



PROJECT SERVE, DARJEELING

A JOINT INITIATIVE OF PROJEKTWERKSTATT
TEEKAMPAGNE- GERMANY AND WWF-INDIA

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25TH YEAR ANNIVERSARY ISSUE

PROJECT SERVE, DARJEELING

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FOREWORD

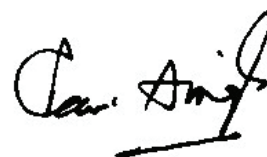
Since 1996, WWF India have been collaborating with Projektwerkstatt Teekampagne (Germany), to implement Project SERVE (Save the Environment and Regenerate Vital Employment) in the Darjeeling Hills of West Bengal. Our joint efforts have helped promote alternative livelihood options in over 60 villages.

Across the arc of this critical partnership, SERVE has been able to initiate community-based tourism efforts in Mulkharka Forest Village; facilitating trainings on homestay operations, marketing, and providing necessary equipment support.

SERVE also assists local communities in deriving an additional source of income through nursery, and apiary management. The promotion of apiary sites in Bunkulung Village and Saureni Forest Village, alongside relevant training workshops has, till now, impacted more than 2000 participants. SERVE has also helped ensure water security across Lebong Cantonment, Nagrifarm Tea Estate and Sindebung village (spanning approximately 500 + households). SERVE is now an emblem for collaborative conservation; bringing together a variety of stakeholders; from the local citizenry, to government officials, community leaders, defence personnel, local NGOs, tea garden management and the local media. In the near future, SERVE will work towards further securing rural water sources and the restoration of red panda habitat.

I would like to extend my sincere appreciation to the Projektwerkstatt Teekampagne team and to all the local stakeholders who have helped implement this project over the last 25 years.

Here's to many more years of working together!



Ravi Singh
SG and CEO, WWF-India

FOREWORD

“Nature is pleased with simplicity” - Isaac Newton

Simplicity is deeply interwoven with our company’s philosophy. An honest product handled responsibly and transparently, keeping the impact on natural resources as limited as possible. Our simple but holistic approach implies that we want to give something back to nature and the people of Darjeeling. Thus we started a reforestation program that is entirely funded by Projektwerkstatt and organised by WWF-India.

Now, in 2020 - this year marks a special occasion – we celebrate 25 years of joining hands with WWF-India regarding our project “Save the Environment and Regenerate Vital Employment, “ and besides that, congratulate WWF-India on its 50th anniversary.

We had planned to celebrate together in Darjeeling by inaugurating a nature trail in the beauty of a tea garden – a combination of information on our project and examples on how to integrate environmental-friendly behaviour into our daily lives.

As you are all well aware, a virus caused quite some havoc in our set-up. However, our meeting will not be cancelled but just postponed. May we see the challenges of these times as a chance to encounter the abundance of nature with more gratefulness is, after all, she doesn’t need us, but we couldn’t survive without her.

Thank you to the SERVE-Team and WWF-India; we look forward to many more years of working together.



Prof. Günter Faltn



WWF INDIA, PROJECT SERVE MILESTONES

TREE PLANTATION

(1996-2021)

Over 3 million tree saplings

(indigenous and shade tree varieties) were planted in 499.9 hectares of degraded land, landslide and water catchment areas, and tea gardens.



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APICULTURE

(2000-2021)

Honey Produced

Around 8-10 litres of honey produced per farmer through traditional apiculture practices is being sold at ₹1000- ₹1200 per 750 ml using the training, technique and equipment provided by WWF-India.

ENVIRONMENTAL EDUCATION PROGRAMS

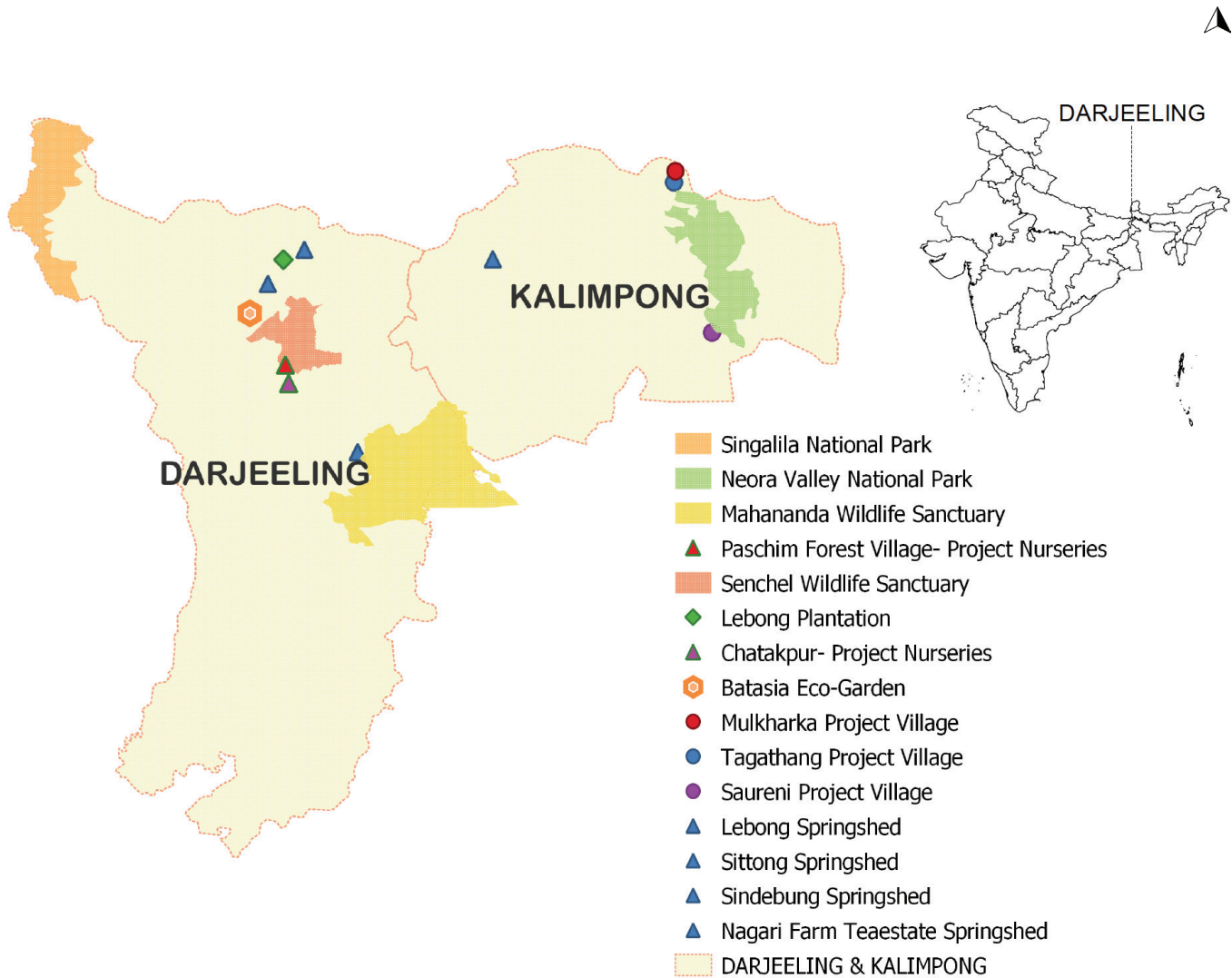
(2000-2021)

5000+ students

From schools and colleges have been part of the Project SERVE environment education programmes.

AREA PROFILE

Darjeeling Hills (Darjeeling and Kalimpong Districts) of West Bengal are geographically divided into hills and plains. The plains include the Terai and Dooars regions. They lie in the Eastern Himalayas and constitute a portion of the Indian Himalayan region. Darjeeling and Kalimpong districts also share a boundary with Nepal, Bhutan, and Bangladesh.



Geographical Location:

North Latitude 27°N 16' 05" and 26°N 27' 10" and East Longitude 88°E 53' 00" and 87°E 59' 30"

Total Area of the District:

3149 Sq. Kms.

Forest Types & Cover: Tropical semi-evergreen, tropical moist deciduous, subtropical hill, Eastern Himalayan wet temperate and alpine forest. Besides the natural forests, there are also man-made forests from the afforestation activities conducted by various stakeholders.

Altitudinal Variation:

130- 3660 meters

Total Population:

1,846,823 (2011 Census)

(Ref: Report on Forest Resources of Darjeeling District – Forest Survey of India, Eastern Zone, Calcutta, 1997)

Forest area is 1204 sq kms consisting of 38.23% of the total geographical area.

