

CONSERVING BIODIVERSITY IN THE OSA PENINSULA



CORCOVADO NATIONAL PARK

Corcovado National Park with 40,000 Ha. was created in 1975 by an executive decree of president Oduber, after years of intense lobbying efforts by the conservation sector. Its declaration meant a large environmental investment for the government. Previous to its declaration the park area was owned by a logging company, Osa Productos Forestales that had plans to install a large operation here. The lands around the park were at that time “national wastelands” and the Institute of Land and Colonization (ITCO) was granting use permits to displaced campesinos coming from other parts of the country.

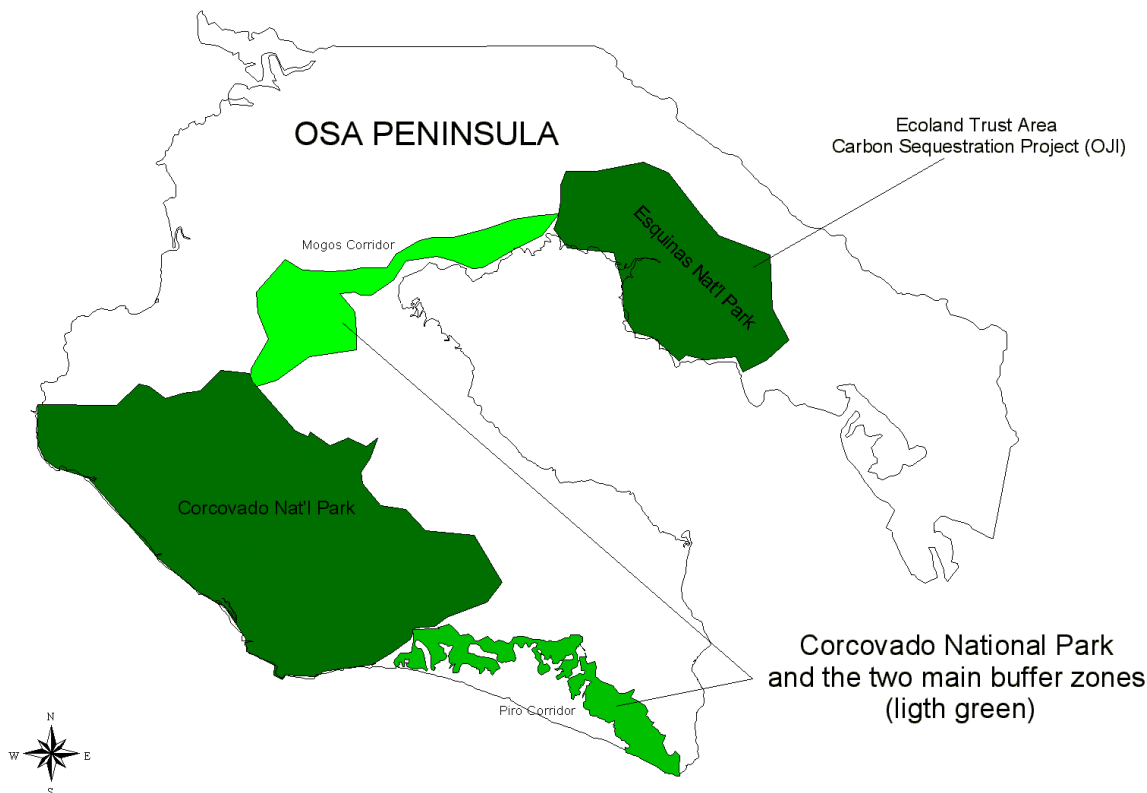


Figure 1: Osa Protected Areas and Buffer Zones

After the declaration of the park, the first one in Costa Rica that was shaped according to ecological concerns in mind, the buffer zones around it have suffered intense colonization pressure. To limit that pressure, in 1979 the Golfo Dulce Forest Reserve was declared with 60,000 Ha. , but its status has been questioned many times by the colonists that refuse to abide by the regulations. The reserve has been always a *de facto* “open access” space and

deforestation rates were in 1990 as high as 4%, due mainly to pasture land, logging, agricultural clearing, and mining in this order of importance. Governmental intervention has been always distant and rather minimal, perhaps fearing the social consequences of increasing the conservation pressure in the area after the declaration of the national park.

PIEDRAS BLANCAS NATIONAL PARK

After discovering the ecological importance of extending the park's initial boundaries, attention was paid to its buffer zones and potential extensions. A well conserved area of 15,000 HA. on the other side of the gulf, known as the Esquinas forest, was under strong pressure by campesino colonization, and the government declared it as the Piedras Blancas National Park in 1994 to function as an extension to the Corcovado.

CORCOVADO BUFFER ZONES AND ECOLOGICAL CORRIDORS

Corcovado has two major natural extensions that are used by the park's fauna during seasonal migrations in search for food sources, especially by the peccaries and the jaguars behind them. The conservation of these corridors is very important to the overall survival of the park biological diversity.

- To the Northeast Piedras Blancas and Corcovado are connected by an almost continuous forested ecological corridor, interspaced with some small secondary forest areas whose importance is known by ecologists as "stepping stones". This is called the Mogos corridor.
- To the Southeast, Corcovado's forests extend almost 20 miles into the tip of the peninsula, following a 400-meter above sea level forested ridge that follows the watershed divide. This corridor that contains vegetation not represented in the park, is also used in seasonal migrations by the park's fauna. This is called the Piro Corridor.

