

# EVEREST ECOSYSTEMS RESTORATION

SAGARMATHA  
NATIONAL  
PARK AND BUFFER  
ZONE,  
SOLUKHUMBU,  
NEPAL

REPORT SUBMITTED TO  
ONE TREE PLANTED  
JULY 2024

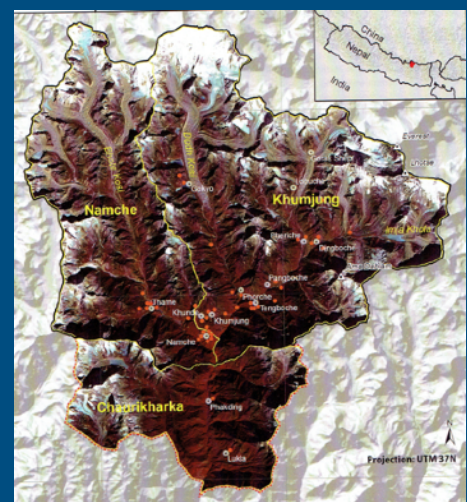


## 1. INTRODUCTION

The Partners Nepal (TPN) presents ONE TREE PLANTED with a status report on the "2023-2024 Mount Everest Community Restoration" project in Sagarmatha National Park and Buffer Zone. This report spans from June 22 to July 10, 2024. The report focuses on the achievements of the ONE DAY ONE TREE initiative in the Solukhumbu region. This project aims to protect and preserve the fragile alpine ecosystems in the Khumbu section of the Sagarmatha National Park Buffer Zone, situated at elevations between 3800 and 3900 meters above sea level. This effort aims to tackle problems like overgrazing, the extraction of fuel wood, logging, and fodder collecting, as well as the effects of trekking, mountaineering, and adventure tourism in the remote alpine regions of Solukhumbu. Planting trees can enhance biodiversity, carbon sequestration, and ecosystem services for humans and wildlife.

## 2. PROJECT LOCATION

An effort to conserve and reforest the villages of Pangboche, Phortse, Khumjung, and Khunde in the Solukhumbu district of Khumbu Pasanglhamu Rural Municipality-4 is being supported by The Partners Nepal, with funding support from ONE TREE PLANTED. The Sagarmatha National Park and Buffer Zone, including the plantation area, was officially inscribed as a World Heritage Site in 1979. This designation aims to protect the park's valuable natural and cultural resources, specifically preserving the fragile alpine ecosystems. This region, characterized by elevations ranging from 3870 to 3900 meters, is a top-notch destination for hiking in the Everest Region. The park encompasses the settlements of the Sherpa community in the Khumbu region, renowned for its exquisite natural scenery and breathtaking scenery. By 2020-2021, the Sherpa community is expected to comprise approximately 2000 households and a population of 4-5 thousand individuals.



### 3. THE PROBLEM

The fragile alpine ecosystems of Sagarmatha National Park and the local population's reliance on natural resources highlight the impact of climate change. The park, renowned for its cultural and environmental importance, has suffered from deforestation, farming, and excessive grazing. Climate change intensifies these issues, with rising temperatures causing glacier melt, disrupting freshwater supplies, and increasing erosion and dehydration. Temperature variations significantly affect the alpine ecosystems and Sherpa communities, who rely on tourism, agriculture, and cattle. To protect these communities and the ecosystems of Sagarmatha National Park, we must prioritize ecotourism, reforestation, and enhanced land management to mitigate climate change impacts.



## 4. OUR APPROACH

The goal of this project is to save and rehabilitate the delicate alpine ecosystems of Sagarmatha National Park and the Buffer Zone in eastern Nepal, with the active involvement of the local community. In two nurseries, Khumbu inhabitants cultivate juniper, fir, birch, and rhododendron trees. Planting indigenous trees in the park is mandatory, as the introduction of non-native seeds is not allowed. Reforestation efforts will be undertaken in areas where significant deforestation has occurred as a result of excessive grazing, tree felling for fuel, construction activities, and various other contributing factors.

One Tree Planted has provided financing for a forestry project in Sagarmatha National Park. This project aims to restore forests by planting trees on an area of around 10 acres. This campaign promotes the regular planting of trees by individuals, schools, and communities. This will aid in reestablishing the canopy, ecosystems, and biodiversity. Furthermore, it will provide advantages to the neighboring villages. In the long run, the trees will also enable and educate women on how to generate income.