Rivers: Teesta, Jaldhaka, Mahananda, Rangeet, Rammam, Balason, Mechi, Ghish, Lish, Murti

Tea Estates: 87 registered tea estates.

Protected Areas: Singalila National Park, Neora Valley National Park, Senchal Wildlife Sanctuary, Mahananda Wildlife Sanctuary, Jorepokhari Wildlife Sanctuary.

Some Key Species Of Darjeeling Hills:

Bengal tiger (*Panthera tigris tigris*), Clouded leopard (*Neofelis nebulosa*), Asiatic black bear (*Ursus thibetanus*), Asian elephant (*Elephas maximus*), red panda (*Ailurus fulgens fulgens*), Chinese pangolin (*Manis pentadactyla*), rufous-necked hornbill (*Aceros*

nipalensis), satyr tragopan (*Tragopan satyra*), blood pheasant (*Ithaginis cruentus*), Himalayan newt (*Tylotriton verrucosus*), rhododendrons, oaks, orchids, and primulas.

Physiography: Darjeeling Hills are a part of the Shivalik range or the outer Himalayas. The land naturally slopes from north to south and its geology ranges between Archaean to Pleistocene sub-recent and recent formation. The soil of the Darjeeling Hills mainly consists of granite, gneiss, shales, boulders, pebbles with sandstones, and solidified but poorly consolidated clutter of conglomerate formations, which are permeable sediments and have a lesser capacity for water retention. The area is very prone to landslides and falls under Seismic Zone IV, making it very prone to earthquakes.



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INTRODUCTION

Since the initiation of Project SERVE in 1992 and its entrustment to WWF-India for its implementation in 1996, the focus has been on ecological restoration in degraded areas, preventing soil erosion and landslides, protecting water catchments, and helping communities with employment opportunities. However, like any other developing town in the hilly region, Darjeeling

comes with challenges like deforestation, loss of habitat, soil erosion, water shortage, drying of springs, unmanaged tourism, and waste management.

Project SERVE has been committed to conserving the biodiversity of Darjeeling Hills for the last 25 years and to work on some of the critical environmental issues that Darjeeling is currently facing.



OVER 25 YEARS OF PROJECT SERVE

Afforestation: Afforestation has been one of the main objectives of the project since its initiation in 1996. About 499.9 hectares of land have been covered under this project till 2021, and about 3 million+ saplings have been planted in the project areas, including the shade tree saplings that have been planted in various tea gardens till now.

Nurseries For Saplings: When the project was launched in 1996, 14 nurseries were established that housed saplings for block forest plantations and shade trees for tea gardens. Various plantation drives were carried out through the years covering the areas extensively. As the project progressed, plantation areas were scaled down to ensure better management of plantation sites. Now, only two nurseries are functioning at Chatakpur and Paschim forest villages as the number of saplings required for the plantations has also decreased.

The requirement for saplings has come down and is now met by only two nurseries functional at Chatakpur and Paschim forest villages.

Apiculture: Initially, farmers who extracted honey from traditional apiary boxes or collected them from the forests sold them for as low as ₹150 per 750 ml bottle. It was found that the traditional method was not only time-consuming but also offered low market value. In order to address this, seven apiary centres were introduced with 106 members in 2000. In 2008, another centre was set up at Bungkulung village in collaboration with the Apiary and Agro Beneficiary Committee. The following year, the communities were supported by providing market linkage whereby the group sold the honey under the brand name, “Darjeeling Gold.”

In all, a total of more than 600 farmers have been trained in apiary management. As of 2013, honey collectors could collect more than ten bottles (750ml) per year from just one apiary box, however, it could only fetch a price of ₹500 per bottle. Now with the growing popularity of organic food, the demand for such products has grown significantly. Today, each honey bottle of 750 ml is being sold between the price range of ₹1000-₹1200.

Organic Compost And

Vermicomposting: Reintroduced in 2007, vermicomposting helped in reducing the dependence of farmers on chemical and synthetic fertilizers. From 2009 to 2016, there were about 65 vermicomposting units. In collaboration with Zero Waste Himalaya, WWF-India has been raising awareness about the benefits of making compost at home.

Off-Seasonal And Organic Vegetable

Cultivation: This project was initiated in 2008 in

Paschim Forest Village at Senchal Wildlife Sanctuary and at Bungkulung Village from 2009 to 2010. Off-seasonal agriculture has proven to be immensely helpful for farmers as they could sell their products even during the period of no produce.

Bio-Globule and Improved Cookstoves:

To reduce the use of fuelwood and enhance the livelihood of communities, a bio-globule-making project was launched in collaboration with the West Bengal Forest Department in 2010. By 2014, 54 communities were involved in the project. This project was later modified. Improved cooking stoves were introduced, which were found to be more efficient than the ones used traditionally.

Mushroom Cultivation: From 2010 to 2014, mushroom cultivation was promoted in villages surrounding the protected area around tea gardens namely Rampuria Village, Rungbull, Baccha Bari Village at Badamtam range, Lahamatta Village, Tukdha Range and Chamong Tea Estate. In the last six years, more than 400kg of mushrooms has been sold at the rate of ₹100 per kg.

Adopt-A-Tree Campaign: This campaign was initiated in 2016 by Projektwerkstatt Teekampagne, Germany and WWF-India is implementing it to create awareness of the environment amongst tea buyers and nature lovers from other countries. The campaign aims to support Project SERVE. Till now, 2000 local saplings have been adopted by individuals, and 250 tree saplings per tea garden have been planted at eight tea gardens, namely Sepoydhura, Chongthang, Moondakoti, Nagri, Nagrifarm, Seeyok, Singell, and Chamong Tea Estate.

Floriculture: Between the years 2000 and 2010, communities were engaged in floriculture. Individuals involved in these initiatives received equipment and structures to grow orchids and seasonal flowers.

Soil Conservation: Between the years 2000 and 2012, vegetative check dams and palisading work with maling bamboo were carried out with live hedges of Erythrina especially to help stabilize soil in the landslide-prone area. This was done at Rampuria and Chatakpur villages.

Mini Hydel Project: This pilot project was initiated in 2003 at Upper Mamring Village. It provided energy to about 10 households.

Biogas: In 2008, in collaboration with West Bengal Renewable Energy and Development Agency (WBREDA), Kolkata, Project SERVE initiated 30 biogas units to provide fuel for cooking purposes and organic manure. The initiative helped in minimizing the drudgery of rural women and reduce pressure on unsustainable natural resource extraction.



WILDLIFE AND HABITAT CONSERVATION

Reforestation Activity: The objective of the project is reforestation of degraded and landslip areas as forests help control the runoff of rainwater, reducing soil erosion which in turn recharges the springs- one of the main sources of potable water for both the rural and urban areas in Darjeeling Hills. Due to deforestation, climate change, natural calamities, anthropogenic pressure, etc., most springs are drying up or have recorded less water discharge. With this in view, spring rejuvenation and conservation of catchment area forms an important objective of the reforestation project.

Current Work: Due to social unrest in Darjeeling Hills in 2017, restoration activity was paused. Between 2018 and 2021, 18 hectares of land was covered under the reforestation project at Leborg Cantonment area. A total of 49,350 local tree saplings were planted, which includes additional sapling plantations to compensate for the mortality of the previous year's plantation.

In 2019, as part of a tree plantation programme at Lanku Valley, 400 local tree saplings of Bagaina (*Melia azedarach*), Harra (*Terminalia chebula*), Barra (*Terminalia belerica*), Gokul (*Alianthes grandis*),

and Tongell (*Vernicia fordii*) were planted. The main objective of this plantation was to conserve the local varieties of fruit-bearing tree saplings, which are preferred by the hornbills and other birds.

In 2020, even during the COVID-19 lockdown, 5 hectares of the plantation was undertaken at Leborg Cantonment with all the precautions and protocols set by the Govt. of India as well as the Secretariat Office, Delhi and in 2021, 3 hectares of the plantation was undertaken at the adjacent area.

Project Nursery: The local tree seedlings for reforestation are all raised in the two project nurseries at Paschim Forest Village and Chatakpur Railway Siding. The nursery owners are provided with agro nets, silpaulin, water pipes, bamboo, polypots, and seed. In 2018, water storage tanks were also provided to store rainwater used during lean periods. From 2018 to 2021 a total of 57,080 saplings were procured from the project nurseries out of which 47,350 were planted at the project site and 9730 saplings were freely distributed to tea gardens, samajas, NGOs and religious groups.



