

Plantation of 1,50,000 Trees, Implemented by Grow-Trees.com For MakeMyTrip Report for FY 2022-23

Projects and Locations:

- 50,000 Trees for Ecotourism Uttarkashi, Uttarakhand, India
- 50,000 Trees for Hanguls, Dachigam National Park, Kashmir, India
- 50,000 Trees for Ecotourism, Dzuluk, Sikkim, India



*Approximately 20kg of CO2 per year, considered globally as a conservative estimate for sequestration potential of trees

PLANTATION SUMMARY

The tree-planting projects were initiated in 3 states of India to reclaim degraded lands as primary forests, strengthen forest-based livelihood opportunities for local communities, promote ecotourism, protect the habitat of endangered species, uplift rural communities, combat air pollution and for rejuvenation of water bodies and rural landscapes. Local communities participated in every process of the plantation activities and about 12,000 work days were generated to implement the project on-time.



Trees for Ecotourism, Uttarkashi, Uttarakhand, India Plantation of 50,000 Trees

Project Summary:

Uttarkashi literally meaning Kashi (pilgrim) of the North is a district in Uttarakhand which is home to numerous well-known tourist and pilgrimage destinations. This Himalayan state earns most of its revenue from the tourism sector. Climate change will have direct impacts on livelihoods as most of the economic and livelihood sectors are dependent on the biodiversity and natural resources of the state which are vulnerable to the impacts of climate change. Over a period of time, the frequency of disasters like landslides and cloudbursts has increased in this state which has posed a threat to socio-economical structure of the area. Therefore, action against deforestation through restoring forests could contribute up to 30% to the climate change solution. The plantation of 50,000 trees will also help to develop community-based sustainable tourism in the region.

Introduction:

Plantation of 50,000 trees was carried out in monsoon 2022 in Naugaun Block, Barkot Tehsil, Uttarkashi, Uttarakhand. About 20% of the local households in the selected area are living below the poverty line with a very high dependency on forest resources for their day-to-day requirements primarily for firewood and livestock fodder. The plantation encouraged participatory approach with direct community involvement in conservation action simultaneously generating local employment during project implementation and monitoring which supports the sensitive rural economy.

Uttarakhand has a diverse fauna, including Himalayan Musk Deer, Himalayan Tahr, Snow Leopard, Himalayan Goral, Black Bear, Common Leopard, Hanuman Langur, Tiger, Indian Elephant, Wild Dog, Common Otter, Porcupine, Python. In terms of avifauna, the area is home to over 200 species. The area is also home to a variety of reptiles, amphibians, and insects. As a result of the plantation, trees aid in the promotion of selected fruiting species, ensuring that the demand of wildlife is sustained within their habitat in the constrained space of the forest.

The plantation of 50000 trees in Uttarkashi district of Uttarakhand can create forest assets for the community in the form of fruits, fodder, fuelwood, and other NTFPs. On an average the plantation of 50,000 trees can absorb 10,00,000 KGs of CO2 per year, which would improve the micro climatic conditions of that region, thus benefitting the local community residing in that region.

Key Activities:

- Training and Sensitization of rural communities
- Land Preparation
- Nursery Development
- Saplings transportation to plantation site
- Sapling Plantation
- Maintenance for 1 year

Activity Calendar:

| Milestones & Key activities | Jan-Mar | April-June | July-Sept | Oct-Dec | Jan-Mar | Post Year 1 |
|--|---------|------------|-----------|---------|---------|-------------|
| Securing permissions, Village selection, finalization of species | | | | | | |
| Nursery Raising | | | | | | |
| Pit Digging and Sapling plantation | | | | | | |
| Periodic monitoring | | | | | | |
| Community Sensitization | | | | | | |
| 3rd party Audit | | | | | | |
| Replanting of saplings that did not survive 1st year | | | | | | |



Plantation Activities:

At initial stages of the plantation project, a feasibility study was conducted to inspect the area for suitability of plantation, resources available to support the plantation, permissions, and the beneficiaries from the project.

