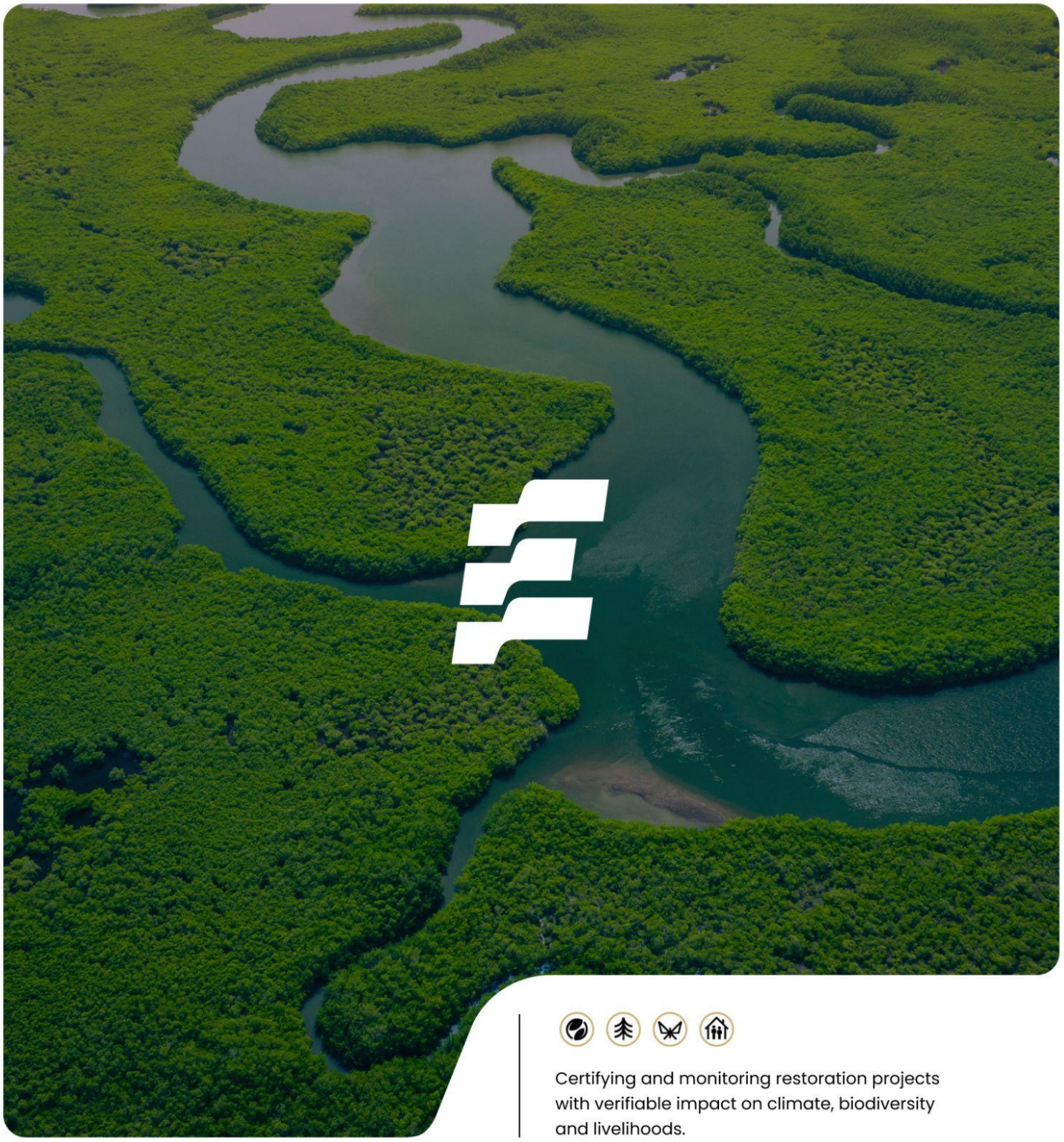

Certifying and monitoring restoration projects with verifiable impact on climate, biodiversity and livelihoods.

