-up meetings with Jasmine Kalha were to be scheduled to discuss this further and finalize the consent process.

6) **CTRI Registration:**

The CTRI registration of the trial was done in the month of February. The trial Registration number is REF/2021/12/049722.

7) **Publications:**

Published October 2022:

Cruz CM, Dukpa C, Vanderburg, J, Rauniyar AK, Giri P, Bhattarai S, Thapa A, Hampanda K, Gaynes BN, Lamb MM, Matergia M. Teacher, caregiver, and student acceptability of teachers delivering task-shifted mental health care to students in Darjeeling, India: a mixed methods pilot study. *Discover Mental Health*. 2022: 2 (1), 1-24;

<https://doi.org/10.1007/s44192-022-00024-z>

Published January 2022:

Vanderburg JL, Dukpa C, Rauniyar AK, Giri P, Bhattarai S, Thapa A, Gaynes BN, Hampanda K, Lamb MM, Matergia M, Cruz CM. Exploring Mental Health and Academic Outcomes of Children Receiving Non-manualized, Transdiagnostic, Task-Shifted Mental Health Care From Their Teachers in a Low-and-Middle Income Country. *Frontiers in Pediatrics*. 2022;10.

4. Zero Waste Himalaya

DLR Prerna is a core team member of Zero Waste Himalaya and in partnership with Integrated Mountain Initiative have been facilitating these activities that are in line with the principles and practices of zero waste.

The Himalayan Cleanup(THC) 2022 Chowrsta DLR Prerna was anchored by DLRPrerna. The annual event undertaken across the Indian Himalayan Region between 26 to 30 May 2022 by Integrated Mountain Initiative and Zero Waste Himalaya, is conducted to highlight the waste crisis in the Indian Himalayan Region and advocates for mountain sensitive policies, as well as individual change, and most importantly demand for sustainable products and packaging. The theme for THC therefore is, 'Reflect, Switch and Demand' to motivate participants to move towards mindful and sustainable lifestyles as well as to create collective spaces for individuals to demand for improved systems and products to redress the problem of plastic pollution.

The results of The Himalayan Cleanup was revealed at an online meeting conducted on the occasion of Zero Waste Himalaya Day, on August 8, 2022. Mr. RP Gurung Zero Waste Himalaya and IMI Member from Sikkim mentioned that **over 5000 participants undertook the clean up in more than 100 sites, and conducted a waste and brand audit which are aligned to the global brand audit of Break Free from Plastics. THC was led by over 100+ educational institutions and 49 organisations including IMI State Chapters.**

Ms. Priya Shrestha, Member of Zero Waste Himalaya and IMI presented that the data received from 65 sites revealed that a total of **114376 pieces of trash weighing 4143 kg was collected in total across the mountains. 92.7% of the waste collected was plastic trash. What is most significant is that 72% of all plastic collected was non-recyclable** like multi-layered plastic, tetra-pak, which is the root of the plastic crisis as these plastics have no solution. Though 28% of plastic waste collected was recyclable, these trash such as PET bottles end up littering the mountains as even recyclable plastics are not collected due to collection, linkage and support challenges in the mountains.

Alarmingly packaged food and drinks made 82% of all plastic waste collected in THC, which is an indication of the junk and processed food culture that is now prevalent. It is a known fact that these foods are low in nutritional value and high in salt, sugar and fat that contributes to the fast growing non-communicable lifestyle diseases in the Himalaya. **70.2% of food packaging was multilayered plastic** that is non recyclable which leads to the Himalayan waste crisis. This is a crucial insight into looking at waste management solutions that are systemic and design oriented.

Speaking on the insights from THC, Roshan Rai, Zero Waste Himalaya and IMI member from Darjeeling highlighted the need for producers to design out their packaging waste with more sustainable material, as part of their extended producer responsibility. While the role of the individual and the end of the pipeline waste manager is important, it is extremely important that companies who produce waste take responsibility for their waste which is now mandated in the Extended Producer Responsibility (EPR) notification within the plastic waste management rules. 72% non-recyclable plastics means that the waste manager in the mountains are helpless and the real solution is for companies to design out this waste. He further stressed that the definition of single-use had to be expanded to include multilayered packaging which was the main contributor to the waste crisis.