Tree planted in 2023	7,500
Tree species x	4
Families benefited	310
Wildlife Species Benefited	30
Hectare restored	10
Job supported	310
Women involved	95
People benefited from training	310
Species Planted:	juniper, fir, birch, and rhododendron trees

## 5. REFORESTATION IN KHUNDE

As per our agreement with One Tree Planted, we have pledged to plant 15,000 indigenous seedlings in 2023 and 2024. In 2023, 7,500 saplings were planted in the Khunde and Khumjung villages of Khumbu Pasanglhamu Rural Municipality-4, Solukhumbu District, which are located inside Sagarmatha National Park and Buffer Zone.

In 2024, 6,000 native trees were successfully planted in Khunde and Pangboche. According to our agreement, our task was to plant 3,000 native trees in Phortse Hamlet, located at 3,900 meters. Upon reevaluating the site, we discovered it was excessively crowded to hold 3,000 seedlings. Consequently, we have decided to plant 3,000 trees in the Khunde area, where land is available, and another 3,000 trees in Pangboche. Thirteen thousand five hundred trees have been planted across 10 acres of the three primary villages. We experienced a shortfall of 1,500 plants. However, we have set aside this remaining amount to ensure the ongoing supervision, irrigation, and administration of the plantation areas in Khunde, Khumjung, and Pangboche.

Men and women from Pangboche and Khunde were hired to dig holes, transport seedlings, collect fertilizers, and plant trees in the designated plots. The saplings were sourced from Thame and Pangboche. These placements were chosen for conservation and restoration due to deforestation caused by overgrazing and the local use of fuelwood for cooking, heating, and construction.



Plantations in Khunde in 2023





Plantations in Khunde in 2024

## 6. REFORESTATION IN PANGBOCHE

With the full support of the chief monk of Pangboche Monastery, we have selected the areas next to our reforestation site in Pangboche. Both the local and senior monks of the monastery have strongly advised us to consider planting trees near the hermitage site. The local community has identified two locations, the head lama and the buffer zone users group for reforestation. These locations can accommodate 4000 seedlings. The location for reforestation was chosen or assigned according to the KLM method.

The initiative was initiated in response to the successful forestry program in Pangboche, which has been running since 2016 under the approval of the deceased Lama Geshe. The local community, lamas, and Rimpoche were greatly impressed by our program's remarkable achievements. Hence, offering additional suggestions to improve the program in Pangboche is imperative.





## 7. TRAINING BY FOREST EXPERT

The Partners Nepal's executive secretary and forest expert trained the local community, buffer zone users group, and other tree planters. Deforested or degraded Khumbu lands benefit from tree planting. Locals must be trained to plant trees. Instructions for training: Find climate- and soil-suited native trees. Think



about how trees can restore ecosystems. Consider sunlight, soil, and water before planting. Trees reduce erosion, boost biodiversity, and shelter wildlife—respect environmental and local laws by obtaining landowner licenses before planting trees. Make a tree-root-sized hole. The tree's root collar should align with the ground within the hole. Backfill the hole with the earth to eliminate root air pockets. Surround the new tree with soil. Water the tree regularly after planting and throughout its life. To keep trees healthy, inform residents about tree maintenance. Following these methods, locals can plant trees and help restore the Khumbu environment. Tree planting improves biodiversity, carbon sequestration, and ecosystem services for humans and wildlife.

## 8. NURSERY ESTABLISHMENT IN KHUMJUNG



In Khumjung, The Partners Nepal and the Buffer Zone Users Committee established a new nursery at 3,750 meters, crucial for forest health. Funded by Peak Aid Japan in April 2023, the nursery specializes in cultivating and distributing premium native seeds to regenerate degraded regions, supporting sustainable land management and combating climate change.

The nursery aims to lower CO<sub>2</sub> levels by growing plants, shrubs, and trees in designated beds, thereby reducing greenhouse gas emissions. These nursery beds promote wildlife habitats, prevent soil erosion, retain moisture, and improve air quality. They are also used for reforestation and restoration projects to prevent deforestation, revitalize degraded areas, and mitigate human-induced environmental impacts. Through sustainable land management, carbon capture and storage, and ecosystem health, the nursery contributes to reducing global warming and climate change.



NURSERY PROGRESS IN KHUMJUNG 2023-2024

## **9. THE BENEFITS OF TREE PLANTATION FOR COMMUNITIES**

Tree planting has a positive environmental impact and significant economic benefits for local communities. These initiatives benefit both the environment and the people. After the trekking season, locals will be hired for seed collection, acquiring fertilizer, digging holes, and planting trees. The project brings together Sherpa communities, tourists, governmental organizations, donors, and institutions to protect alpine ecosystems. Locals can help protect their forests by spreading the word about forest conservation.