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Understanding The Distribution And Status Of Key Species

WWF-India has been working for the conservation of red panda by enhancing understanding of the species and promoting community stewardship. The red panda are threatened by habitat loss and fragmentation, occasional hunting, poaching, and predation by free-ranging dogs. In Darjeeling, WWF India's Red Panda Conservation efforts are focused around Neora Valley National Park and Singalila National Park: the only habitats where the red panda is found in West Bengal.

Current Work: The first phase of this work was initiated in October 2019 around Neora Valley National Park with secondary data collection to assess presence absence of the species. Currently a landscape level occupancy study of the species is being undertaken for Sikkim and Kalimpong District.

Promoting Improved Cookstoves:

Improved Cooking Stoves (ICS) are mud-brick stoves with a chimney that allows the smoke to escape and improve combustion efficiency. It is one of the most simple, inexpensive, and widely used technologies designed to reduce fuelwood consumption and indoor air pollution. Compared to traditional firewood stoves, the ICS has helped the communities reduce their fuelwood consumption. ATREE, an NGO, has been addressing issues related to dependency on fuelwood in Darjeeling. Following the success of one of their initiatives of promoting improved cookstoves, in the year 2018 exposure and training trips to Talkharka Village, Sikkim, where the ICS project was already initiated were organized for the community people from Saureni forest village and Phoobsering Tea Estate from 13th to 15th Nov. The follow-up of this training was done in the Mulkharka Village on 27th Nov 2018. WWF-India currently works in forest fringe villages for the promotion of improved cooking stoves.



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LIVELIHOOD & COMMUNITIES

Promotion Of Community Based Tourism Around Key Wildlife Habitats In Darjeeling

WWF-India has initiated responsible community-based tourism in two villages around Neora Valley National Park – Mulkharka and Saureni. The Neora Valley National Park is a prime red panda habitat. The initiative has been launched to strengthen community stewardship for effective management of red panda habitat through a local-level association with 12 homestay owners coming together to promote responsible tourism in their villages which includes the Zero Waste principles. Training in birdwatching has been given to the youth so that they get an awareness of biodiversity as well as earn their living. Training and installation of an Improved Cooking Stove have been given to reduce fuel wood usage and promote the responsible use of forest resources, and income diversification opportunities.

Current Work: In April 2019, a community consultation was undertaken at Saureni forest village to explore the possibilities of promoting sustainable tourism there. Saureni is one of the remote fringes of the Neora Valley National Park, near Gorubathan consisting of 39 households. Livelihood activities such as small-scale apiculture initiatives have been going on in the village since 2014, and the tourism initiative is being built based on the success of the earlier initiative. Saureni was selected as one of the potential sites for conducting nature trails for birdwatching, especially for hornbills, and other outdoor activities like hiking. A community-based ecotourism plan is being developed for the village in coordination with the forest department.

Mulkharka forest village in Kalimpong district has been identified as another village for the promotion of responsible tourism. A quick assessment to study the potential and challenges for initiating tourism activities was undertaken from January 16-17, 2020. A community consultation meeting was organised in the village on 26th August 2021 to develop a plan for responsible tourism promotion and for the formation of the Mulkharka Homestay Association. For building the capacity of the village youth, three community representatives from Mulkharka were provided a 3-day training on birdwatching and guiding in Sikkim from January 30 to February 1, 2020.

In 2021, tourism training at Mulkharka Village was organised from the 19th to the 21st of September for the 12 homestays who were selected through community consultation held the previous year. The training was provided on the basic requirements of the homestays- guest handling, health and hygiene, biodiversity around Mulkharka, waste management, and marketing and promotion of homestays. This was followed by bird and nature guide training from 6th to the 8th of December 2021. The main objective was to generate awareness of birds and other species and to create an avenue for bird and nature guides from Mulkharka and its surrounding villages that cater to the needs of the various nature-loving tourists and birders alike. During these 3 days of training, the participants learned about birds and birdwatching, their importance, and conservation. About 60 different bird species were observed by the participants.



Sustainable Beekeeping: The beekeeping activity is a sustainable income-generating activity for the communities that also have the added benefits of improving agro-ecology and the environment. It also compensates for the loss of agriculture from human-wildlife interaction for those living nearby or in forest fringe areas.

Current work: In 2014, a sustainable beekeeping initiative was taken up at Saureni forest village, situated at the fringe of Neora Valley National Park, which involved community training. On February 5, 2020, the follow-up of a three-day apiculture training was provided to 20 interested participants from this village. The training was provided by Mr. Resh Kumar Tamang, a member of the same community

from Saureni Village who was trained in apiculture in 2014. Along with the training, 20 bee boxes were also provided to the participants.

Marketing support during the COVID-19 lockdowns: Post this intervention during the honey production cycle from March to May 2022, 24 households harvested around 280 litres of honey but during the lockdown, the communities were unable to sell the honey in the local market. So, WWF-India, Darjeeling approached two of the partner schools namely St. Robert's and St. Teresa's Higher Secondary School whose staff and students came forward and bought the honey at the amount of ₹600/- per 750ml bottle. A total sum of ₹223,800/- was collected and handed over to the community.



Off-season vegetable farming: Off-season vegetable production means a type of agricultural technology in which vegetables are cultivated and produced fresh before or after their normal season. The main objective of off-season vegetable production is to produce and supply vegetables to consumers at lean period of supply and best prices for products. This technology offers higher prices to farmers. Also, this technology ensures food security during peak periods to timely promote certain employment. Off-season vegetable farming is the best source of income for others and an effective means for the reduction of poverty, unemployment, and malnutrition which is continuously existing.

Current work: WWF-India, Darjeeling initiated a training programme at Saureni Village on building 10 Polythene/Hot Houses for 10 women beneficiaries within the community by providing the standard silpaulin polysheets and agro-nets. A two-day intensive training programme on the 15th & 16th of October 2020 was also provided on the cultivation of the off-season vegetables inside the Polythene House. The objective of the programme was for enhancing their skills in growing off-season vegetables and thereby enhancing their income.



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Testimonial by Mr. PD Lama (Lama Apiary)

Lama Apiary is situated at Kafeybaari in Kurseong sub-division. The apiary has been also providing training on beekeeping in collaboration with WWF-India in Darjeeling and Sikkim. In 2006, the first training programme on beekeeping and modern apiary techniques was organised at Bungkulung village in the Mirik sub-division of Darjeeling. From then on, many apiary training events were held at Bungkulung. In 2010, WWF-India organized another apiary workshop for the communities living at Gorubathan block in the then Kalimpong sub-division and on the fringes of Neora Valley National Park.

Such initiatives were taken to enhance people's livelihood and maintaining the ecological balance with minimum impact on biodiversity.

Testimonial by Mr Pawan Subba & Kamal Subba (Bungkulung)

In the year 2006, Project SERVE was launched in the little known village of Bungkulung. The objective of the project was to improve the livelihood of the local farmers and boost their income. At the same time, it aimed at improving the ecological condition of the area. The farmers formed the Apiary and Agro Beneficiary Committee with full support from WWF-India, (Darjeeling Field Office).

*In collaboration with Project SERVE, the committee started nursery rearing of shade trees, particularly *Albezia* species, which were later distributed to the surrounding tea-growing estates like Selimbong, Teesta Valley, Gopaldhaara, Nagri, Dhajea, Castleton, Rohini and Soureni. The shade tree nursery supplied quality saplings to these tea gardens and simultaneously helped the farmers to boost their incomes from the nursery.*

In 2008, a programme on modern scientific apiary techniques and practices was launched in which several women from Bungkulung participated in the early training programmes and benefitted financially by the sale of honey.



Such programs are beneficial for local communities in the region. They received modern apiary equipment and kits like bee boxes, honey extractors, queen gates, artificial combs, capture nets, comb cutting knives, gloves, face protecting masks, etc.



In 2010, as part of the project, the villagers were assisted in developing a marketing strategy. With the technical help of a Lopchu based food-producing unit, the honey produced in Bungkulung were promoted under the brand name "Darjeeling Gold." Very soon, the honey production gathered pace and won the hearts of people due to its hygienic processing and excellent quality. The farmers of Bungkulung also got opportunities to display and sell their produce at the State Agro Fest held at Milan Mela Ground, Calcutta, and GTA level Agro Fair held at Jaamuney. The interest in beekeeping and honey production spread like wildfire, and groups from all over Darjeeling hills approached the project office. Thousands of trainees benefitted from the training workshops held in Bungkulung, which had, by now, become a nodal training center for beekeeping.

