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Quarterly report of field activities

Restoration Project

Banegas

September 2022

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Restoration technique

So far into the restoration process of the Banegas Farm, trees from 3 different nurseries have been planted: the Monitoring Group nursery in Rancho Quemado, the Saimiri Foundation nursery in La Palma, and the Osa Conservation nursery in Piro.

All nurseries are located on the Osa Peninsula and produce native species adapted to the climate and conditions of the tropical rainforest. Of the 1,238 trees currently planted, 500 were donated by the Osa Conservation nursery in Piro and 738 have been purchased from the Rancho Quemado nursery and Fundación Saimiri, thus generating income for local nurseries in the area.

The restoration technique used is active restoration, through the planting of native forest species in an old pasture area. The purpose of this first phase is to improve the conditions for the establishment of natural regeneration. It is also intended that these native species suppress the grasses via shading and provide fruit to seed dispersers. This will favor the repopulation of natural vegetation and create the necessary conditions for reproducing a plant composition similar to that of the nearby forest.

In this phase of the restoration process, field teams are planting mainly native heliophyte species, both ephemeral and durable, and some scyophyte species in the shaded areas bordering the forest. The idea of planting heliophyte species is to generate the shade and organic matter conditions required in the soil to lay the ground for other slower-growing species that require shade conditions to develop in the future.

For better monitoring, all trees are first marked with flagging tape. The tree species is written on the tape to make it easier to place the aluminum plate on the tree to carry out the registration and monitoring process of the different species.

In addition, these native heliophyte species are the species most suitable for surviving the sun conditions and the scarcity of nutrients that currently exist in the area to restore old pastures. After the trees have been planted, each tree is rounded, so that the grass present in the restoration area does not compete and limit the survival of the trees.

Tree species planted and mortality rates

A total of 1238 trees have been planted. The mortality rate is very low, only 3.55%.

No dead trees have been replaced at this time. The plan is to replace the trees after the next dry season. Due to the harsher water shortage conditions during that season, there may be an increase in the tree mortality rate.

Scientific name	Common name	
<i>Albizia julibrissin</i>	Albizia	25
<i>Anacardium excelsum</i>	Espavel	43
<i>Andira inermis</i>	Almendro de rio	61
<i>Apeiba tibourbou</i>	Peine de mico	2
<i>Astrocaryum standleyanum</i>	Pejibaye de montaña	5
<i>Bixa orellana</i>	Achiote	1
<i>Bromisum costaricanum</i>	Vaco	24
<i>Bunchosia sp</i>	Cerezo	6
<i>Calophyllum brasiliense</i>	Cedro Maria	2
<i>Caryocar-costaricense</i>	Ajo blanco	1
<i>Cecropia</i>	Guarumo	106
<i>Cedrela odorata</i>	Cedro amargo	69
<i>Ceiba pentandra</i>	Ceiba	2
<i>Chrysophyllum cainito</i>	Caimito	1
<i>Cojoba Arborea</i>	Lorito	40
<i>Cojoela odorata</i>	Cojoba	1
<i>Conostegia subcrustulata</i>	Lengua de vaca	1
<i>Copaifera camibar</i>	Camibar	1
<i>Cupania rufescens</i>	Guavillo	25
<i>Dalbergia retusa</i>	Cocobolo	7
<i>Dilodendron costaricense</i>	Iguano	1
<i>Diphysa americana</i>	Guachipelin	26
<i>Dipteryx panamensis</i>	Almendro de montaña	121
<i>Dussia macrophyllata</i>	Frijolon	31
<i>Enterolobium cyclocarpum</i>	Guanacaste	31
<i>Ficus sp.</i>	ND	5
<i>Guazuma ulmifolia</i>	Guasimo	1
<i>Handroanthus impetiginosus</i>	Cortez negro	42