Community support is of utmost importance, thus necessary permissions were taken from Gram panchayat or forest department in order to proceed with plantation activities. The plantation is carried out with the help of the local villagers around the area where they contribute by working as a laborer in various plantation activities. The plantation activities include nursery development, transportation of saplings, pit digging, plantation and maintenance of the sapling. The saplings were nurtured in the nurseries, meanwhile plantation area was prepared for the plantation and further maintenance. The saplings were transported at planting sites and were planted in monsoon season. The selected tree saplings were native species which will create a natural habitat over a period of time and can be beneficial for the ecosystem as well as community in near future. Saplings were further maintained by local villagers by regular watering, cutting grass and weeds that grows around to ensure saplings' survival.

Direct Beneficiaries:

The plantation drive was able to generate more than \sim 4000 work days for the rural community of Uttarkashi district, Uttarakhand of which close to \sim 50% beneficiaries were women. The workdays thus generated allows these women to contribute towards their household incomes and works towards empowering the women who benefit from the work.

Indirect Beneficiaries:

Indirect beneficiaries are the villagers, wildlife, birds and insects who benefit from the trees in the longer run through NTFPs (Non-Timber Forest Produce). Our team of environment experts take a thorough look into the species of the trees to ensure that the tree provide shelter and food to the wildlife and birds that are found in the region.

The plantation in the Naugaon block caters to more than ~130 households. Once the trees mature, these plantations will help to secure the livelihood of the local community with forest assets. The plantation upon maturing can absorb ~10,00,000kgs of Carbon dioxide from the atmosphere, improve the soil quality of the region and provide the villagers with Non-Timber Forests produce.

Sustainable Development Goals (SDGs) related to the project:





Tree Species Bifurcation:

| Tree Species | Botanical name |
|------------------|-------------------------------------|
| Deodhar | Cedrus deodara |
| Bhimal | Grewia optiva |
| Amla | Phyllanthus emblica |
| Baheda | Terminalia bellirica |
| Silver oak | Grevillea robusta |
| Reetha | Sapindus mukorossi |
| Bamboo | Bambusoideae |
| Ghuriyal-Kachnar | Bauhinia variegata |
| Pomegranate | Punica granatum |
| Banj | Quercus leucotrichophora |
| Guava | Psidium guajava |
| Sahada | Kapebonimranu daheya streblus asper |
| Malta | Citrus limetta |
| Total Saplings | 50,000 |

Project Location Map:





Photos:

Nursery



Transportation Of Saplings





Plantation Activity





Sapling plantation





<u>Testimonials</u>:



Roji Manyuda

Roji Manyuda is 29 years old and hails from Kyarkuli village in Uttarkashi. Her family includes 6 members which includes 2 children and 2 in-laws. Roji works at the Grow-Trees plantation site and ensures that pit digging, excavating trenches, and filling polybags are carried out smoothly. She believes planting trees can help her secure a safe and healthy future for her family. Roji says that the trees will not only improve the environment of the region but also support her many years later with fruits, vegetables, and other forest products.



Samiksha Thapli

Samiksha Thapli is from Kyarkuli village in Uttarkashi. She is 26 years old and her family consists of 5 members, including 2 children. Samiksha works at the plantation site, part of Grow-Trees' project 'Trees for Ecotourism'. She says that working at the planting site has instilled a sense of independence in her as she can now contribute to providing for her family.



Trees for Hanguls, Dachigam National Park, Kashmir, India Plantation of 50,000 Trees

Project Summary:

The Hangul (*Cervus elaphus hanglu*), also known as Kashmiri Red Deer or Kashmir Stag is a critically endangered subspecies of Red Deer, endemic to Kashmir and surrounding areas. The IUCN categorized Hanguls as "Critically Endangered" in its assessment dated December 1, 2016, described its population trend as "decreasing". Hangul, the official state animal of Jammu and Kashmir has been the subject of much interest over centuries. It is acknowledged that human activity, including grazing, man-animal conflict, poaching, and illicit wildlife trafficking, is a key factor in the catastrophic decline in the hangul population. The plantation of 50,000 was implemented in the periphery of Dachigam National Park, Kashmir on Forest Department land. Trees play a significant role in the hangul's diet, it is believed that the hangul derives its name from 'Han Dun' which is the local name for the horse chestnut tree, the fruit of which the deer feeds. The plantation of 50000 trees is a straightforward and effective approach to provide shade, food, reduce air temperatures, and aid Hangul's overall health.