In 2009, the Darjeeling Field Office introduced organic vegetable farming techniques in the village. As part of this project, tomatoes and other leafy vegetables were grown successfully. This further improved the livelihood of the local farmers in Bungkulung. Similarly, WWF-India (Darjeeling Field Office) also trained the farmers in the technique of making bio briquettes (Matola), using dead wood and unwanted weeds. This resulted in a decline in firewood consumption and, more importantly, motivated the villagers to increase the forest cover. They started planting locally suitable saplings in the open and barren patches, which continues to this date.

Apart from agro-based livelihood activities, Project S.E.R.V.E also initiated an Environment Education Programme for children. Children from local schools in Bungkulung have imparted education on biodiversity. As part of an exchange programme, the children were taken to the Padmaja Naidu Himalayan Zoological Park, Himalayan Mountaineering Institute, Botanical Garden, and

Sailesh Chandra Sharma

Programme Manager, Darjeeling Ladenla Road Prerna, Darjeeling

Though Project SERVE was initiated in the year 1993, its operational existence came in the year 1994. That was the year when a managing committee was formed comprising of tea planters, academics, social worker and lawyers from Darjeeling and Kolkata region. The temporary office was run from DPA (Darjeeling Planters Association). Later, the office was shifted to Darjeeling Gymkhana Club premises. The managing committee members were all volunteers.

I joined Project SERVE officially from the month of September 1994, where I looked after the administrative tasks as well as community visits. The apiary programme was launched in Mamring village under Kurseong Sub-division. The apiary boxes were acquired from Mr. Ganga Prasad Rai. As a part of beautification and reintroduction of indigenous species, tree plantation was done in and around the Chowrasta and Mall road areas. This programme was conducted with students and NCC cadets from different schools and colleges.

other heritage sites in Darjeeling. Children from urban schools were brought to Bungkulung to get hands-on exposure to day-to-day life in the village. Project S.E.R.V.E also organised several Nature Camps at Bungkulung.

In this manner, WWF-India (Darjeeling Field Office) opened up new avenues for the once little known region. As part of exploring the potential of eco-tourism, five members from the village were taken to Kabi Longchok, Sikkim, to observe and learn about eco-tourism practices.

The contribution of WWF-India, Project S.E.R.V.E, Darjeeling Field Office, is immeasurable. We, the members of the Apiary & Agro Beneficiary Committee, along with all of us whose lives have been touched and improved by Project S.E.R.V.E, express our heartfelt gratitude.

We congratulate Project S.E.R.V.E on its completion of 25 years of dedicated service to Darjeeling Hills.



In the year 1996, massive tree plantation drive was done at Lower Harsing hatta and Yangkhoo village with the help of DLR Prerna, then known as RCDC (Region Community Development Committee) and Sanjukta Vikash Cooperative, first organic and fair trade certified community in the region. The plantation along the road side at Harsing still stands tall and has helped in regeneration of vegetations.

It was a very good time working and a great learning experience. On this happy occasion of 25 years celebration of Project SERVE, I congratulate both WWF-India as well as Projektwerkstatt, Germany and hope to see the partnership grow for the goodwill of the our area, Darjeeling.



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ENHANCING WATER SECURITY

Restoration Of Key Springs: Local springs are the only alternative source of drinking water in both urban and rural areas in Darjeeling Hills. Population increase, deforestation, changing rainfall patterns, natural calamities, unscientific and unplanned urbanisation etc. result in less water discharge or, in some extreme cases, even drying up of these springs.

Current Work: In 2017, WWF India, West Bengal Forest Department, and Lanku Valley Biodiversity Conservation came together to revive three springs: Saroj Dhara, Birsing Dhara, and Gokul Dhara located at Upper Lanku Valley Village under the Kurseong Block. Seventeen hectares of water catchment areas were selected out of which seven hectares of land were under the Forest Department, and 10 hectares of land were privately owned.

WWF-India provided technical support towards the spring recharge implementation work at one hectare of the forest land (the forest department is supposed to undertake the task at another 6 hectares in a few years). As for the 10 hectares of private land, WWF-India provided technical guidance and financial support.

The ground implementation work for the spring recharge was done by creating artificial structures like counter trenches, percolation pits, and drainage trenches to trap rainwater, allowing more water to percolate into the ground and recharge the aquifers. Community members have observed some improvement in water discharge in these springs.

Birshing Dhara Discharge (lit/hr)	Jan	Feb	Mar	Apr	May
2017	399	249	128		
2018	578	251	132		
2019	416	342	305	100	76
2020	440	401	379	131	161
Gokul Dhara Discharge (lit/hr)	Jan	Feb	Mar	Apr	May
2017	684	635	582		
2018	516	884	600		
2019	504	717	1045	617	203
2020	611	806	1345	716	219

In 2019, the springshed work was scaled up to cover more springs in Kalimpong and Darjeeling districts with technical support from the People's Science Institute, Dehradun. To initiate the intervention, a three-day training programme for community representatives from selected villages was conducted through field surveys to identify some critical springs where the pilots could be initiated. From the survey around 13 springs, 1 from Lebung Cantonment, 5 from Nagrifarm Tea Estate, 3 from Shelpu, 2 from Sittong, and 2 from Sindebong, Kalimpong were selected.





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AWARENESS AND EDUCATION

Mobilising volunteer groups to engage in events and campaigns

Teachers Camp: A three-day teachers' camp for participants from Sikkim and Darjeeling was organised at Majitar, near Jorethang, in South Sikkim from 18th Dec to 20th Dec 2018. A total of 24 teachers participated in the programme where they were briefed on lesser-known species, climate change matters, zero waste, celebrating local food, etc. Activities like birdwatching, treasure hunts, waste audits, quizzes, and film shows were part of the camp.

Adopt a Tree: Adopt a Tree (AAT) initiative was conceptualised by Projektwerkstatt Teekampagne, Germany in 2016 and implemented at tea estates around Darjeeling by WWF-India to raise awareness amongst the tea buyers and connect them with the environment by supporting the plantation initiative of Project SERVE. In the year 2018, 1000 local tree saplings were planted at Chamong, Nagrifarm, Seeyok, and Singell Tea Estates. At Nagrifarm Tea Estate the follow-up of the plantation was again done in July 2019 and 2020. The donors adopted these saplings and a display board acknowledging the support of the donors was installed at the Singell Tea Estate.

Learning And Exposure Visit To

Talkhadka Village: A visit to Talkhadka Village in Sikkim was organised for 11 community members from Mirik, Lanku Valley, Sittong, Rimbick, Maneybhanjang, Lebong, and Darjeeling on April 26-28, 2018. Talkhadka is situated on the fringe of Pangolakha Wildlife Sanctuary, where WWF-India has been promoting responsible tourism. The objective of the visit was to learn about homestay hospitality and nature guide training. A trek to Dolma Lake was also organised during the trip.

Exposure Visit for NGOs and Partners

to Lanku Valley: An exposure visit for the NGOs and partner organizations from Darjeeling and Mirik to showcase the springshed management activity done at Lanku Valley was organized on 6th April 2018. The main objective was to showcase the springshed management work undertaken at Lanku Valley and to explore possibilities of replicating similar interventions in other areas where the problem of water shortage was an issue. Eighteen participants from different organizations like Friends for Tea Forum, Mirik, DLR Prerna, Anugyalaya DDSSS, CHAI Project from Darjeeling and Sunakhari Self Help Group from Phoobsering were present. The participants were taken for a field site visit and in the second half, short videos on springshed management were screened which showcased the spring rejuvenation work in Lanku Valley followed by a PowerPoint presentation by Mr.

Bishnu Thapa, on how the springshed programme was initiated at Lanku and his experience on the increase of spring water discharge after the initiation of the project.



Awareness events and campaigns with school children and other stakeholders

International Biodiversity Day: On May 22, 2017, in collaboration with the Biodiversity Management Committee (BMC), Mirik, and Zero Waste Himalaya, WWF-India celebrated International Biodiversity Day at Mirik. More than 100 participants from 5 schools, NGOs, and local community members were part of the celebration. Winning posters on the theme of Biodiversity Conservation and Sustainable Tourism were displayed at the venue. This was followed by a clean-up activity at the Mirik Lake Garden and a talk on the importance of Mirik Lake and the threats to lake biodiversity.