<i>Hevea brasiliensis</i>	Hule	1
<i>Hule castilla</i>	Castilla elastica	1
<i>Hymenaea courbaril</i>	Guapinol	29
<i>Inga sp.</i>	Gauba	43
<i>Laurus nobilis</i>	Laurel	60
<i>Lecointea amazonica</i>	Costilla de danto	1
<i>Licania platypus</i>	Zapote mechudo	25
<i>Lonchocarpus yoroensis</i>	Chaperno	1
<i>Luhea seemani</i>	Guacimo colorado	1
<i>Luehea divaricata</i>	Sota	10
<i>Miconia sp.</i>	Lengua de vaca	4
<i>Minuartia guianensis</i>	Manu cuajado	27
<i>Muntingia calabura</i>	Capulin	5
<i>Ochroma pyramidale</i>	Balzo	23
<i>Palicourea lasiorrhanchis.</i>	Cafesillo	16
<i>Piper sp.</i>	Anisillo	6
<i>Platymiscium parviflorum</i>	Cristóbal	35
<i>Pouteria sapota</i>	Pouteria	33
<i>Psychotria sp</i>	ND	1
<i>Pterocarpus sp.</i>	Sangrillo	3
<i>Rutensas sp.</i>	ND	1
<i>Samanea saman</i>	Cenizaro	2
<i>Schizolobium parahyba</i>	Gallinazo	89
<i>Senna reticulata</i>	Saragundi	9
<i>Simarouba amara</i>	Aceituno	6
<i>Spondias mombin</i>	Jobo	26
<i>Symphonia globulifera</i>	Cerillo	3
<i>Tabebuia impetiginosa</i>	Cortes negro	20
<i>Tabebuia rosea</i>	Roble sabana	25
<i>Tapirira sp.</i>	Cedrillo	5
<i>Terminalia catappa</i>	Almendra de playa	6
<i>Virola sp</i>	Fruta dorada	11
ND	ND	29
	Total	1238

Trees planted	1238	
Dead	44	3.55%
Alive	1194	96.45%

Planned reforestation for September

This September, the last reforestation campaign will be carried out at the Banegas Farm. This is because there are only about two months left before the beginning of the dry season, so a margin must be accounted for in order for the trees to adapt to the terrain before they are subject to the water stress of the dry season.

500 trees were donated by the Osa Conservación nursery in Piro:

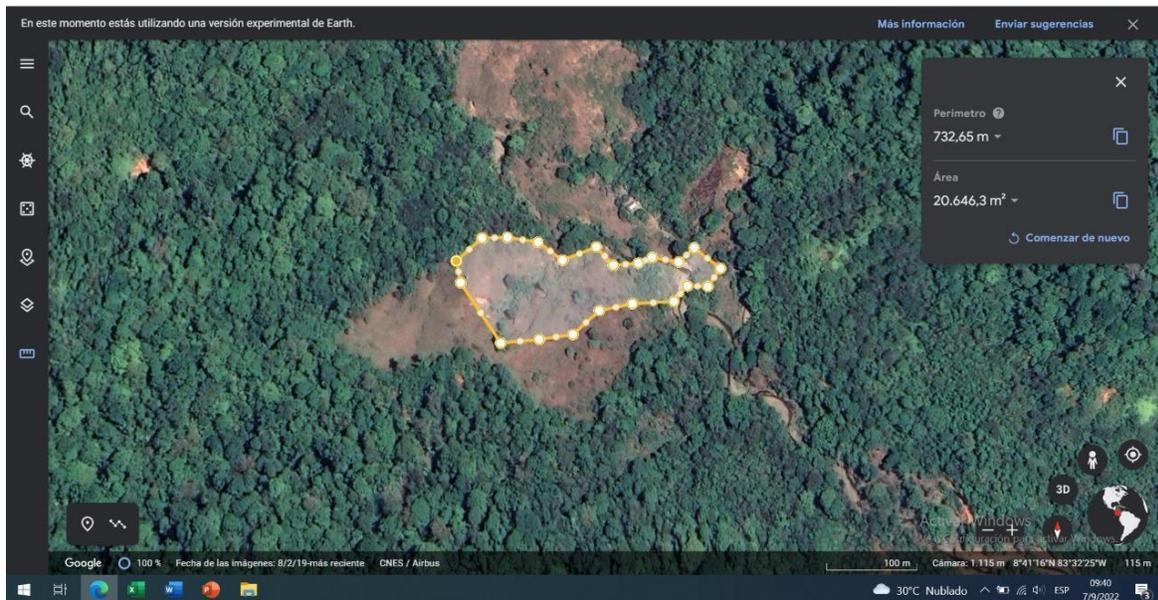
Scientific name	Common name	Quantity
<i>Dussia sp.</i>	Frijolon	45
<i>Inga sapindoides</i>	Guaba	30
<i>Tabebuia rosea</i>	Roble Sabana	20
<i>Cedrela odorata</i>	Cedro amargo	45
<i>Artocarpus altilis</i>	Castaña	30
<i>Clarisia biflora</i>	ND	20
<i>Brosimum utile</i>	Vaco	30
<i>Brosimum costaricanum</i>	Vaco	25
<i>Samanea saman</i>	Cenizaro	30
<i>Virola crysocarpa</i>	Fruta dorada	45
<i>Genipa americana</i>	Guaitil	30
<i>Enterolobium cyclocarpum</i>	Guanacaste	40
<i>Pouteria sp.</i>	ND	20
<i>Dilodendron costarricensis</i>	Iguano	20
<i>Andira inermis</i>	Carne asada	30
<i>Ceiba pentandra</i>	Ceiba	20
<i>Inga multijuga</i>	Guaba	20

