



Volcano Valley Reforestation.

Planting Report 2021



*Plant-for-the-Planet supports the
United Nations Environment Programme*

Introduction

The trees made possible by the cocoa farmers producing Die Gute Schokolade are planted by farmers in the origin of cacao.

Reforestation and restoration efforts need to involve, support and benefit local communities in order to be effective in the long-term. Projects need to take into account the local necessities and interests to increase the likelihood of success. An integral approach needs to consider not only the biological, but also the social and economical impacts in the community. By involving landowners in the planning and implementation processes and by ensuring economical benefits we can increase the engagement with the project while contributing to social welfare, which can contribute to long-term conservation of the restored areas.

Taking this into consideration we have searched for a restoration partner with which to implement such a reforestation model, in particular to plant the trees funded by Die Gute Schokolade and Die Gute Bio Schokolade. Plant-for-the-Planet was delighted to discover the preexisting work and extensive experience of The Protectora de Bosques del Estado de México (PROBOSQUE).

PROBOSQUE is a governmental organization established in 1990 in charge of reforesting and improving the conservation and protection status of the forest resources of The State of Mexico (Edomex). The State of Mexico has 22,487.67 km² in size and 48 % of its territory is covered

by pine, oak and fir forests. Nonetheless, being the most populated entity in the country¹, the exploitation of these forests has been extensive due to illegal logging, excessive use of firewood and charcoal, intensive cattle grazing and agricultural activities, creation of roads and highways as well as an accelerated population growth have contributed to the degradation and reduction of this forests (PROBOSQUE, 2021).

The objective of PROBOSQUE is to develop a sustainable forestry management. To achieve so, they implement diverse programs, including "Payments for Environmental Services", "Sustainable Forestry Management", "Reforesting Edomex", among others. In particular, Reforesting Edomex is a program focused on conserving forests and soil by providing funding, trees and technical assistance to farmers with forestry land to conserve and recover the forest of Edomex. Plant-for-the-Planet collaborates with PROBOSQUE since 2019 to develop strategies and actions to improve the quality of life of the inhabitants of Edomex and ensure the sustainable development of forests and the conservation of biodiversity and environmental services. As a result of our collaboration, by 2020 a total of 4.3 million trees have been planted on 4,997.23 hectares in different regions of the Toluca Valley. These plants belong to 23 different species including pines, cypresses and mesquite plants.



Tree planting activities

In 2021, we continued our existent collaboration with PROBOSQUE and planted 5,000,000 trees on 4811.53 hectares, adding up to a total of 9.3 million new trees in the State of Mexico. This year the trees were planted in 8 different regions and around 50 municipalities of the state (Figure 1a). These municipalities are located in the Transvolcanic Belt (Figure 1b) in which the dominating ecosystems are conifer forests.

During the planting activities of 2021, the project benefited more than 300 properties. The participation was open to a range of actors, including individual farmers with private properties, civil organizations (NGOs) and farmers in traditional community organizations called Ejidos (communal property). (Figure 2). 663,180 trees were planted

by 53 Ejido farmer communities. A further 4,304,385 trees were planted by around 400 individual farmers and the planting of the final 32,435 trees was conducted with an NGO partner. Most of these farmers had land with a certain degree of degradation, however, the intensity of degradation varied widely.

The samplings used for these activities belong to 53 species and 17 plant families. It is important to note that the species planted in each site were selected depending on the specific site characteristics and necessities of the area, not all species being used in each site. The technical team of PROBOSQUE visited and evaluated the areas to select the approach and species to utilize every time. All samplings were grown under controlled conditions in the PROBOSQUE nurseries and were provided to each one of the participants.

All tree planting sites are mapped and are being made available at www1.plant-for-the-planet.org/toluca (see site tab in the top right to navigate between project sites). The exact number of trees per species is documented for each site.



Table 1: Families and species planted in 2021 in the Toluca Valley Reforestation program.

Family	Species
Pinaceae	<i>Abies religiosa</i>
Fabaceae	<i>Acacia baileyana</i>
Fabaceae	<i>Acacia guatemalensis</i>
Fabaceae	<i>Acacia melanoxylon</i>
Fabaceae	<i>Acacia retinodes</i>
Betulaceae	<i>Alnus firmifolia</i>
Meliaceae	<i>Azadirachta indica</i>
Fabaceae	<i>Bauhinia variegata</i>
Myrtaceae	<i>Callistemon citrinus</i>
Casuarinaceae	<i>Casuarina equisetifolia</i>
Meliaceae	<i>Cedrela odorata</i>
Cupressaceae	<i>Chamaecyparis sp.</i>
Rosaceae	<i>Crataegus mexicana</i>
Cupressaceae	<i>Cupressus lusitanica</i>
Fabaceae	<i>Delonix regia</i>
Verbenaceae	<i>Duranta erecta</i>
Fabaceae	<i>Enterolobium cyclocarpum</i>
Rosaceae	<i>Eriobotrya japonica</i>
Fabaceae	<i>Erythrina americana</i>
Myrtaceae	<i>Eucalyptus cinerea</i>
Oleaceae	<i>Fraxinus uhdei</i>
Lamiaceae	<i>Gmelina arborea</i>
Bignoniaceae	<i>Jacaranda mimosifolia</i>
Euphorbiaceae	<i>Jatropha curcas</i>
Fabaceae	<i>Leucaena leucocephala</i>
Oleaceae	<i>Ligustrum japonicum</i>
Altingiaceae	<i>Liquidambar styraciflua</i>
Rosaceae	<i>Malus domestica</i>
Fabaceae	<i>Mimosa guatemalensis</i>
Moringaceae	<i>Moringa oleifera</i>
Pinaceae	<i>Pinus ayacahuite</i>
Pinaceae	<i>Pinus cembroides</i>
Pinaceae	<i>Pinus greggii</i>
Pinaceae	<i>Pinus hartwegii</i>
Pinaceae	<i>Pinus leiophylla</i>
Pinaceae	<i>Pinus maximartinezii</i>
Pinaceae	<i>Pinus montezumae</i>
Pinaceae	<i>Pinus oocarpa</i>
Pinaceae	<i>Pinus patula</i>
Pinaceae	<i>Pinus pseudostrobus</i>
Pinaceae	<i>Pinus rudis</i>
Pinaceae	<i>Pinus teocote</i>
Fabaceae	<i>Prosopis sp.</i>
Rosaceae	<i>Prunus capuli</i>
Rosaceae	<i>Prunus persica</i>
Pinaceae	<i>Pseudotsuga menziesii</i>
Fagaceae	<i>Quercus laurina</i>
Fagaceae	<i>Quercus sp.</i>
Salicaceae	<i>Salix babylonica</i>
Fabaceae	<i>Senna multiglandulosa</i>
Meliaceae	<i>Swietenia humilis</i>
Cupressaceae	<i>Taxodium mucronatum</i>
Fabaceae	<i>Tipuana sp.</i>