Introduction:

The plantation of 50,000 trees was carried out in monsoon 2022 in the periphery of Dachigam National Park, Kashmir on Forest Department Land. The plantation of trees in the region aims to rehabilitate the lost forests of Dachigam National Park. It is anticipated that an increase in the green area will help the disappearing wildlife. Through this project, the villagers were sensitized about the plight and utility of the Hanguls along with various conservative methods and sustainability principles, as a result they became more conscious and aware of the importance of protecting the forest. The plantation of native tree species will also provide the local communities with alternative modes of forest-based livelihood opportunities to prevent them from continuing the unsustainable practice of poaching. The trees also aim to help in alleviating soil erosion, augmenting surface water and recharging groundwater, improve the quality and quantity of groundwater, mitigating natural disasters and sequestering atmospheric carbon. The plantation region. The workdays thus generated contributes towards their household incomes. Once matured, the trees will act as a natural asset and will be able to absorb an average of 10,00,000 KGs of CO₂ per year. This would improve the micro climatic conditions in that region and would potentially offset the rising pollution.

Key Activities:

- Training and Sensitization of rural communities
- Land Preparation
- Nursery Development
- Saplings transportation to plantation site
- Sapling Plantation
- Maintenance for 1 year

Activity Calendar:

| Milestones & Key activities | Jan-Mar | April-June | July-Sept | Oct-Dec | Jan-Mar | Post Year 1 |
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| Community Sensitization | | | | | | |
| 3rd party Audit | | | | | | |
| Replanting of saplings that did not survive 1st year | | | | | | |



<u>Plantation Activities</u>:

At initial stages of the plantation project, a feasibility study was conducted to inspect the area for suitability of plantation, resources available to support the plantation, permissions, and the beneficiaries from the project. Community support is of utmost importance, thus necessary permissions were taken from Gram panchayat or forest department in order to proceed with plantation activities. The plantation is carried out with the help of the local villagers around the area where they contribute by working as a labourer in various plantation activities. The plantation activities include nursery development, transportation of saplings, pit digging, plantation and maintenance of the sapling. The saplings were nurtured in the nurseries, meanwhile plantation area was prepared for the plantation and further maintenance. The saplings were transported at planting sites and were planted in monsoon season. The selected tree saplings were native species which will create a natural habitat over a period of time and can be beneficial for the ecosystem as well as community in near future. Saplings were further maintained by local villagers by regular watering, cutting grass and weeds that grows around to ensure saplings' survival.

Direct Beneficiaries:

The plantation drive was able to generate more than ~4000 work days for the rural and tribal community of Dachigam National Park. The workdays thus generated allows them to contribute towards their incomes.

Indirect Beneficiaries:

Indirect beneficiaries are the villagers and wildlife who benefit from the trees in the longer run through NTFPs (Non-Timber Forest Produce). Our team of environment experts take a thorough look into the species of the trees to ensure that the tree provide shelter and food to the wildlife that are found in the region.

Once the trees mature, the plantations will help to secure the livelihood of the local community with forest assets and can potentially mitigate climate disasters in this region such as flooding, landslides and soil erosion. The plantation upon maturing can absorb an average of \sim 10,00,000kgs of Carbon dioxide from the atmosphere, improve the soil quality of the region and provide the villagers with Non-Timber Forests produce.

Sustainable Development Goals (SDGs) related to the project:





Tree Species Bifurcation:

| Tree Species | Botanical Name |
|----------------|------------------------|
| Cypress | Cupressus spp |
| Deodar Cedar | Cedrus deodara |
| Kail | Pinus wallichiana |
| Apple | Malus pumila/domestica |
| Pear | Pyrus communis L. |
| Apricot | Prunus armeniaca |
| Quince | Cydonia oblonga |
| Horse Chestnut | Aesculus hippocastanum |
| Peach | Prunus persica |
| Kainth | Pyrus pyrifolia |
| Plum | Prunus domestica |
| Total Saplings | 50,000 |

Project Location Map:





Photos:

Plantation Site



Nursery





Pit Digging Activity



Plantation Activity







Saplings after being planted





Testimonials:



Liyaqat Ali

Liyaqat Ali is from the Bardalla village in Kashmir. He is 25 years old and his family comprises 5 members. He is involved in rearing livestock which doesn't fetch him an adequate income to support his sustenance. Reyaz mentions that before being employed at the Grow-Trees plantation site, he had to travel long distances in search of work. With the project being introduced near his village, he is able to go to work and stay close to his family. The plantation also helps him supplement his income as he is involved in all the activities required to bring the project to fruition.