World Water Day: On March 22, 2018, WWF-India in collaboration with Lanku Valley Society for Biodiversity Conservation and DLR Prerna, celebrated World Water Day at Lanku Valley. The participants included 57 community members of the Middle Mamring, Rangull, Lower Sittong, and Selpu villages. The participants were taken to a springshed field site where they were briefed on the field implementation technique and ways for measuring spring water discharge. Two short videos that showcased the spring rejuvenation work initiated at Lanku Valley and success stories of spring management work for south Sikkim were screened.



On March 2021, WWF-India, Darjeeling Field Office collaborated with the Zero Waste Himalaya, Darjeeling Wildlife Division, Darjeeling Municipality and Senchal Mandir Committee and launched the Plastic Free Senchal Campaign. Senchal is a sacred landscape and a tourist spot located within the Senchal Wildlife Sanctuary and is one of the main water catchment areas in Darjeeling town and the surrounding areas.

With a growing number of tourists, picnickers, and temple devotees visiting the area regularly, lots of plastic waste like food packages, water bottles, single-use utensils, and plastic-made offerings are discarded on the premises. Hence, with the objective of establishing a culture of plastic-free offerings also called Sola Shringar and reducing plastic waste with the collaboration with the stakeholders and partners the area was declared plastic free zone.

International Red Panda Day: On 15th September 2018, the International Red Panda Day (IRPD) was organized in collaboration with the Darjeeling Wildlife Division, for the students and general public at the Interpretation Centre Hall Maneybhanjang, which is a gateway to the Singalila National Park. Films on red panda were screened, and 30 Zero Waste posters were displayed at the venue to mark the occasion. Vehicles plying inside the park were provided with garbage bags to prevent tourists from disposing of used plastic water bottles, food wrappers, and other items inside the national park.

International Red Panda Day was celebrated from September 20 to 22, 2019 at the Choudapheri Camp, Neora Valley National Park, in collaboration with the Gorumara Wildlife Division. The programme was organised for students and teachers of schools located around Singalila and Neora Valley. A total of 58 participants were present. A birdwatching trip, walk along a red panda trail, painting competition, wildlife quiz, and scavenger hunt were organised as a part of the programme.



Due to the COVID-19 situation on 19th September 2020, an online programme was organized for school students from both Darjeeling and Sikkim areas. Dr. Sunita Pradhan a fellow ATREE spoke about the past, present and future of the red pandas. A short film- 'The trail of the fire cat' produced by WWF-India was also screened for the participants.

On 18th September 2021, the IRPD was celebrated at Mulkharka Village for the Mulkharka and Talkharka community members. Mulkharka and Talkharka villages hold significance as they are transboundary villages between West Bengal and Sikkim respectively. The former lies in the Kalimpong district of West Bengal and is the fringe village of the Neora Valley National Park and the latter lies in the East Sikkim district close to the Pangolakha Wildlife Sanctuary. Both these protected areas are important habitats for

the endangered red panda species. A waste clean-up drive was organized at Mulkharka Lake followed by an education and awareness programme on the red panda species. A total of 25 community members were present in the programme.



World Environment Day: In 2017, on 5th June, World Environment Day was celebrated at a plantation site at Leborg Cantonment in collaboration with Darjeeling Montessori School students. In 2018, it was celebrated at Seeyok Tea Estate in collaboration with the tea estate management. During this event, a plantation programme was organised at one of the water catchment areas by the Seeyok Workers Development Committee. They planted 1500 saplings of local trees at the site, and another set of 1500 tree saplings was distributed for free at Seeyok village. On this day, a total of 810 tree saplings were also distributed to Siksha Sangh School, Mount Hermon School, All India Women Welfare Society, and DLR Prerna. In 2019, a film based on environmental issues was screened at different schools.



Due to the ongoing COVID-19 situation on 5th June 2020, an online event was organized for teachers and students from various schools. Guest speakers were Ms. Usha Lachungpa, Retired Scientific Officer, Sikkim Forest Department, and Mr. Karma Tempo, a founding member of the Photography Club of Sikkim.

In 2021, too due to the prevailing COVID-19 situation only smaller events were organized to mark the event by planting some 250 indigenous tree saplings by the community members at Mulkharka Village, Kalimpong,

and by the WWF-India's staff planting a sapling at their respective homes.



Van Mahotsav: In 2018, Van Mahotsav was celebrated in collaboration with Darjeeling Forest Division at Chowrasta and the plantation site at Leborg Cantonment. The Forest Department and WWF-India distributed tree saplings. After this event, about 1000 tree saplings were planted at Leborg Cantonment by the guests, forest department officials, and other partners.

In 2019 and 2020, the Darjeeling Field Office, in collaboration with the Darjeeling Forest Division organised a plantation programme at Gwali Goat Dara and at the newly created 2020 plantation site respectively within the Leborg Cantonment.

On July 14, 2021, Sri Ganesh Cooperative Samiti, Tindharae, and WWF-India, Darjeeling celebrated Van Mahotsav by planting 500 indigenous saplings. Before the plantation, an awareness programme on tree plantation, its importance, and information on Van Mahotsav was provided to the participants. At Leborg Cantonment, WWF-India in collaboration with the Darjeeling Forest Division did a ceremonial plantation of 100 saplings.



World Pangolin Day: On February 16, 2019, the WPD was celebrated at Mim Tea Estate in collaboration with the tea estate management. A total of 138 participants from the Mim Primary School, tea garden workers, and people from Mim villages were present. The highlights of the programme were talks on pangolins and its conservation, local biodiversity, zero waste, a film show, and a quiz.

On February 15, 2020, the WPD was celebrated at Chamong Tea Estate in collaboration with Lali Gurans Kalyan Sangh, an NGO from Chamong Village. There were about 50 participants from six self-help groups, two samajas, and students.



A talk on Pangolin was presented, followed by the screening of the short movie- 'The Plight of the Pangolin' which was produced by WWF India, Darjeeling Field Office, in collaboration with Green Hub. Another talk on bushmeat hunting and the hunting of birds was discussed with a focus on Wildlife (Protection) Act.

On February 20, 2021, WPD was celebrated at Nagri Tea Estate in collaboration with the tea management. The school students from Ojha High School and some tea garden workers were present. The students were taken for a trail walk and taught to look for possible secondary signs like burrows for the presence of pangolins in the area. A question-answer session, PowerPoint presentation on the pangolin along with the Wildlife Protection Act was shared with the students. Some community members also shared their experience seeing the pangolin in the tea garden area.



World Earth Day: On World Earth Day, 22nd April 2021, as a part of the Plastic Free Senchal Campaign, WWF-India collaborated with the Scavengers, a youth organization from Darjeeling to spread awareness on plastic problems by painting and writing messages on the walls and parapets at the Senchal Devi Temple.



International Mountain Day: In 2018, the theme for International Mountain Day (IMD) was 'Mountains Matter.' Considering the crucial role of the mountains in providing essential ecosystem services to the planet and their vulnerability in the face of climate change, WWF-India and the partner organisation under the aegis of the Darjeeling Himalaya Initiative (DHI) celebrated this day on 11 December at Town Hall, Kalimpong. The objective of the programme was to launch a social movement and advocate for the conservation of mountain biodiversity.



The Darjeeling Bird Club: The Darjeeling Bird Club (DBC), an initiative of the Darjeeling Field Office was formed to provide a platform for bird experts, amateurs, learners, etc. to raise awareness, education and conservation of birds.

On October 29th, 2021, an hour-long birdwatching session at the nature trail in the zoo premise commenced and the DBC was formally inaugurated by the Zoo Director, Dr. Basararaj Holeyachi at the Padmaja Naidu Himalayan Zoological Park Hall. The youths and students from Darjeeling town, the DFO, Darjeeling Wildlife Division, and the zoo staff were present during the event.



Awareness Programme on Wildlife

Conservation: The Darjeeling Wildlife Division in collaboration with the WWF-India, Darjeeling Field Office organized an event on the awareness of wildlife conservation at the Margret's Hope Tea Estate on 21st Jan 2021 for the tea garden workers, students, and other general public. The programme focused on the protection and conservation of all the species and on the information sharing of the Wildlife Protection Act.



Maintaining Batasia Eco Garden: The Batasia Eco Garden which is one of the main tourist spots in Darjeeling is being partly maintained by the Darjeeling Field Office. A small plot has been prepared to showcase local medicinal plants and raise awareness among the students and visitors. A vermicomposting pit constructed at the site provides manure to the plants. In 2018, a water storage tank was provided to store rainwater and for watering the plants.