Banegas - Q4 2022

Quarterly report

FUNDACIÓN CORCOVADO

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Recap of the Project's basic information

Restoration technique

So far, Banagas is using three different nurseries to provide seedlings for its restoration project: (i) vivero del Grupo de Monitoreo en Rancho Quemado, (ii) vivero de Fundación Saimiri en La Palma, (iii) vivero de Osa Conservación en 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 1901 trees currently planted, 1000 were donated by the Osa Conservation nursery in Piro and 901 have been purchased from the Rancho Quemado nursery and the Saimiri Foundation, thus generating income through the project for local nurseries in the area.

The restoration technique used is **active restoration**, through the planting of native forest species in a paddock area.

Fundacion Corcovado continues to work in the first process of restoration. 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 by shading and provide fruit to seed dispersers, favouring the repopulation of the natural vegetation and creating the necessary conditions so that species native to the zone, but with other ecological requirements different to the current conditions of the terrain, can grow in the restored area, reproducing in the future a plant composition equal to that of the nearby forest (reference ecosystem).

In this phase of the restoration process, we are planting mainly native heliophyte species, both ephemeral and durable, and some scyophyte species in the shaded areas bordering the forest. The goal of planting heliophyte species is to generate the conditions of shade and organic matter required in the soils so that other slower growing species, that require shade conditions, can begin to develop in the future.

Before planting, all trees are first marked with flaging tape. The tree species is written on the flaging tape, so that it is easier to attach the aluminium plate to the tree later on in order to record and monitor the different species.

Reforested area

At present, the reforested area is of approximately 2 hectares. Within these two hectares, there's: (i) an area close to the river, which is a flood zone of the river, (ii) a water source, (iii) and areas with a steep slope.

Approximately 2 more hectares remain to be reforested.