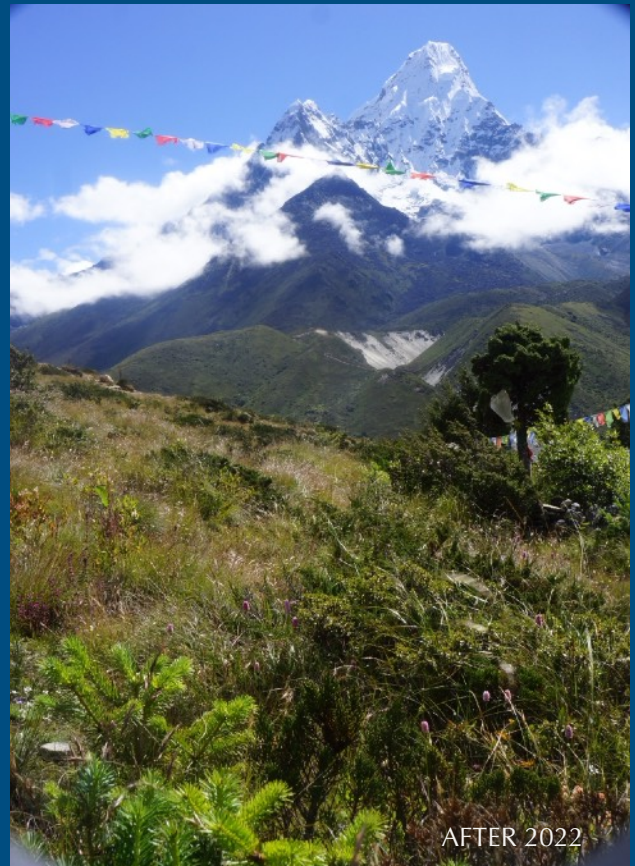
Trees protect holy sites such as monasteries, hermitages, caves, and groves while conserving water. The benefits of reforestation include:

- The "One Day, One Tree" native tree planting program will hasten the restoration and rehabilitation of alpine forests in isolated high-altitude villages.
- By sequestering carbon, the plantation program will help reduce global warming and climate change.
- Many organizations, groups, individuals (including international donors), government organizations (including Sagarmatha National Park and the Buffer Zone), and locals will collaborate to restore and sustain alpine ecosystems.

## **10. PROJECT IMPACTS**

The tree-planting initiative demonstrates the harmonious integration of scientific knowledge and spiritual beliefs in preserving the environment and cultural values. Reforesting areas heavily deforested helps protect and restore ecosystems, offering multiple benefits. This initiative actively involves local community members in planting and nurturing trees to safeguard vulnerable alpine and subalpine forests. Planting trees provides numerous advantages, including fostering biodiversity and community benefits. Additionally, it contributes to mitigating climate change and addressing global warming.

The One Day One Tree program is gaining prominence in the region's efforts to conserve and restore delicate alpine ecosystems. This initiative skillfully integrates natural and cultural elements to enhance environmental well-being while respecting cultural and spiritual principles. The Sherpa community actively engages in reforestation and forest conservation initiatives in vulnerable alpine and subalpine regions.



Plantation in Pangboche 3900meters before and after



Plantation in Khunde 3840 meters before and after

## 11. EXPENSE DETAILS 2024 TREE PLANTATION IN KHUNDE AND PANGBOCHE

As per our 2022 agreement with ONE TREE PLANTED, we have planned a project that will last two years, ending in July 2024. The expenses associated with the 2024 plantation in Khunde and Pangboche include the purchase of seeds, transportation of the young plants to the reforestation sites, digging of holes, acquisition of Gabion wires, angle poles, and wires for enclosures, procurement of fertilizers, costs related to religious offerings such as tea and biscuits, transportation of Gabion wires and angle poles to Pangboche, and their subsequent shipment to Khumbu and Solukhumbu. Expenses were incurred when managing and interacting with local and buffer zone user groups throughout the current project. The following graphic presents a summary of the expenditures for the year 2024. Due to adverse weather conditions, the area's budget has exceeded its limit by \$1,069.