Training on Finance and Record

Keeping: As WWF-India, Darjeeling has been supporting the community members of Saureni Forest Village on apiary and agriculture projects, to strengthen and empower the community members, on 11th March 2021 a simple training on finance and record keeping was provided to the members of Saureni Village Social Committee. The participants were taught about keeping track of the produce, their income, and expenditure on the sales of their produce, etc.



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Testimonial by Dr. Saibal Sengupta, PhD.

Dr. Saibal Sengupta

My association with Project SERVE, implemented by WWF-India, goes back to the year 2002. I had just started the Nature Club at St. Robert's School, where I teach and I was invited to prepare a students project on vermi-composting by Mr. N.S. Rai who was the Consultant then. This led to a long association with Project SERVE that lasted upto 2014.

This association enabled me to contribute in my own small way towards generating awareness among school children about the environment and the need for its conservation.

In those days, the Darjeeling Field Office functioned under the dynamic leadership of Lt.Col. (retd.) S.R. Banerjee who headed the West Bengal State Office. Dr. Saswati Sen who was then Education Officer took great interest in Environmental Education for Darjeeling schools. It was under her guidance that the Nature Club at St. Robert's School was registered under the NCI movement, in 2002.

I have fond memories of my association with learned men and women like Mr. N.S. Rai, Lt. Col Banerjee, Dr. Saswati Sen, Ms. Farida Tampal, Mr. Harish Mukhia and Mr. S. Kritaniya.

Later, Mr. Pravat Rana joined as Senior Project Officer and gave the required boost to this project. It was during his tenure that we successfully hosted a 2-day nature fair on 'Birds of the Indian subcontinent' in Darjeeling. During this period, several teams of German guests visited our school to assess the activities of the nature club. Mr. Ravi Singh, the CEO & Secretary General of WWF-India also paid a visit to our school during this time.

By 2007, Mr. Sanjeeb Pradhan had taken over as Senior Project Officer and he provided ample opportunities to me as well as my nature club students to engage in nature education activities in a proactive manner. With the support of Project SERVE, we were able to publish a series of booklets and posters highlighting the rich biodiversity of Darjeeling.



During my association with Project SERVE, I was able to visit numerous places during the field visits and share wise insights with the local people. Most importantly this association provided the required exposure, guidance and support in shaping young minds into the science and art of conservation. It is a result of this collaboration that enabled some of my past pupils to take up careers in forestry and nature photography.

I would like to mention here the unwavering support and warmth shown by Mr. Pemba T. Bhutia, field officer and the longest serving staff at the Darjeeling office. His keen interest and unlimited support to our nature club activities has always been invaluable.

On this occasion of the 25th Year of Project SERVE, I remember all those individuals who shaped the project and led it to this stage. I take the opportunity to congratulate Mr. Deependra Sunar, currently the head of the project and his entire team of young conservation leaders and give my best wishes for the days to come.

ZERO WASTE

Promoting zero waste principles and practices in Darjeeling

Learning And Exposure Visits on the Composting Technique: A learning and exposure visit on composting was organised for the residents of Lebong and Jalapahar Cantonment, and teachers and students of Siksha Sangh Higher Secondary School on March 28, 2019 at a homestay named Tieddi Forest Garden located at 8th Mile, Gorabari, Sonada in Darjeeling. The Tieddi Forest Garden has been practicing organic composting using waste from neighbouring households, and fast-food shops located along the 8th-Mile Road. A total of 13 participants were briefed about the benefits of permaculture and the gravitation and rolling down technique used in organic composting. After the visit, the community members set up composting units.

Vermicomposting Training: To promote one of the zero waste principles and spread awareness on composting, a training on vermicomposting was organised for the teachers and students of Siksha Sangh Higher Secondary School on August 14, 2018. A 4x4 feet silpaulin vermicomposting pit was provided for this activity.

Peer Educators Zero Waste

Programme: A two-day programme was organised at Mirik on August 4 and 5, 2018 for teachers. A total of 56 participants from St. Joseph's College, Southfield College, Darjeeling Government College, Mirik College, and Tadong Government College, and Namchi Government College discussed various issues such as zero waste, behavioural change in individuals like fast fashion, menstruation in relation to health, hygiene, and waste along with extended producer responsibility, a film screening and field visit to the Mirik landfill were also organised.

In 2019, a three-day training programme was organised from December 10-12 at Kalimpong. A total of 42 participants representing diverse fields such as education, CBOs, NGOs, religious organisations, government organisations from Sikkim, Darjeeling, Kalimpong, and even from the neighbouring country Nepal were part of the programme. Some of the highlights of the programme include:

1. Discussions on zero-waste travel, how to make the switch from plastic to sustainable options, 12 steps to a zero-waste lifestyle, and extended producer responsibility.
2. A clean-up activity of the surrounding area followed by a waste audit.
3. Calculating sugar in packaged food,
4. A debate on waste to mark International Mountain Day (December 11),

5. A session to share community solutions and stories of change from the communities of Sikkim and Darjeeling; lessons on zero waste campaigns on social media, and the concepts of cloth-swap, secret friend, and fast fashion.



प्लास्टिक मुक्त सिन्चेल

Support the Plastic Free Senchal Campaign
प्लास्टिक मुक्त सेञ्चल अभियानलाई सहयोग गर्नुहोस्

Offer natural plastic free offerings to Senchal Devi
देवीलाई प्लास्टिक को प्रदुशणले होइन, प्राकृतिक सामग्रीले पूजा गरी

Do not bring single use plastic items to Tiger Hill
टाईगर हिलमा प्लास्टिकको फोहोर नल्याउनुहोस्





©WWF-India

The Himalayan Cleanup: The Himalayan Clean-up (THC) was initiated on May 26, 2018, as part of the Integrated Mountain Initiative and Zero Waste Himalaya in which WWF-India, Darjeeling office is one of the partner organisations. The event was organised in 12 Indian Himalayan states to raise awareness of the problem of single-use plastics. Responding to the call of more than 200 organisations, 15000 volunteers from across the mountain states participated in over 300 clean-up events that year. The objective of the event was to conduct a waste audit, provide insights into the consumption patterns and waste generated in the mountains, and demand extended producer responsibility, especially for multi-layered plastic, PET bottles, and Tetra Packs.

In 2018, the Darjeeling field office collaborated with schools, municipalities, and NGOs for the THC at Mirik. Close to 99 volunteers from Lewis English School, Orange Lake School, Jogpal Jr. High School, Friends for Tree Forum, Bokar Monastery and Mirik Municipality participated in the clean-up activity and waste audit. The volunteers were provided with jute sacks, gloves, and masks. The collected waste was handed over to the municipal corporation to be recycled or discarded at the landfill.

In 2019, the clean-up was organised at the Chowrasta and the Mahakal Temple. There were about 80 volunteers from colleges, schools, NGOs, and CBOs, for the clean-up. They were provided with gloves, masks, and jute bags. The collected waste was segregated into different categories such as pet bottles, multi-layered packaging, tetra pack, and single-use products for a waste audit. Glass, metal, paper/cardboard, cloths, etc. were also segregated and sent for recycling or to the landfill.

Due to COVID-19 looming around in 2021, the THC was done by the participants at their own homes and on June 6th, the way-forward session was organized online. It was attended by participants across the Himalayas and emphasized the need to amplify the demand for Extended Producer Responsibility (EPR) of companies. The THC2021 recommended mountain-sensitive waste management policies as well as stopping single-use plastics and phasing out multi-layered single-use food packaging plastic which is of utmost concern.



Zero Waste Himalaya Day: The Zero Waste Himalaya is a grassroots campaign for individuals, groups, organisations, and institutions to drive the message of eliminating plastic from the Himalayan regions. To advocate the concept and philosophy of Zero Waste, August 8 was declared a Zero Waste Himalaya Day at Deer Park Institute, Bir, Himachal Pradesh.

In the year 2018, WWF India, DLR Prerna, ATREE and Anugalya DDSSS celebrated this day by inviting educational institutes for an educational walk to one of the landfills in Darjeeling. The objective of the programme was to demonstrate the types of mixed wastes such as dry (plastic, paper, cloths, etc.), wet (food, vegetable, etc) electric, and medical waste that reach the landfill, and the need for segregation and composting. Students from St. Joseph College, Southfield College, Loreto Convent School, and St. Robert's School were part of this educational activity.

