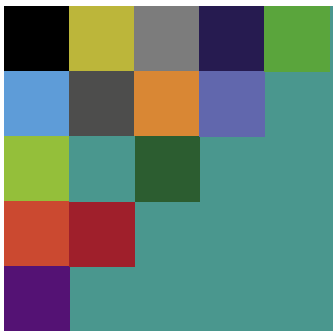




Three Decades of Restoration and Ecosystem Management: Environmental and Social Impacts of The Pink Floyd Forest.

Report prepared for Dan Morell, in recognition of his contribution to the Scolel 'te program

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Plot restored in 2005. Ejido Tziscão, La Trinitaria, Chiapas.



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1. Executive Summary

This document highlights the main environmental and social impacts of the Scoler'te program, after nearly three decades its founding and its collaboration with various stakeholders who have supported the development of activities aimed at recovering deforested areas. These actions, implemented through processes of establishment, monitoring, and follow-up plots, have allowed the reintegration of these areas into diversified forest systems, generating benefits for the families involved and contributing to the strengthening of local biodiversity

In this context, and thanks to the support provided for Dan Morell from 2000 to 2005, helped **restore 120 hectares** and to give management to **800 hectares of tropical forests**, achievement in which **18 communities** have actively participated.

Among the main environmental and social impacts achieved, stands out: increased forest cover in community territories, protection of water sources, conservation of local biodiversity, and the strengthening of the capacities and economic conditions of the farming families, through training and technical and production support. Likewise, the active participation of both women and men in restoration and management activities has been promoted, contributing to community development and the strengthening of local governance.

All of this has been made possible through a collaboration between Ambio, a Mexican organization that coordinates and implements the Scoler'te program locally, and the Plan Vivo Foundation, which validates the actions carried out in the territories.



2. General Description of the Project

The Scole'te program aims to contribute to climate change mitigation and the well-being of rural communities in Mexico by strengthening local capacities and promoting the establishment of forestry or agroforestry systems, as well as the management of community forest areas. These actions are implemented through a comprehensive approach of land management and community participation, with the purpose of promoting sustainable livelihoods and strengthening local development strategies.

In this context, the Scole'te program celebrates 29 years of uninterrupted operation this year, consolidating the program as an initiative aimed at supporting indigenous communities in the comprehensive management of natural resources, through the mechanism of payments for environmental services (PSA).

Since its inception, the program has prioritized working with communities highly vulnerable to climate change due to poverty, marginalization, and limited access to financing, by promoting local processes that strengthen socio-environmental resilience and sustainable development. The map indicates the regions where the program is present in collaboration with Dan Morell.

The actions promoted by Scole'te focus on promoting the conservation of biodiversity and ecosystem services through restoration with native species, protection of wildlife, watershed management, and prevention of soil erosion. These interventions also aim to improve the livelihoods of participating families.

To achieve these goals, the program implements the living plan methodology, which is based on a participatory and inclusive approach where producers play a central role in decision-making through the analysis and planning of their land use. This process strengthens the sense of local ownership, contributing to the permanence and sustainability of reforestation efforts.