Saki Jahara

Saki Jahara is from Bardalla village in Kashmir. He is 32 years old and has 7 members in his family. Like most of the locals in the region, rearing livestock is a major part of his occupation. Saki lives at high altitudes and had to travel to the main city to find work that would help him support his family. Saki says that Grow-Trees' plantation project has saved him from this. He is now able to work close to his home and supplement his income by participating in plantation activities.



Trees for Ecotourism, Dzuluk, Sikkim, India Plantation of 50000 Trees

Project Summary:

The Pangolakha Wildlife Sanctuary is a prime wildlife habitat, including the state animal of Sikkim, the Red Panda. Many animals, such as Himalayan Black Bears, can be seen along the border, destroying the habitants' crops. The increase in human-wildlife conflict is exactly proportional to decreased fruiting species within the forest. Therefore, plantation of selected trees will act as a bio-fence, limiting animal movement outside of the forest, preventing crop destruction in farmlands and protecting the local economy. The Rachela trekking route is located within its periphery. Visitors' interest in bird-watching, nature walks, and nature photography is growing, so improving forest health will have a significant impact on promoting alternative tourism and improving local livelihood, which is a win-win situation in terms of socioeconomic, environmental, and cultural factors. The plantation of flowering species adds overall aesthetic appearance both to the visitors and the locals in the region.

Introduction:

The plantation of 50,000 trees was carried out in monsoon 2022 at the fringes of Pangolakha Wildlife Sanctuary in Phadamchen, Dzuluk and Lungthung-Ganek villages of Regu and Gnathang Block, Zuluk, East Sikkim. The plantation facilitates the conversion of degraded land into primary forests with indigenous tree plantation. It attempts to the preservation of the area's forest green cover and aids in conservation efforts. The plantation helps to protect wildlife habitat in order to promote conservation. It also helps to stabilise the local agro-economy by ensuring the safety of farmers' agricultural produce. Apiculture is an alternative livelihood practiced by the inhabitants residing in the plantation area. Bees will pollinate those flowers, resulting in higher honey production. As a result, planting more of local floral plants, promotes beekeeping, which allows people to increase their revenue as an alternative livelihood option. The plantation drive was able to generate more than ~4000 work days for the rural and tribal community of Dzaluk, East Sikkim. Indigenous communities are the ones that know their forests the best and that's why they are encouraged to get involved in plantation activities starting from the pit digging process to their maintenance of trees. Once matured, the trees will act as a natural asset and will be able to absorb an average of 10,00,000 KGs of CO2 per year. This would improve the micro climatic conditions in that region and would potentially offset the rising pollution.

Key Activities:

- Training and Sensitization of rural communities
- Land Preparation
- Nursery Development
- Saplings transportation to plantation site
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- Maintenance for 1 year

Activity Calendar:

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| 3rd party Audit | | | | | | |
| Replanting of saplings that did not survive 1st year | | | | | | |



Plantation Activities:

At initial stages of the plantation project, a feasibility study was conducted to inspect the area for suitability of plantation, resources available to support the plantation, permissions, and the beneficiaries from the project. Community support is of utmost importance, thus necessary permissions were taken from Gram panchayat or forest department in order to proceed with plantation activities. The plantation is carried out with the help of the local villagers around the area where they contribute by working as a labourer in various plantation activities. The plantation activities include nursery development, transportation of saplings, pit digging, plantation and maintenance of the sapling. The saplings were nurtured in the nurseries, meanwhile plantation area was prepared for the plantation and further maintenance. The saplings were transported at planting sites and were planted in monsoon season. The selected tree saplings were native species which will create a natural habitat over a period of time and can be beneficial for the ecosystem as well as community in near future. Saplings were further maintained by local villagers by regular watering, cutting grass and weeds that grows around to ensure saplings' survival.