THE HIMALAYAN CLEANUP FROM HOME

INTEGRATED MOUNTAIN INITIATIVE Zero Waste HIMALAYA

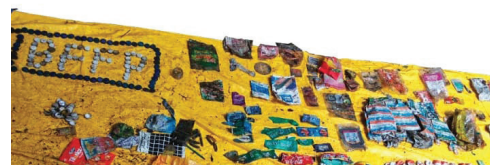


THE HIMALAYAN CLEAN UP 2021 REFLECT, SWITCH, DEMAND The Way Forward

The Himalayan Cleanup 2021 was from Home and participants reflected on their lifestyles through waste and brand audits. This reflection enables a switch to sustainable lifestyles. THC2021 also contributes to demanding systemic changes in design and management systems.

Scan the QR Code or join through the link below <https://qr.go.page.link/4JePi>

Date: 6th June, 2021
Time: 4:00 PM
On Zoom



ANNEXURE I

Total area of Block Forest Plantation of Project SERVE since 1996			
SI No	Name of Area	Area (Hec)	year
1	Gorabari	5	1996
2	Miling	5	
3	Rajahatta	2	
4	Chatakpur	4	
5	Singell	2	
6	Ghumti	2	
7	Via-Tukvar	2	
8	Rangeroon	2	
9	Rajbari	2	
10	Pulungdung	5	1997
11	Gorabari	5	
12	Miling	5	
13	Harsingh-Dabaipani	5	
14	Mall Road	1	
15	Gothels school	5	1998
16	Caselton Tea Estate	5	
17	Chatakpur	0.4	1999
18	Singell	5	2000
19	Dhoteray	5	
20	Badamtam	4	
21	Gorabari Wildlife Divn 1	5	2001
22	Singell	5	
23	Margaret's Hope	5	
24	Badamtam	4	
25	Casalton Tea Estate	2	
26	Paschim	30	2002
27	Gorabari	3	
28	Singell	5	
29	Margrets' Hope	5	
30	Upper Mamring	5	
31	Paschim	30	2003
32	Gorabari	5	
33	Upper Mamring	5	
34	Ghoom-Bhanjyang	10	
35	Pugung	10	
36	Margret's Hope	5	
37	Dhajey	4	
38	Badamtam	5	
39	Upper Mamring	5	2004
40	Gorabari	5	
41	Margret's Hope	5	

42	Kumai	5	
43	Badamtam	5	
44	Paschim	10	2005
45	Upper Mamring	5	
46	Gorabari	5	
47	Paschim	10	2006
48	Badamtam	5	
49	Margret's Hope	5	
50	Upper Mamring	3	2007
51	Aloo Bari	2	
52	Bungkulung	5	
53	Makai Bari	2.5	
54	Avon	1.5	
55	Teesta Valley	1	
53	Chatakpur	7.5	2008
54	Gorabari	5	
55	Badamtam	5	
56	Gorabari	20	2009
57	Badamtam	5	
58	Gorabari	15	2010
59	Badamtam	5	
60	Naya Busty	15	2011
61	Chatakpur	8	
62	Phoobsering	5	
63	Tonglu	2	
64	Naya Busty	10	2012
65	Chatakpur	10	
66	Phoobsering	5	
67	Nagari Farm	5	
68	Chatakpur Railway Siding	5	2013
69	Phoobsering	5	
70	Naya Busty	5	
71	Lanku	5	
72	Chatakpur Railway Siding	5	2014
73	Phoobsering	5	
74	Naya Busty	5	
75	Lanku	5	
76	Chatakpur	5	2015
77	Naya Busty	5	
78	Lanku	5	
79	Lebong Cantonment	5	
80	Lebong Cantonment	5	2016

81	Not done due to political unrest at Dajeeling	0	2017
82	Lebong Cantonment	5	2018
83	Lebong Cantonment	5	2019
84	Lebong Cantonment	5	2020
85	Lebong Cantonment	3	2021
86	Lebong Cantonment	5	2022
87	Lebong Cantonment	5	2023
Total Area of Plantation		509.9	

Total area of Block Forest Plantation of Project SERVE since 1996			
SI No	Name of Area	Area (Hec)	year
1	Gorabari	5	1996
2	Miling	5	
3	Rajahatta	2	
4	Chatakpur	4	
5	Singell	2	
6	Ghumti	2	
7	Via-Tukvar	2	
8	Rangeroon	2	
9	Rajbari	2	
10	Pulungdung	5	1997
11	Gorabari	5	
12	Miling	5	
13	Harsingh-Dabaipani	5	
14	Mall Road	1	
15	Gothels school	5	1998
16	Caselton Tea Estate	5	
17	Chatakpur	0.4	1999
18	Singell	5	2000
19	Dhoteray	5	
20	Badamtam	4	
21	Gorabari Wildlife Divn 1	5	2001
22	Singell	5	
23	Margaret's Hope	5	
24	Badamtam	4	
25	Casalton Tea Estate	2	
26	Paschim	30	2002
27	Gorabari	3	
28	Singell	5	
29	Margrets' Hope	5	

30	Upper Mamring	5	
31	Paschim	30	2003
32	Gorabari	5	
33	Upper Mamring	5	
34	Ghoom-Bhanjyang	10	
35	Pugung	10	
36	Margret's Hope	5	
37	Dhajey	4	
38	Badamtam	5	
39	Upper Mamring	5	2004
40	Gorabari	5	
41	Margret's Hope	5	
42	Kumai	5	
43	Badamtam	5	
44	Paschim	10	2005
45	Upper Mamring	5	
46	Gorabari	5	
47	Paschim	10	2006
48	Badamtam	5	
49	Margret's Hope	5	
50	Upper Mamring	3	2007
51	Aloo Bari	2	
52	Bungkulung	5	
53	Makai Bari	2.5	
54	Avon	1.5	
55	Teesta Valley	1	
53	Chatakpur	7.5	2008
54	Gorabari	5	
55	Badamtam	5	
56	Gorabari	20	2009
57	Badamtam	5	
58	Gorabari	15	2010
59	Badamtam	5	
60	Naya Busty	15	2011
61	Chatakpur	8	
62	Phoobsering	5	
63	Tonglu	2	
64	Naya Busty	10	2012
65	Chatakpur	10	
66	Phoobsering	5	
67	Nagari Farm	5	
68	Chatakpur Railway Siding	5	2013
69	Phoobsering	5	
70	Naya Busty	5	
71	Lanku	5	

72	Chatakpur Railway Siding	5	2014
73	Phoobsering	5	
74	Naya Busty	5	
75	Lanku	5	
76	Chatakpur	5	2015
77	Naya Busty	5	
78	Lanku	5	
79	Lebong Cantonment	5	
80	Lebong Cantonment	5	2016
81	Not done due to political unrest at Dajeeling		2017
82	Lebong Cantonment	5	2018
83	Lebong Cantonment	5	2019
Total Area of Plantation		491.9	



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ANNEXURE 2

Details of species grown in nurseries

SL NO	LOCAL NAME	BOTANICAL NAME	USES/ PURPOSE
1	Adkowlo	<i>Quercus spicata</i>	Timber, firewood, furniture, fruits,
2	Arupatae	<i>Prunus nepaulensis</i>	Timber, furniture, foliage, flower,
3	Badrasae	<i>Elaeocarpus lanceaefolius</i>	Timber, fruit, medicine,
4	Bogana	<i>Melia azedarach</i>	Foliage, pesticides, fruit,
5	Buk	<i>Quercus lamellosa</i>	Timber, furniture, foliage, flower, fodder, fruit, charcoal
6	Chilawnae	<i>Schima wallichii</i>	Plywood
7	Chiplae Kawlo	<i>Machilus gammieana</i>	Timber, charcoal
8	Deodar	<i>Cedrus deodara</i>	Timber,
9	Dhupi	<i>Cryptomeria japonica</i>	Timber
10	Goge chap	<i>Magnolia campbellii</i>	Timber, foliage, flower,
11	Gagun	<i>Saurauria nepalensis</i>	Fodder, fruit,
12	Kapasi	<i>Acer campbellii</i>	Agricultural implement, fodder, timber, furniture, plywood
13	Kaphal	<i>Syzygium tetragonum</i>	Fodder, fruit,
14	Katus	<i>Castanopsis indica</i>	Timber, fruit, charcoal, agricultural implement
15	Kyamuna	<i>Syzygium operculatum</i>	Fruit, fire wood, fodder,
16	Lal Chandan	<i>Daphniphyllum himalayense</i>	Timber, firewood, furniture, fruits,
17	Lali Guras	<i>Rhododendron arboreum</i>	Fire wood, medicine, flower,
18	Lapche Kawlo	<i>Machilus edulis</i>	Timber, fruit, medicine,
19	Maya	<i>Eriobotrya petiolata</i>	Fire wood, fodder,
20	Mitae Chap	<i>Michelia exelsa</i>	Timber, furniture, fruit, flower,
21	Okhar	<i>Juglans regia</i>	Timber, furniture, medicine, fruit,
22	Pani sajh	<i>Termenelia myriocarpa</i>	Timber, furniture, plywood, fodder, flower,
23	Payoo	<i>Prunus ceracoides</i>	Flower, fruit, fodder,
24	Phalant	<i>Quercus lineata</i>	Timber, fodder, fruit, charcoal
25	Pipli	<i>Symingtonia populnea</i>	Timber, fodder, foliage, charcoal,
26	Putli	<i>Acer laevigata</i>	Timber, fruit, fodder, agricultural implement
27	Seto siris	<i>Albizzia procera</i>	Timber, flower,
28	Sinkowlo	<i>Cinnamomum obtusifolium</i>	Timber, fodder, medicine,
29	Tata siris	<i>Albizzia lebbek</i>	Timber, flower,
30	Tetae chap	<i>Michelia cathcartii</i>	Timber, fodder, furniture,
31	Utis	<i>Alnus nepalensis</i>	Timber, soil conservation,