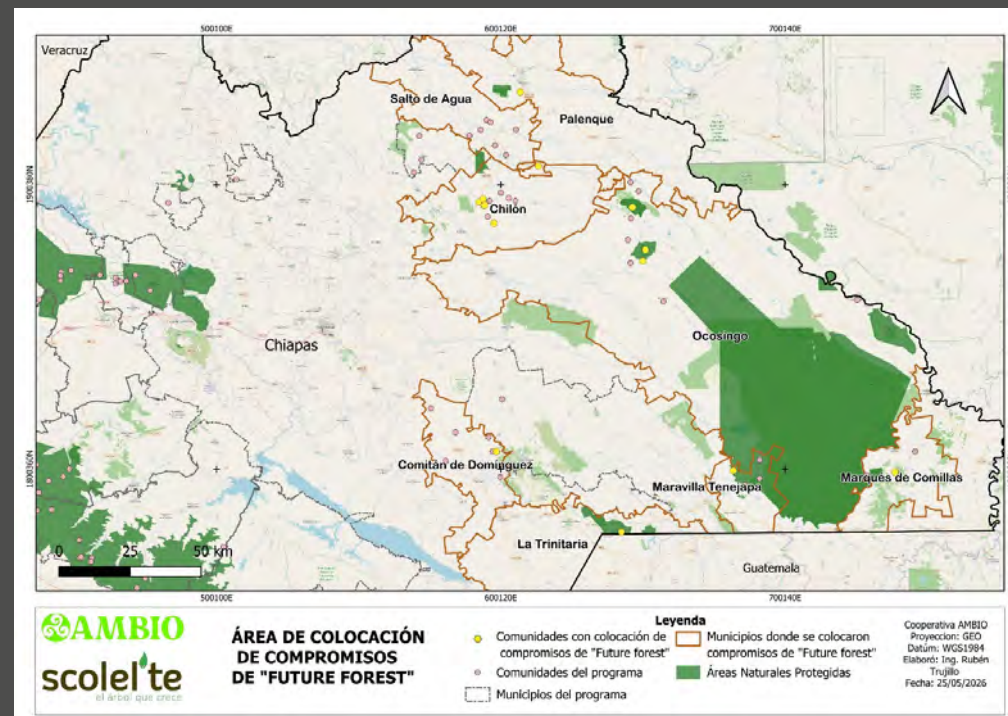


Figure 1. Communities in which we collaborated with Dan Morell

2. General Description of the Project

The following figure represents a living plan developed by one of the farmers as part of this report. This planning tool allows for defining, organizing, and monitoring restoration, cleaning, and maintenance activities, facilitating sustainable management and the achievement of established objectives.

Currently, the program has incorporated farmers and their families from various Indigenous groups in Chiapas, including Chol, Lacandon, Tzeltal, and Tojolabal communities, among others. In this multicultural context, the living plan (Land Plan) methodology is a key tool for facilitating communication and understanding between technical staff and communities, as well as promoting participatory processes to strengthen territorial management and achieve positive socio-environmental impacts.