Total: 53 Species

Voices of people involved in the program

Carlos Santana - beneficiary

"It gives me great satisfaction to see a project like this having results. For our kids is really important because this is the future and their survival"
 "Thanks to these beautiful plants, and to the people in Germany who support us by buying chocolate, we can fight against climate change. Thanks so much!"

Mario González - PROBOSQUE

"Plant-for-the-Planet and PROBOSQUE collaborate to work in benefit of the Mexican forests. We have helped more than 2000 communities in the state and, with that, help to improve the social welfare of the people"

Azucena Téllez - Beneficiary

[These supports] "Are really good, because we and our work is being valued and taken into account. There are already women saying: we, women, will continue fighting so that our forests continue to develop"

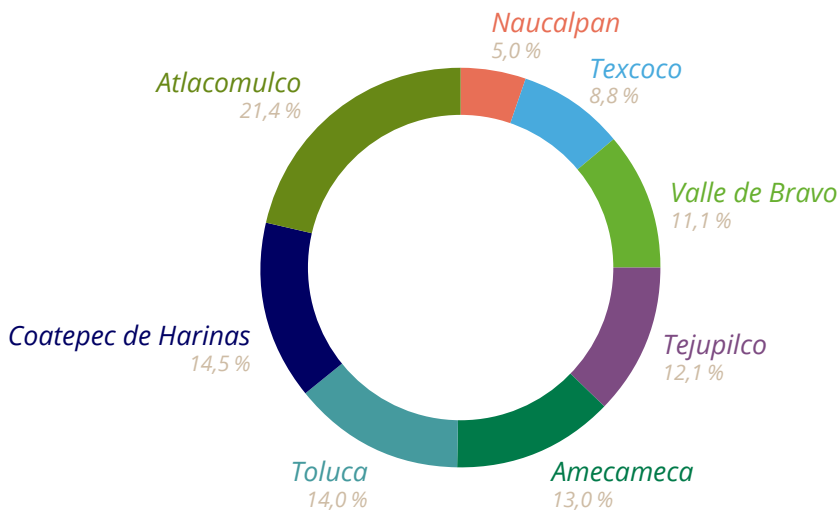


Figure 1: Percentage of trees planted in each different region of the state of Mexico. The total number of trees planted in 2021 was 5,000,000.

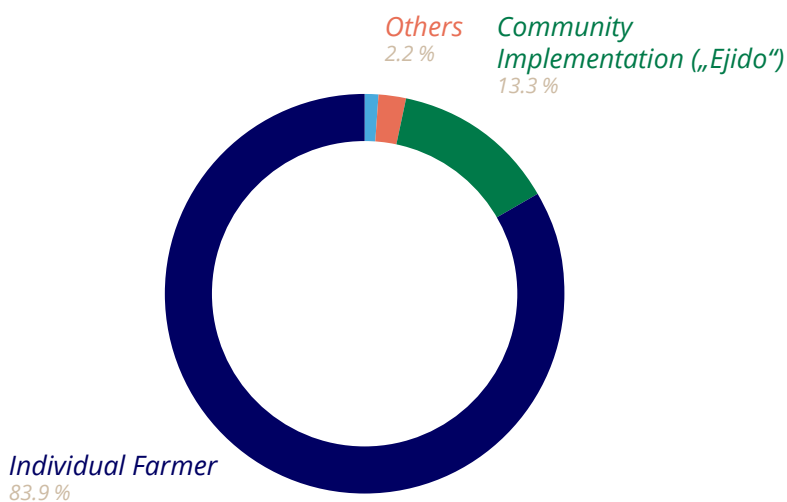


Figure 2: Percentage of trees planted per community type. NGO refers to farmers that belong to a small civil-society organization. Community Implementation refers to farmers who participated jointly within their traditional Ejido communities, planting on their joint land. And other ones are farmers that did not disclose the type of organization they belong to.

References

1.) SEDECO. 2021. Principales Resultados del Censo Población y Vivienda 2020.

<https://www.sedeco.cdmx.gob.mx/storage/app/media/uploaded-files/resultados-del-censo-pob-y-viv-2020-1.pdf>



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