ANNEXURE 3

Tree saplings planted since 1996

Sl no	Year of plantation	Number of Tree Saplings			Total No of Saplings
		Saplings planted at BFP, Tea Gardens etc.	Free distribution	Sold	
1	1996	65000			65000
2	1997	286000			286000
3	1998	266157			266157
4	1999	211500			211500
5	2000	154220			154220
6	2001	156714			156714
7	2002	161366		19925	181291
8	2003	223190	6489	15200	244879
9	2004	157215	4700	45050	206965
10	2005	144025		2000	146025
11	2006	152500			152500
12	2007	147500			147500
13	2008	124135	6705		130840
15	2009	158000			158000
16	2010	131305			131305
17	2011	90900			90900
18	2012	89400	300		89700
19	2013	68660	1650		70310
20	2014	75100			75100
21	2015-2016	79400	18475		97875
22	2017	0	0		0
23	2018	11000	3750		14750
24	2019	13500	2500		16000
25	2020	10500			10500
26	2021	12350	3480		15830
27	2022	13035	800		13835
28	2023				0
	Total	3002672	48849	82175	
		Grand Total			3133696
		Actual Annual Report is not present, the no of saplings taken out of old power point presentation			
		In 2017 plantation activity was not done due to unrest at Darjeeling during statehood agitation			



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ANNEXURE 4

Name of the springs selected for springshed restoration.

PRIORITY	NAME OF SPRING	NAME OF THE VILLAGE
1	Mandir Dhara	Lebong Cantonment
2	Zimba Dhara	Nagrifarm Tea estate
3	Gumba Dhara	
4	Mahesh Kuawa	
5	Bhoje Dhara	
6	Latip Kuawa	
7	Heme Khola	
8	Mothe Dhara/Jhora	Shelphu
9	Mone Dhara	Sittong
10	Kothi Dhara	
11	Devithan Dhara	
12	Titung Dhara I	Upper Sindebung, Kalimpong
13	Titung Dhara II	

ANNEXURE 5

Name of the tea garden where Adopt a Tree campaign is implemented

SL NO	YEAR OF IMPLEMENTATION	NAME TEA GARDENS	NO OF SAPLING PLANTED
1	2016	Nagri Tea Estate	250
2		Chongtong Tea Estate	250
3		Moondakotee Tea Estate	250
4		Sepoydhoorah Tea Estate	250
5	2018	Chamong Tea Estate	250
6		Nagrifarm Tea Estate	250
7		Seeyok Tea Estate	250
8		Singell Tea Estate	250
Total			2000

ANNEXURE 6

Some associated and/or well-wishers of WWF India, Project SERVE

Sl no	Name	Remarks
1	Darjeeling Earth Group- Darjeeling	NGO
2	Ashoka Trust for Reserch in Ecology and the Environment- Darjeeling	NGO
3	Inner Wheel Club- Darjeeling	NGO
4	Darjeeling Ladenla Road Prerna- Darjeeling	NGO
5	Anugalaya Darjeeling Diocese Social Service Society- Darjeeling	NGO
6	Chai Project- Darjeeling	NGO
7	Darjeeling SPARSH- Darjeeling	NGO
8	Disha- Darjeeling	NGO
9	Hayden Hall- Darjeeling	NGO
10	Himalayan Society of Nature and Science- Darjeeling	NGO
11	Save the Hills- Kalimpong	NGO
12	Nature and Environment Protection Activists- Mirik	NGO
13	Friends For Tree Forum- Mirik	NGO
14	Change Group- Lebong	NGO
15	Integrated Mountain Initiative- Delhi	NGO
16	Lanku Valley Society for Biodiversity Conservation- Lanku Valley	NGO
17	People's Science Institute- Dehradun	NGO
18	Zero Waste Himalaya- Sikkim & Darjeeling	Platform
19	Forest Protection Committee- Pubung	Committee
20	Forest Protection Committee- Ghoom Bhangjhang	Committee
21	Eco Development Committee- Paschim Forest Village	Committee
22	Gorabari Block Forest Committee, Gorabari	Committee
23	Village Development Committee- Upper Mamring	Committee
24	Kishan Nursery Committee- Chatakpur	Committee
25	Apiary and Agro Beneficiary Committee- Bungkulung	Committee
26	Sanjavani Self Help Group- Bungkulung	Committee
27	Nari Uday Self Help Group- Bungkulung	Committee
28	Prakriti Sangh- Chatakpur	Committee
29	Sunakhari Self Help Group- Phoobsering	Committee
30	Forest Protection Committee- Saureni	Committee
31	Society for Highlanders for Guide and Porters- Maneybhajang	Society
32	Sirikhola Social Organization and Welfare Society, Sirikhola	Society
33	Real Rimbick Society- Rimbick	Society
34	Dhotrey Nature Guide's Association- Dhotrey	Association
35	Land Rover's Association- Maneybhanjang	Association
36	Indiahikes- Joubari	Tourism/Trekking
37	Shree Satya Sai Samity- Badamtam and Kurseong	Religious Group
38	Bokar Ngedhon Choekhorling Monastery- Mirik	Religious Group
39	Sai Milan Youth Club- Rangeroong	Club
40	St. Joseph's College- Darjeeling	College
41	Government College- Darjeeling	College

42	Southfield College- Darjeeling	College
43	St. Robert's Higher Secondary School- Darjeeling	School
44	Gyanoday Niketan School- Darjeeling	School
45	Sardaswari Higher Secondary School- Darjeeling	School
46	St. Teresas Higher Secondary School- Darjeeling	School
47	Municipal Boys Higher Secondary School- Darjeeling	School
48	Sunrise School- Lebong	School
49	BSMI School- Lebong	School
50	Siksha Sangh Higher Secondary School- Ging	School
51	Rangbull High School- Rangbull	School
52	Rambi Higher Secondary School- Rambi	School
53	Kanchanjunga Public School- Tukvar	School
54	Riverdale School- Pokhribung	School
55	Rabindranath Higher Secondary School- Sourine	School
56	Lewis English School-Mirik	School
57	Orange Lake Schook-Mirik	School
58	Lank Valley Higher Secondary School	School
59	West Bengal Forest Department (Darjeeling, Kurseong, Kalimpong)	Government
60	Darjeeling Municipality	Government
61	Mirik Municipality	Government
62	Padmaja Naidu Himalayan Zoological Park	Government
63	National Research Centre for Orchids- Darjeeling	Government
64	District Rural Development Cell (Swacch Bharat Mission)	Government
65	Sashastra Seema Bal- Maneybhanjang	Government
66	Lebong Cantonment Board- Darjeeling	Government
67	Zilla Sainik Board- Darjeeling	Government
68	Chamong Group of Tea Gardens	Tea Company
69	Ambootia Group of Tea Gardens	Tea Company
70	Tea Promoter of India	Tea Company
71	Goodrick Group of Tea Gardens	Tea Company
72	Bagaria Group of Tea Gardens	Tea Company
73	Other Individual Tea Gardens	Tea Company

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CONSERVE NATURE
AND REDUCE THE MOST
PRESSING THREATS TO
THE DIVERSITY OF LIFE
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