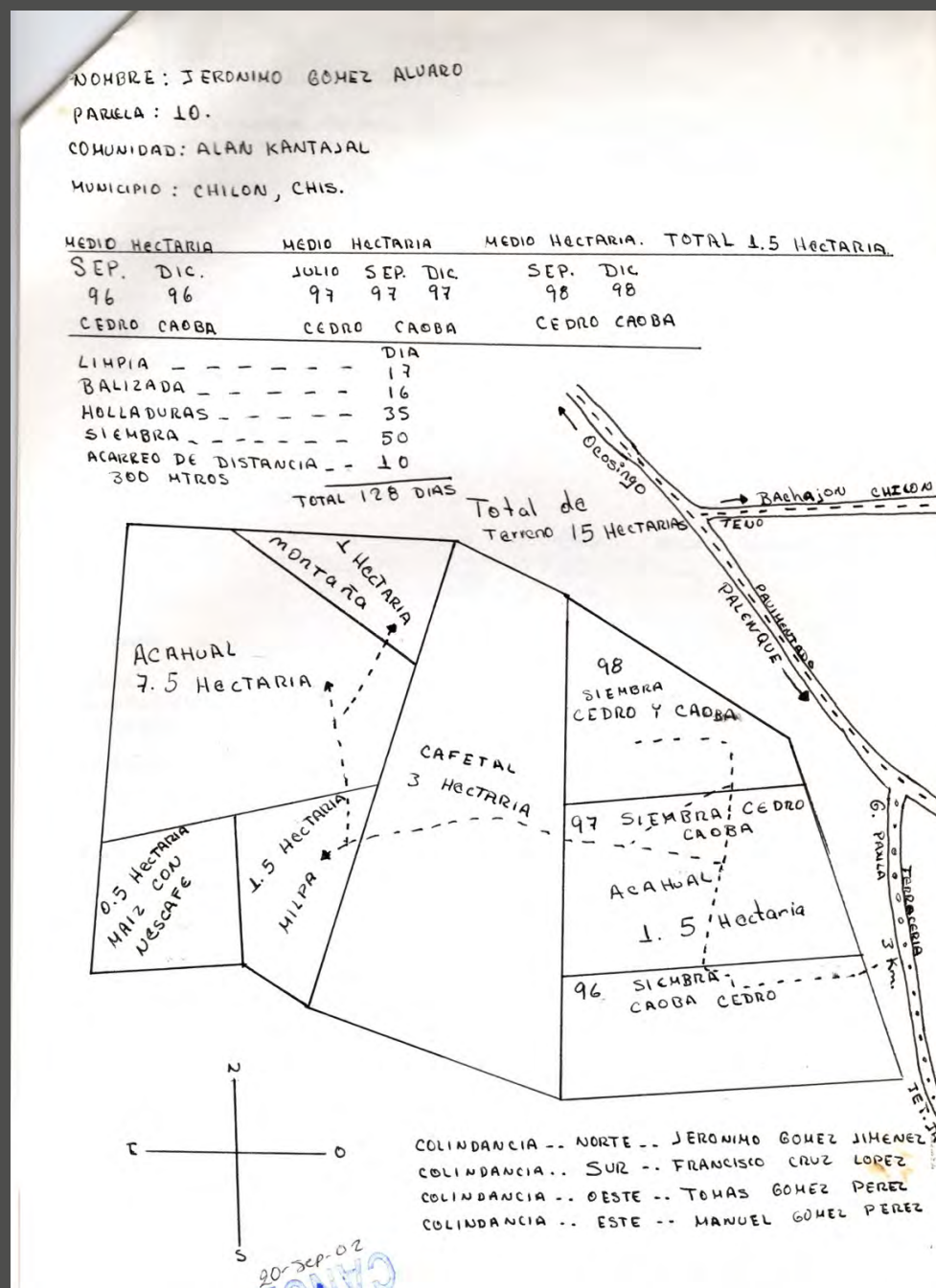


Figure 2. Plan Vivo Farmer participating in Scolel'te.



3. Socio-environmental Impacts

Since its inception, Scolel'te has prioritized generating environmental and social benefits, with direct effects on ecosystems and the communities that depend on them. After nearly three decades of operation, the program has consolidated a series of impacts that demonstrate its contribution to environmental conservation and community well-being, including:

- **Climate Change Mitigation**, through restoration, reforestation, management and conservation actions of forestry and agroforestry areas established.
- **Recovery and increase of community forest territories**, contributing to ecosystem conservation.
- **Strengthening training and promotion of sustainable alternatives**, favoring better land management, and contributing to reducing degradation and deforestation.
- **Protection of water sources**, restoration and reforestation actions in areas near rivers and streams promote the permanence of water
- **Protection and conservation of local biodiversity**, favoring the survival of species that depend on forest ecosystems for food, shelter, and reproduction. Furthermore, these actions contribute to strengthening biological corridors, promoting ecological connectivity.
- **Over three decades**, these actions have contributed to strengthening the resilience of communities to the effects of climate change, through the generation of productive and economic alternatives, as well as reducing their vulnerability to events such as forest fires or floods.

Some indicators:

Number of
hectares restored:

120

Numbers of
hectares under
conservation
activities:

800

Number of trees
established/
planted:

48,000

Number of
hectares under
sustainable
management:

920

Number of
Good practices
established¹:

15

Number of
communities
participating:

18

Number of families
participating:

120

1 Some these good practices are: Planning, training, management, seed collection, plant production, fertilization, pest management, cleaning, diversification, among others



3. Socio-environmental Impacts

Figures 3, 4 and 5 demonstrate the historical advances in the landscape as a result of the reforestation efforts carried out more than twenty years ago.