The brand audit that revealed the top polluting companies were revealed during the meeting which showed that the top 10 companies whose plastics are found littering the

mountainscapes were PepsiCo India, CG Foods India Pvt. Ltd., Perfetti Van Melle, Perfetti Van Melle, ITC, ParleAgroPvt. Ltd, Hindustan Coca Cola, Nestle, Hindustan Unilever Ltd., Mondelez India Food Pvt. Ltd., Dabur India Ltd,

Educational institutions were acknowledged for their tremendous stewardship and the top 5 schools from the 70+ schools were announced by Ms. Kabya Rai, Zero Waste Himalaya Volunteer. Gyanoday Niketan, Darjeeling; King George School, Sikkim; Duga SSS, Sikkim; Sambhota Tibetan School, Darjeeling; Lamdon Model School Leh were the top 5 schools

During the meeting, the **Plastic Freedom Challenge for 2022** which runs from August 8 to 15 was also launched. Mr. Abishek Pradhan, Zero Waste Peer Educator gave an overview of the campaign and announced a video making contest which was open for all. A social media storm on the Top 3 Polluters was also conducted to amplify the results of THC 2022. He called on all individuals and institutions to take the Plastic Freedom Challenge and make Independence Day celebrations plastic free.

A very strong communication campaign through social media was carried out for The Himalayan Cleanup leading into Plastic Bag Free Day and right up to the Plastic Freedom Challenge. Initial posts focused on information related to THC - what, why and how through films and other posters.

5. Maasika Mahotsav 2022

Maasika Mahotsav is a week-long festival which starts from 21st May to 28th May. This week we celebrate periods as well as observe World Menstrual Hygiene Day on 28th of May. The team conducted an awareness program on Sustainable Health and Hygiene Management at institutions, schools with civil societies and government departments. The main objective was to boost ongoing efforts to eliminate taboos and generate inclusive awareness on menstrual health and hygiene in a more sustainable way. World Menstrual Hygiene Day was celebrated at Chowrasta through an open event where different stakeholders participated. There were stalls which displayed different kinds of sustainable products for awareness. Through this event we tried to break the silence on menstruation and challenge societal taboos and myths around it. The aim was also to educate menstruators on Sustainable Menstruation hygiene practices during menstruation by occupying an important and public space to celebrate and talk about periods.

6. Integrated Mountain Initiative

DLR Prerna is an institutional member of Integrated Mountain Initiative The IMI is a platform advocating for mountain sensitive policies and practices.

Sustainable Mountain Development Summit XI (SMDS) 9-12 October, 2022

The Integrated Mountain Initiative's Sustainable Mountain Development Summit (SMDS) XI was organized in Leh Ladakh from 9-12 October, 2022. It was hosted by the Sustainable Development Forum of Ladakh and Integrated Mountain Initiative (IMI) with the theme "*Harnessing tourism for sustainable mountain development*'

We took an active role in formulating the *Indian Himalayan Youth Summit V* and the technical session: *Environmental Sustainability*. We were actively involved in the Mountain Legislators Meet with the theme *Extended Producer Responsibility From Policy to Practise* including the technical presentation on the theme as a continuation of the intervention from SMDSX Darjeeling. The SMDSX report was released at the Leh Ladakh SMDSXI summit by Honourable Union Minister MoEFCC, Shri Bhupendra Yadav. .

Plastic Waste Management in the Indian Himalayan Region, CounterMeasures II

As a member of IMI and ZWH we are part of the core team member in the UNEP Counter Measures II project that looked at plastic waste in the Ganges. The IMI project role was to look at plastic waste in the upper reaches of the Ganga and resulted in a number of documents that were broadly divided into Literature Review, Stakeholders Mapping and Gap Analysis and policy recommendation for Plastic Waste in the IHR. These documents were distilled to draft out policy briefs on plastic waste management in the Indian Himalayan Region and Uttarakhand.

Meet of the Mountain States 24 25 March 2023

MoMS March 2023 was organised in Paryavaran Bhavan, MoEFCC, Delhi by IMI along with Divecha Center for Climate Change of the Indian Institute of Science. DLRPrerna as a member of IMI, was actively involved as a core team member facilitating the event. The meet brought together members of the IMI, law and policy makers from Indian Himalayan states and the central government, and also researchers and scientists of the IISc, as well as, other stakeholders engaged in the Indian Himalayan region. The MoMS was attended by a number of Union Ministers and State Minister: Shri Bhupendra

Yadav, Shri Ashwini Choubey, Shri Ajay Bhatt, Shri Rajkumar Ranjan and a number of Himalayan MLAS. MoMS was taken forward under two themes

a. Sustainable Food Systems - shining a light on millets

'International Year of Millets' 2023 has been declared on India's call, and #IYM2023 will be an opportunity to raise awareness of, and direct policy attention to the nutritional and health benefits of millets and their suitability for cultivation under adverse and changing climatic conditions (FAO). For mountain communities, this renewed interest in millets is very timely and one that must be leveraged. Millets are a crop of great importance and have been an integral part of food culture in the mountains. Cultivated traditionally, millets have occupied a space that has fulfilled nutrition requirements as well as occupied a high cultural significance. Millets are a resilient and nutritious crop and adapt to different ecological conditions that can withstand extreme heat conditions, low rainfall, long dry spells, making them an ideal plant in the face of changing climatic conditions.