Direct Beneficiaries:

The plantation drive was able to generate more than \sim 4000 work days for the rural community of Pangolakha Wildlife Sanctuary of which close to \sim 50% beneficiaries were women. The workdays thus generated allows these women to contribute towards their household incomes and works towards empowering the women who benefit from the work.

Indirect Beneficiaries:

Indirect beneficiaries are the villagers and wildlife who benefit from the trees in the longer run through NTFPs (Non-Timber Forest Produce). Our team of environment experts take a thorough look into the species of the trees to ensure that the tree provide shelter and food to the wildlife that are found in the region.

The plantation in the 3 villages (Phadamchen, Dzuluk and Lungthung-Ganek) caters to more than ~ 200 households. When the trees are mature, these plantations will help to secure the livelihood of the local community with forest assets and can potentially mitigate climate disasters in this region such as flooding, landslides and soil erosion. The plantation upon maturing can absorb an average of $\sim 10,00,000$ kgs of Carbon dioxide from the atmosphere, improve the soil quality of the region and provide the villagers with Non-Timber Forests produce.

Sustainable Development Goals (SDGs) related to the project:





Tree Species Bifurcation:

| Tree Species | Botanical Name |
|----------------|-------------------------|
| Katus | Castanopsis tribuloides |
| Guras | Rhododendron arboreum |
| Nebara | Ficus hookeri |
| Lal Chimal | Rhododendron barbatum |
| Rani Chaap | Michelia excelsa |
| Tengre salla | Picea smuthiana |
| Phurse Chaap | Michelia lanuginosa |
| Kapasay | Acer campbellii |
| Arupatey | Prunus nepaulensis |
| Gobre Salla | Abies webbiana |
| Kharaney | Symplocos theifolia |
| Malingo | Himalayacalamus asper |
| Gagun | Saurauia nepalensis |
| Asarey | Viburnum cordifolium |
| Phamphal | Persa americana |
| Total Saplings | 50,000 |

Project Location Map:





Photos:

Nursery



Pit Digging Activity





Transportation Activity



Plantation Activity







Saplings after being planted





Testimonials:



Dalman Gurung:

Lingtam, a small village in Sikkim. He is 42 years old and has 4 members in his family. He is a farmer and a forest conservator who is determined to create awareness among people about the preservation of wildlife and trees. Dalman says that these plantation projects have created workdays for them for many years now and they continue to work on the planting sites efficiently. He went on to say that the project made everyone responsible for maintaining a clean and green environment. He is grateful to Grow-Trees for this opportunity as the project not only helped people earn money but also provided shelter for many animals and birds and improved other ecosystem services.

A sincere, simple, and kind-hearted man, is from



Doma Sherpa:

Doma Sherpa hails from a low-income family and lives in the village of Phadamchen. She separated from her spouse and has been living alone ever since. She works as a farmer and a member of the General Reserve Engineer Force (GREF). She took part in the Grow-Trees plantation project, helping with the planting, excavating the trench and filling the polybags. She compared the advantages of working on a plantation to those of going to a shrine. Doma thinks that by doing this, she is doing a good act. According to her, giving food and fruit from trees to animals is the same as making an offering to a deity. She says that Grow-Trees has provided women with brilliant opportunities so they can support their families. She hopes the saplings flourish and wishes Grow-Trees continued prosperity.



Jangbu Sherpa:

Jangbu Sherpa is a very hard-working man. He is 53 years old and his family consists of 4 people. He is a farmer and raises livestock at his house. Jangbu was able to pay for his child's college expenses because of the additional work he acquired from Grow-Trees. The trees provide fodder for his livestock. He claims that the plantation program also helps to avoid human-animal conflict. Along with making some money, the project taught him a lot about environmental protection and how trees affect our lives. Being from a BPL family, he is appreciative of the opportunity given to him by Grow-Trees. On behalf of the entire community, he thanks Grow-Trees and expects to get more such projects in the future



Prepared by Grow-Trees.com

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