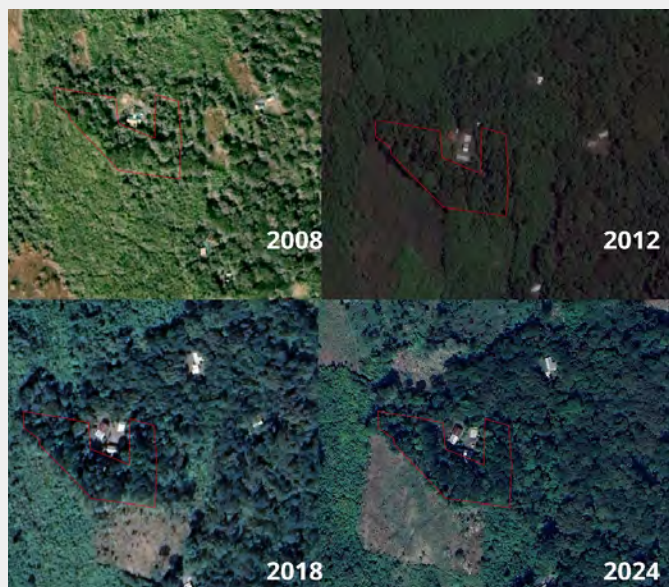


Figure 3.
Historical restoration process since 2005 in the plots of the municipality of Chilón, Chiapas. Note: The oldest satellite images are from 2008, although the restoration began in 2005



Figure 4.
Historical restoration process since 2005 in the plots of the municipality, La Trinitaria, Chiapas.

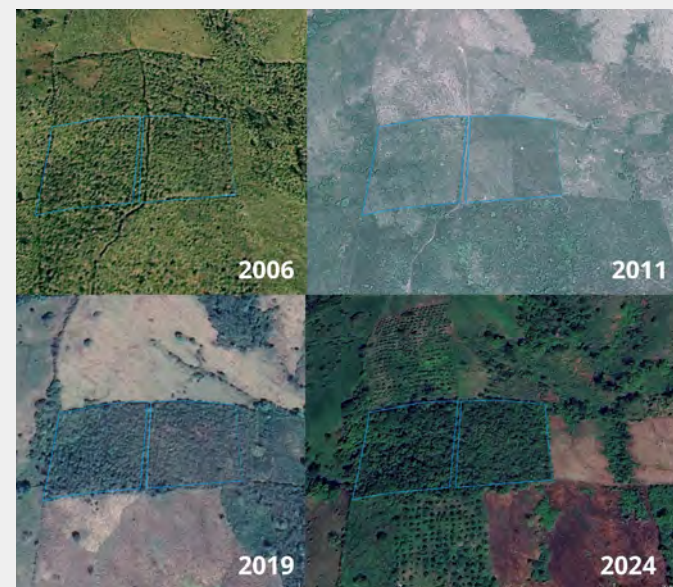


Figure 5.
Historical restoration process since 2005 in the plots of the municipality, Maravilla Tenejapa, Chiapas. Note: The oldest satellite images are from 2006, although the restoration began in 2005.



3. Socio-environmental Impacts

Below we have added some photos of the plots established with the consent and collaboration of the producers in the communities.



Restored areas enriched with coffee and preserving natural forest species.



*(Top) Restoration with coffee and timber trees, in the municipality of Maravilla Tenejapa, Chiapas
(Bottom) Producer participating in the restoration efforts in the municipality of Salto de Agua, Chiapas*

4. Biodiversity Impacts

In the various regions where the program operates, significant impacts on biodiversity conservation have been documented. Among these, the Marqués de Comillas region stands out, dominated by tropical forests, as well as the Tziscão region, in the Montebello Lakes area, characterized by temperate forests. Where the sales of Dan Morrell and Future Forest were allocated.

All areas within the program face a persistent threat from the expansion of agricultural activities, which drive land-use changes and the loss of forest cover. These changes increase landscape fragmentation and reduce the resilience of forest ecosystems, impacting biodiversity conservation and ecosystem functioning.