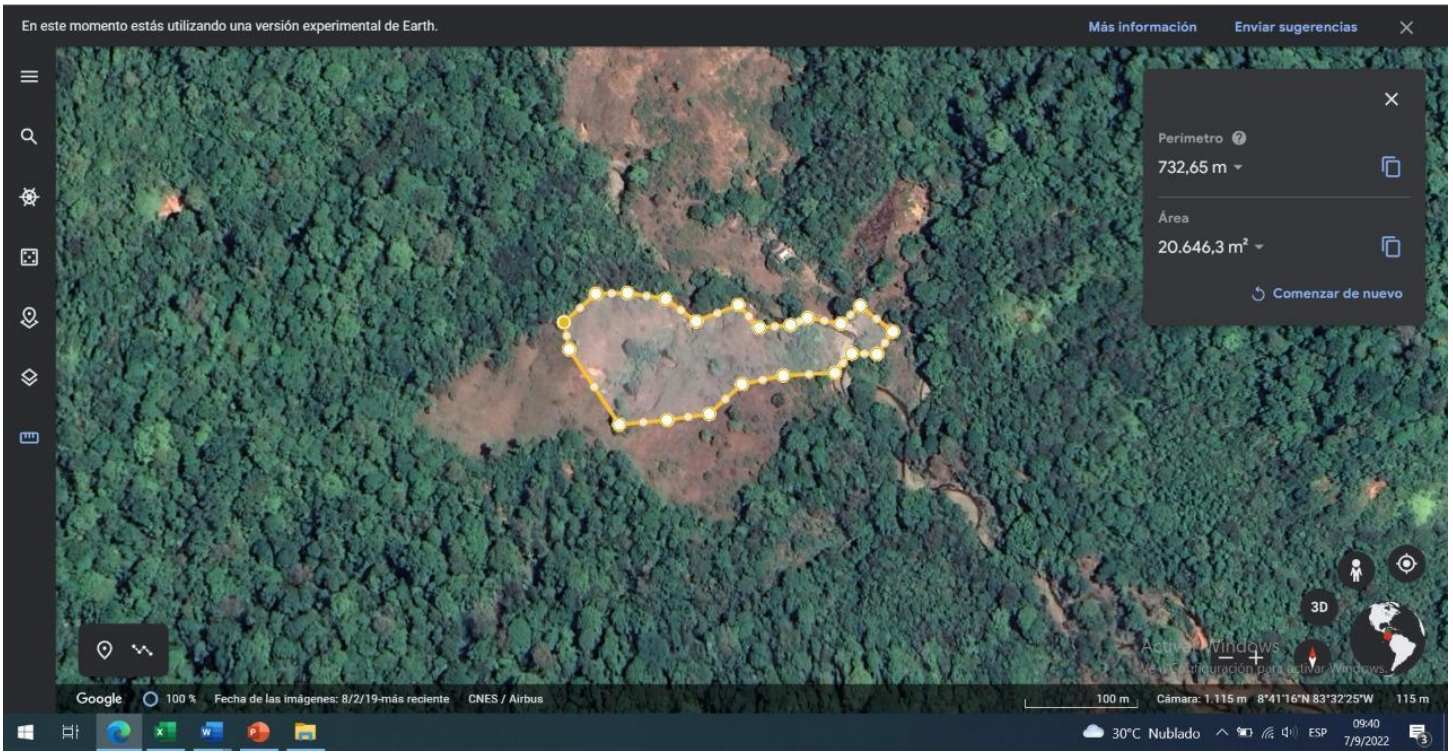

Image 1: Project's restoration area

Fresh from this Quarter!

Tree species planted and mortality rate

A total of 1901 trees have now been planted. The mortality rate is very low, only 2.32%. It's believed that this mortality rate has been possible because planting was done in the rainy season and the trees didn't suffered hydrological stress. Good maintenance given to the saplings, always keeping them in a clean round, without competition from other plant species that take away light or nutrients, has also largely contributed to the near 2% result. This rate can change with the dry season, hydrological stress is much higher.

At present 72 different tree species were planted.

	Scientific Name	Common Name	Planted up to Aug 2022 (last report)	Planted up to Dec 2022 (this report)
1	*Albizia julibrissin*	Albizia	25	25
2	*Anacardium excelsum*	Espavel	43	43
3	*Andira inermis*	Almendro de rio	61	92
4	*Apeiba tibourbou*	Peine de mico	2	2
5	*Artocarpus altilis*	Castaña	-	30
6	*Astrocaryum standleyanum*	Pejibaye de montaña	5	5
7	*Bixa orellana*	Achiote	1	1
8	*Bromisum costaricanum*	Vaco	24	51
9	*Brosimun utille*	Vaco u	-	29
10	*Bunchosia sp*	Cerezo	6	6
11	*Calophyllum brasiliense*	Cedro Maria	2	2
12	*Caryocar-Costa Rican*	Ajo blanco	1	1
13	*Cecropia sp.*	Guarumo	106	112
14	*Cedrela odorata*	Cedro amargo	69	118
15	*Ceiba penthandra*	Ceiba	2	22
16	*Chrysophyllum cainito*	Caimito	1	1
17	*Cytarexylum*	N.I.	-	6
18	*Clarisia biflora*	N.I.	-	20
19	*Cojoba Arborea*	Lorito	40	40
20	*Cojoela odorata*	Cojoba	1	1
21	*Conostegia subcrustulata*	Lengua de vaca	1	1
22	*Copaifera camibar*	Camibar	1	1
23	*Cupania rufescens*	Guavillo	25	25
24	*Dalbergia retusa*	Cocobolo	7	7
25	*Dilondendron costarricensis*	Iguano	1	26
26	*Diphysa americana*	Guachipelin	26	26
27	*Dipteryx panamensis*	Almendro de montaña	121	121
28	*Dussia macroprophyllata*	Frijolon	31	77
29	*Enterolobium cyclocarpum*	Guanacaste	31	70
30	*Ficus sp.*	N.I.	5	5
31	*Genipa americana*	Guaitil	-	26
32	*Guazuma ulmifolia*	Guasimo	1	2
33	*Handroanthus impetiginosus*	Cortez negro	42	42
34	*Hevea brasiliensis*	Hule	1	1