## 12. PLANTATION EXPENSE DETAILS

SN	PURPOSE	QUANTIT Y	RATE	AMOUNT IN NRS	AMOUNT IN USD
1	SEEDLING	6000	50	300000	2273
2	TRANSPORTATION	16	2500	40000	303
3	PIT DIGGING	45	1500	67500	511
4	FERTILISER	120	400	48000	364
5	PLANTATION	40	1500	60000	455
6	SUPERVISOR COST	10	2000	20000	152
7	GABION WIRES, ANGLE POLES, WIRES AND SHIPPING			125000	947
8	NURSERY SUPPORT IN KHUMJUNG			50000	379
9	CONTINGENTS (TOOLS, BANNER, SHIPPING)			20000	152
10	SOCIAL WELFARE COUNCIL			55000	417
11	FIELD MONITORING BY TPN STAFF			150000	1136
12	CAPS, T-SHIRTS, SHIPPING TO KHUMBU			125000	947
13	CONTINGENTS			50000	379
14	<b>TOTAL</b>			<b>1110500</b>	<b>8413</b>
15	<b>TPN ADMIN COST 10%</b>			<b>111050</b>	<b>841</b>
	<b>GRAND TOTAL</b>			<b>1221550</b>	<b>9469</b>

## EXCHANGE RATE 1X132

### **13. CONCLUSION**

The success of TPN's program may be attributed to the partner organizations' enthusiasm, teamwork, and skill in maintaining and rebuilding fragile alpine ecosystems in Sagarmatha National Park for almost two decades. TPN members have extensive expertise in Nepal's forestry initiatives and the establishment of forests over an extended period. Pangboh Forestry received assistance from senior lamas, monks, Indigenous people, and others.

The Sagarmatha National Park and Buffer Zone Users Committee played a crucial role in safeguarding and rejuvenating the fragile alpine ecosystems of Solukhumbu. The success of the Pangboche and Phortse project hinged upon the reliance on Min Bahadur. He meticulously cared for all those juvenile plants to guarantee their successful placement in our Pangboche planting areas. Donor agencies such as Peak Aid Japan are crucial in protecting the fragile alpine ecosystems. The TPN provided funding for the initiative while local communities implemented it.

The TPN served as an intermediary between donor agencies and implementing partners, easing the management of financial resources and documentation. We promote the collaboration of community and mother's groups. This partnership would decrease expenses, enhance the effectiveness and longevity of the programme, and enhance the local community's ability to protect and revive the natural resources of Sagarmatha National Park and its Buffer Zone.

### **14. APPRECIATION**

Dear friend,

With your support, we have effectively nurtured 15,000 native trees from 2023 to 2024 in three prominent settlements in Sagarmatha National Park and its Buffer Zone. This effort aims to preserve and restore the fragile alpine ecosystems in eastern Nepal. As a result of the national park's existence, only native trees can be planted in the area. Trees have been planted in areas with significant deforestation or depletion due to overgrazing, the felling of forests for fuel wood, and the construction of structures, among other factors.

Planting trees has a favorable impact on the environment by speeding up and ensuring the growth of strong and flourishing forests. This forestry initiative aims to enhance the regeneration of the uppermost layer of trees, the overall ecological systems, and the thriving of diverse life forms. It promotes the daily planting of trees by individuals, schools, and communities, aiding in environmental preservation. With your help, this can be accomplished!

ANG RITA SHERPA  
CHAIRMAN  
THE PARTNERS NEPAL

"GROW HOPE, PLANT TREES: REFORESTING  
FOR A GREENER TOMORROW."

PLEASE HELP US PLANT MORE TREES!



MANAGED BY



KHUNDE VILLAGE 3840  
JUNE 2024



“Planting trees in Nepal's Sagarmatha National Park and Buffer Zone in Province -1 of Solukhumbu District would aid in safeguarding and revitalizing the fragile alpine ecology. As these trees reach maturity, they play a vital role in reestablishing critical habitats for species that are in danger of becoming extinct. They also protect the watersheds that provide drinking water to millions of people, cleanse harmful pollutants, and absorb and store CO2 in their biomass and soil. Trees enhance biodiversity conservation by providing habitats for several wildlife species. The tree-planting initiative has empowered individuals and communities to actively participate in creating a more ecologically sustainable and healthier habitat”.

**Ang Rita Sherpa**  
**Project Manager**  
**Sagarmatha National Park in Nepal**



**The Partners Nepal**

**P.O. Box 7851**

**Solukhumbu, Province-1, NEPAL**

**PHONE: 038520058**

**WWW.THEPARTNERSNEPAL**

**PAN NO: 602789196**

TEXT AND CONCEPT:  
ANG RITA SHERPA  
(THE PARTNERS NEPAL)  
PHOTOS: ANG RITA SHERPA  
& BHEEM RAJ RAI, MIN  
BAHADUR RAI