Therefore, through Scolel'te, significant progress has been made in terms of forest management and biodiversity. Monitoring in different communities has identified diverse species of flora and fauna that reflect the ecological value of the areas where these areas have been impacted.

Biodiversity monitoring is carried out under the methodology developed by Ambio and implemented with the participation of community technicians previously trained

in the use of equipment, methodological application and information recording, thus strengthening local monitoring processes and territory management.

DIVERSITY OF FAUNA

Wildlife monitoring is carried out annually and is implemented each year in different areas of the program, with the aim of generating representative information from all areas and having data that allows evaluating the results at the program scale.

Based on this monitoring and observations made by participating communities and farmers have reported an increased presence and reappearance of some species that were previously rare or had disappeared from certain areas. These include various species of birds, mammals, amphibians, and reptiles, which may reflect habitat recovery and improvement. Some of the reported species are listed opposite:

BIRDS

Common name	Scientific name
Scissor-tailed hawk	<i>Elanoides forficatus</i>
Chara pea	<i>Cyanocorax morio</i>
Magpie	<i>Cyanocorax formosus</i>
Black Hawk	<i>Buteogallus anthracinus</i>
Caracara	<i>Caracara plancus</i>
Chara pea	<i>Cyanocorax morio</i>
Vulture Aura	<i>Cathartes aura</i>
Mexican Parakeet	<i>Psittacara holochlorus</i>

MAMMALS

Common name	Scientific name
Deer	<i>Odocoileus spp.</i>
Black howling monkey	<i>Alouatta villosa</i>
Coyote	<i>Canis latrans</i>
River Otter	<i>Lontra longicaudis</i>
Rabbit	<i>Sylvilagus spp</i>
Squirrel	<i>Sciurus carolinensis</i>

AMPHIBIANS AND REPTILES

Common name	Scientific name
Rattlesnake	<i>Crotalus spp</i>
Toad	<i>Bufo bufo</i>
Green vine snake	<i>Oxybelis fulgidus</i>
Peter's anole	<i>Anolis petersii</i>
American Mabuya	<i>Mabuya unimarginata</i>
Smooth-headed alligator lizard	<i>Gerrhonotus liocephalus austrinus</i>

4. Biodiversity Impacts

Below are some photos of the wildlife species that benefit from the restoration efforts undertaken by producers and their families.



Spider monkey, located in the Marques de Comillas, Chiapas



Pecari de collar, located in the Marques de Comillas, Chiapas



Ocofaisan, located in the Maravilla Tenejapa, Chiapas

The presence of some of these species indicates the improvement and quality of the habitat, due to the availability of food and water, thanks to their recovery. It is important to add that the famers and communities have also developed local strategies, such as community tours, to prevent illegal hunting and thereby strengthen biodiversity conservation.

4. Biodiversity Impacts

DIVERSITY OF FLORA

Regarding flora, one of the program's principles is to promote and encourage the conservation and recovery of native forest species, with the aim of contributing to the preservation of natural ecosystems. Annual monitoring of these species allows tracking the establishment and development and is a fundamental component for evaluating the restoration efforts undertaken on family plots.

These species have been established within local agroforestry systems, which allow for the integration of timber trees with food crops such as corn, beans, and squash, as well as with coffee production systems. This combination promotes productive diversification and provides families with the opportunity to obtain forest products for their own consumption, such as timber and firewood.

LOCAL FOREST SPECIES RECOVERED THROUGH RESTORATION ACTIONS

Common name	Scientific name
Baril	<i>Calophyllum brasiliense</i>
Zapote Mamey	<i>Pouteria sapota</i>
Duraznillo	<i>Tapirira mexicana</i>
Nogal	<i>Juglans pyriformis</i>
Ceiba	<i>Ceiba aesculifolia</i>
Guayacan	<i>Tabebuia chrysantha</i>
Liquidambar	<i>Liquidambar styraciflua</i>
Ciprés de montaña	<i>Podocarpus matudae</i>
Zapote de agua	<i>Pachira aquatica</i>



Species: *Pachira aquatica*



Species: *Juglans pyriformis*

5. Social and Community Impacts

Three decades after the program's inception, socioeconomic monitoring has generated relevant information on the impacts observed both locally and within participating families. The results demonstrate that income generated from forest restoration activities has been primarily allocated to home improvements, healthcare, food purchases, and children's education, thus contributing to a reduction in some family economic needs.