Millets and other pseudo cereals have long been overshadowed in the agriculture development of India, especially in the mountains. In the last few years, however, the Government of India has taken positive steps to promote millets. Declaration of the millets as a 'Nutra Cereal' in a notification in 2018 followed up with MSP for millets are some of them.

The conservation of land races and the diversity of seeds among farmers is top priority as many seed varieties have dwindled in the past decades. Post harvesting processes are still rudimentary and there is great scope for innovation in the sector to match that of wheat and paddy. Much of the millet ecosystem is to do with rain fed agriculture where a completely different regime of crop management needs to be adopted that needs mainstreaming.

b. Managing plastic waste in the mountains

Plastic waste is now a globally acknowledged crisis. This crisis in the ecologically fragile mountain regions of the IHR is further amplified due to remoteness, accessibility, limited land availability for waste treatment and disposal. Increasing urbanization and tourism in the Himalaya have made waste one of the most visible challenges. Litter along trails in tourist spots and open dumping of waste in valleys and streams have become common, which is a huge public health and environmental pollution issue.

There is a clear intersection between food and plastic waste that has been established by the data from The Himalayan Cleanups since 2018 that shows more than 80 percent

of waste from home based audits and outdoor cleanups emanate from food packaging. It is an indicator of the changing food habits and preference for packaged and processed food items and the need to look at waste from a larger systemic lens.

Mountain Legislators' Meet organised in Darjeeling 2021 and Ladakh 2022 discussed extensively on plastic waste management in the mountains and extended producer responsibility. The Leh Declaration that is seeking an amendment to the EPR framework to have specific mountain specificities has been endorsed by legislators from across the mountains.

A policy paper for plastic waste management in the IHR has been drafted by IMI under UNEP's project - CounterMeasuresII. The policy needs acceptance and implementation in the mountain states. The policy paper was launched at the MoMS as well as key policy makers discussed gaps in EPR implementation in the IHR followed by recommendations through the Himalayan Deceleration.

7. Darjeeling Himalaya Initiative

Darjeeling Himalaya Initiative is the regional chapter of IMI and DLR Prerna is the secretary of DHI.

Call of the Mountains 30 May 2022

"Call of the Mountains" is an annual event organised by Darjeeling Himalaya Initiative to highlight sustainable development issues of the Darjeeling Kalimpong Himalaya for critical engagement with key stakeholders. Thematic conversations at the Call of the Mountains link local and global issues with the key stakeholders of the Darjeeling and Kalimpong Himalaya for redress.

The half day event had a keynote speech delivered on local agro-biodiversity and the need for their conservation by Dr. Ghanashyam Sharma (TMI) from Sikkim. This was followed by a presentation on changing food cultures of our region and its intersection with the plastic waste crisis in the mountains by Mr. Roshan Rai, of Darjeeling.

International Mountain Day

The Darjeeling Himalaya Initiative and Sikkim Chapter of the Integrated Mountain Initiative highlighted the theme 'Women move mountains' by engaging in a panel discussion with Women: Ms Kamlesh Rai, Dr Sunita Pradhan, Ms Shanti Rai who have moved the Sikkim and Darjeeling Himalaya, on International Mountain Day, 11 December 2022 in a hybrid format. The panel discussion enabled critical contextual discussion on

gender in the Darjeeling and Sikkim Himalaya as well as offer insights, pathways and inspiration for our society.

The theme was also explored through an online meet and greet of women achievers: Ms Binita Rai, Mrs Saraswati Chettri,, Dr Mona Chettri, Dr Smriti Basnet of the Darjeeling and Sikkim Himalaya in partnership with Kalimpong TV

8. Permaculture Design Course 5 to 20 November 2022.

The Permaculture Design Course facilitated by Rixo Zook was taken forward post lockdown and had the DLR Prerna team along with 3 external participants joining for the course at Aap Botay Mineral Springs.

9. Future Action Plans

1. Partner and strengthen community based organizations.
2. Strengthen conservation and sustainable livelihoods programme
 - i. Agro-biodiversity conservation, agro-forestry, nutritional agriculture, slow food, local food culture
3. Strengthen capacity enhancement programmes on sustainable agro-ecology, nutritional agriculture, fairtrade, permaculture and participatory planning.
4. Expand community based HWC management as well as advocacy initiatives through: networking and linkages; lobbying; publishing
5. Strengthen community based water and sanitation interventions
6. Promote school health interventions
 - Promote school nutrition gardens as well as infrastructure for WASH
7. Strengthen mental health interventions in schools and communities.
 - Pilot adolescent mental health interventions in schools
8. Zero waste strengthening innovation, expansion and campaigns. Intersects with local food, junk food, food and nutrition security.

9. Climate smart interventions
 - Research the intersect of mental health, climate change and enviromental stressors
10. Increase media and online presence
11. Network with national, international platforms and academic institutions

10. **Note of appreciation**

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