And 150 trees will be bought from the Saimiri Foundation nursery in La Palma.

Reforested area

Currently the reforested area is approximately 2 hectares. Within these two hectares we have an area near the river, which is a flood zone of the river, a water source and areas with a high slope.

There are approximately 2 more hectares to be reforested.



Social activities carried out

Up until now, 6 reforestation campaigns have been carried out with the participation of 120 people, apart from the Foundation's personnel, all the participants in the reforestation campaigns have been volunteers.

Site	Date	Quantity of trees planted	Number of participants	Participating groups
R.F.G.D Banegas	23/11/2021	97	18	Neighbors of Banegas, children's environmental group of Los Periquitos and members of the Rancho Quemado wildlife monitoring group
R.F.G.D Banegas	5/5/2022	159	9	Staff from the foundation and international volunteers
R.F.G.D Banegas	5/6/2022	248	39	Staff from the foundation, community leaders from Progreso, and students from the Drake middle school
R.F.G.D Banegas	7/7/2022	124	8	Staff from the foundation and international volunteers
R.F.G.D Banegas	30/7/2022	500	33	Staff from the foundation, forest guards, students from the Drake middle school, and intl volunteers
R.F.G.D Banegas	19/8/2022	110	13	Staff from the foundation and international volunteers

We are very proud of the help and community participation that this restoration project has sparked. It has been beautiful to see how children from local communities, senior citizens, school youth and community leaders have participated on a voluntary basis.

Below are some images of the community participation and international volunteers in the project:



Figure 1 Reforestation campaign 23/11/2021



Figure 2 Reforestation campaign 05/05/2022



Figure 3 Reforestation campaign 06/05/2022



Figure 4 Reforestation campaign 05/06/2022



Figure 5 Reforestation campaign 05/06/2022



Figure 6 Reforestation campaign 30/07/2022

Project testimony

“For us, this restoration project has been an extremely interesting project, both for the environmental component, relating to the importance of ecosystem conservation, and for the environmental education part, as well as community development. With this reforestation project we are learning a lot from the experience in this farm and we are advancing with our monitoring techniques, to see what is the most effective way to carry out the monitoring process.

It has also served as a tool for us to work on community education. By promoting community participation in the reforestation process, the community has been able to grasp the importance of promoting this type of process, as well as learning about forest restoration techniques.

This project is also providing economic support to people in the community, such as the neighbors who live near the restoration farm, since a salary is being generated for them, for the maintenance of the trees, as well as their support in the restoration processes. In this sense, the local nurseries are also benefiting from the planting of trees. In fact, we are going to give a 3-day workshop at the end of September on how to develop forest nurseries, so that more people in the community can benefit from forest restoration projects in the future.”



Alejandra Monge
Executive director of Corcovado Foundation