These revenues have also been invested in the purchase of animals, either for self-consumption or for the establishment of small-scale meat production businesses.

Another key aspect is investment in diversifying the production means of family farms, integrating production systems geared towards both sales and self-consumption. Among the main products are honey, plantains, fruit trees, and palm trees for sale, among others, which promote income diversification and strengthens local livelihoods.



Diversified agroforestry system, Chilón, Chiapas.

5. Social and Community Impacts

Another positive impact is the capacity building for communities, which is developed in a differentiated approach for men, women, and youth. This training is geared towards strengthening local capacities in areas such as production self-sufficiency and climate change adaptation strategies. This is especially relevant given the need to generate local alternatives that increase community resilience to the effects of the climate crisis.



Agroforestry system enriched with Palm, Salto de Agua, Chiapas.

Impact indicators:

Numbers of
smallholders as
beneficiaries:

120

Number of men
trained:

120

Number of women
trained:

40

Number of
community
technicians
(local capacities):

18

Number of regional
technicians
(regional
capacities):

3

Number of
comprehensive
training sessions
(technical, environmental,
social, gender):

40

6. Challenges and Learnings

Over nearly three decades of implementing restoration activities, several challenges related to environmental, social, and productive factors have been identified. These have been addressed through comprehensive and participatory approaches with communities and farmers. The main challenges, categorized by their primary causes, are presented below:

For Climate Change:

Climate change has presented one of the main challenges for farmers, as its effects are due to external factors over which there is limited local control. The main impact is the presence of pests and diseases affecting established trees, which has required intensified management activities for their control, resulting in increased implementation costs.

There have also been more frequent and intense droughts, creating water stress conditions that affect plant growth and the survival of local wildlife. Similarly, there has been an increased risk of forest fires, leading to strengthened prevention efforts and timely response mechanisms to reduce potential impacts.

For Economic Factors:

As mentioned previously, the increase in management activities resulting from the effects of climate change has increased the costs associated with establishing and maintaining forest plantations. Among the main costs associated with this increase are family labor, the acquisition of supplies, and the materials necessary for the management and maintenance of reforested areas.

In response to this situation, the program has promoted the management of supplementary financing with the aim of reducing the economic pressure on participating families and preventing economic and social negative impacts. This supplementary financing has also contributed to the permanence, maintenance, and sustainability of the established plantations.

To Ensure the Management and Maintenance of Restored Areas:

A key aspect identified during the program's implementation has been the need to guarantee ongoing management and maintenance activities in restored areas. Failure to do so can

limit their environmental and social functioning, weakening them and increasing the likelihood of their conversion to agricultural use. In this regard, the program has promoted the management of these systems through training, support in purchasing tools, and continuous monitoring.



Training session, Salto de Agua, Chiapas

7. Next Steps

The collaboration and actions undertaken since the program's inception have generated valuable learning and lessons that have contributed to strengthening restoration processes. This knowledge has been transferred and replicated in other communities and families, promoting the recovery of degraded and deforested areas and expanding the reach of the project's environmental and social benefits.

Therefore, one of the program's goals is to scale up and replicate the experience in other regions of Mexico, with the aim of continuing to promote the restoration and conversion of agricultural areas into forest systems. This will generate socio- environmental benefits and promote biodiversity and the ecosystems that underpin it, through the implementation of best management and restoration practices.

Similarly, efforts are underway to strengthen ties with strategic partners interested in supporting the expansion of these initiatives into new areas and contributing to the sustainability of actions already implemented. The continuation of these efforts allows for the consolidation of socio-environmental benefits at both local and global levels, strengthening ecosystem conservation and improving the living conditions of participating families.