35	*Castile rubber*	Castilla elastica	1	1
36	*Hymenaea courbaril*	Guapinol	29	29
37	*Igna sp.*	Guaba	43	43
38	*Inga chililllo*	N.I.	-	4
39	*Inga multijuga*	Guaba m	-	21
40	*Inga punctata*	N.I.	-	1
41	*Inga saindoides*	Guaba	-	28
42	*Inga sp*	N.I.	-	9
43	*Laurus nobilis*	Laurel	60	60
44	*Lecointea amazonica*	Costilla de danto	1	1
45	*Licania platypus*	Zapote mechudo	25	29
46	*Lonchocarpus yoroensis*	Chaperno	1	1
47	*Luehea divaricata*	Sota	10	10
48	*Luhea seemani*	Guacimo colorado	1	1
49	*Miconia sp.*	Lengua de vaca	4	4
50	*Minquartia guianensis*	Manu cuajado	27	33
51	*Muntingia calabura*	Capulin	5	5
52	*N.I.*	N.I.	-	87
53	*Ochroma pyramidale*	Balso	23	25
54	*Palicourea lasiorrhanchis.*	Cafesillo	16	16
55	*Piper sp.*	Anisillo	6	6
56	*Platymiscium parviflorum*	Cristóbal	35	35
57	*Pouteria sapota*	Pouteria	33	53
58	*Psychotria sp*	N.I.	1	1
59	*Pterocarpus sp.*	Sangrillo	3	3
60	*Rutensas sp.*	N.I.	1	1
61	*Samanea saman*	Cenizaro	2	32
62	*Schizolobium parahyba*	Gallinazo	89	142
63	*Senna reticulata*	Saragundi	9	9
64	*Simarouba amara*	Aceituno	6	6
65	*Spondias mombin*	Jobo	26	27
66	*Symphonia globulifera*	Cerillo	3	3
67	*Tabebuia impetiginosa*	Cortes negro	20	24
68	*Tabebuia rosea*	Roble sabana	25	45
69	*Tapirira sp.*	Cedrillo	5	5
70	*Terminalia catappa*	Almendro de playa	6	6
71	*Virola crysocarpa*	Fruta dorada		46
72	*Virola sp*	Fruta dorada	11	11
			1238	1900

Total Trees planted	1900		
Dead	44	2,32%	
Trees present	1856	97,68%	

Reforestation campaigns and participation

Nine reforestation campaigns were carried out, eight of them with the support of national and international volunteers together with the Fundacion Corcovado's staff. In the last reforestation campaign, neighbours of the area to be restored were paid for planting the trees.

Reforested farm	Date	Number of trees planted	Number of participants	Participating groups	Quarter of activity
R.F.G.D Banegas	23/11/2021	97	18	Neighbours of Banegas, children's environmental group Los Periquitos and members of the Rancho Quemado wildlife monitoring group.	Q3/2022 (november report)
R.F.G.D Banegas	5/5/2022	159	9	FunCorco staff and international volunteers	Q3/2022 (november report)
R.F.G.D Banegas	5/6/2022	248	39	FunCorco staff and community leaders from Progreso and students from Drake High School.	Q3/2022 (november report)
R.F.G.D Banegas	7/7/2022	124	8	Foundation staff and local and	Q3/2022 (november report)

				international volunteers	
R.F.G.D Banegas	30/7/ 2022	500	33	Foundation staff, junior rangers from Drake College and international volunteers.	Q3/2022 (november report)
R.F.G.D Banegas	19/8/ 2022	110	13	Foundation staff, international and local volunteers	Q3/2022 (november report)
R.F.G.D Banegas	6/9/2 022	240	23	Foundation staff and local volunteers, the natur fund for costa rica	Q4/2022 (february report)
R.F.G.D Banegas	16/9/ 2022	260	11	Foundation staff, social educator, volunteers Rebeca and community members	Q4/2022 (february report)
R.F.G.D Banegas	26/9/ 2022	163		Don Vicente and his son	Q4/2022 (february report)
	Total	1901	154		

Images 2 and 3: September 2022 planting

Restoration monitoring

15 monitoring tours have been carried out to keep track of tree development, growth and mortality (Attached Excel file).

In addition, 6 camera traps were installed. Four in the area to be restored and two inside the forest, allowing to monitor how the fauna evolves during the restoration process.

These cameras are checked once a month, but due to the large amount of precipitation from October to December 2022, the cameras had to be removed due to moisture problems.

Image 4: Camera trap installation

Heavy rain also impacted the farm monitoring as one of the access bridges was washed away and could not be repaired until December.

The developer is establishing monitoring plots and protocol to allow tree monitoring.

Images 5 and 6: Field monitoring visit in December 2022