TUVA AND THE ECOLOGICAL CORRIDORS

Since its beginning in 1990, TUVA has worked to protect the biological diversity of Corcovado buffer-zones, filling in the vacuum left by the government in the region after the creation of the peninsula protected area system during the 70's. TUVA's mission as a public and private organization was set to complement the governments' large conservation investment and to help the long-term health and survival of Corcovado as one of the most important parks in Central America and, according to Alwyn Gentry and many biologists, as containing one of the finest and most impressive examples of rain forest ecosystems in the world. TUVA's strategy has consisted in integrating the local population into the conservation strategies so they could become allies for the protection of the park and benefit from the economy created around the management of biological diversity. In the beginning and for almost 2 decades, the local communities felt very hostile towards the park and the conservation sector. It could be said that TUVA's main contribution to Corcovado have been:

- Securing important land tracts in the Piro Corridor (Fig. 2) that were highly threatened by logging in 1992 and forming in 1998 the 1,835 Ha. Osa National Wildlife Refuge, after a decade of efforts with the assistance of many conservation minded land owners

- Avoiding the construction of the largest chip mill in Central America in the Punta Estrella sector, in the very middle of the Mogos Corridor. This industrial facility would have had very negative consequences for the park long term-stability.
- Developing socio-economic strategies and production models to show that conservation of biological diversity can be compatible with the participation and activities of the local population.

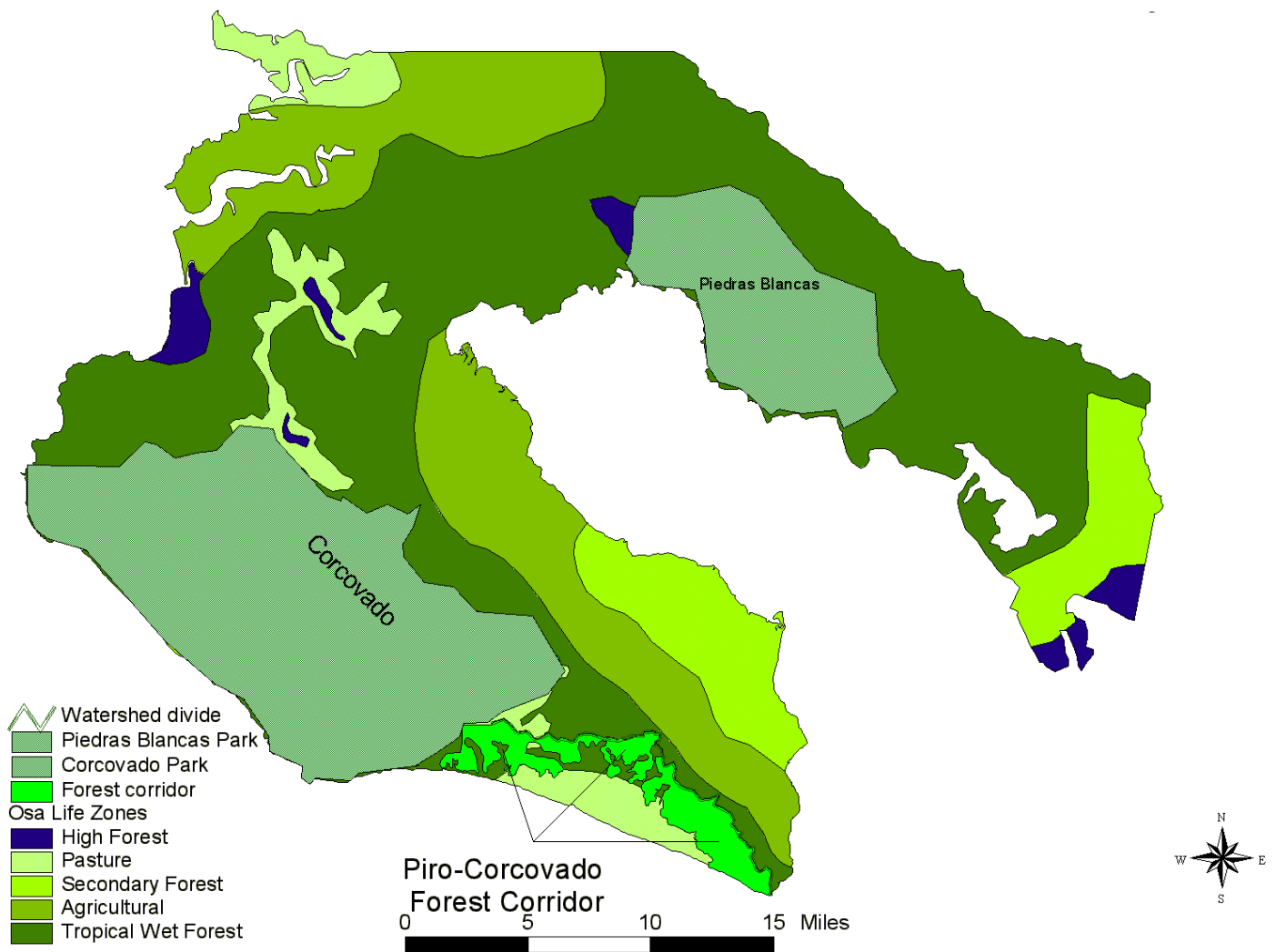


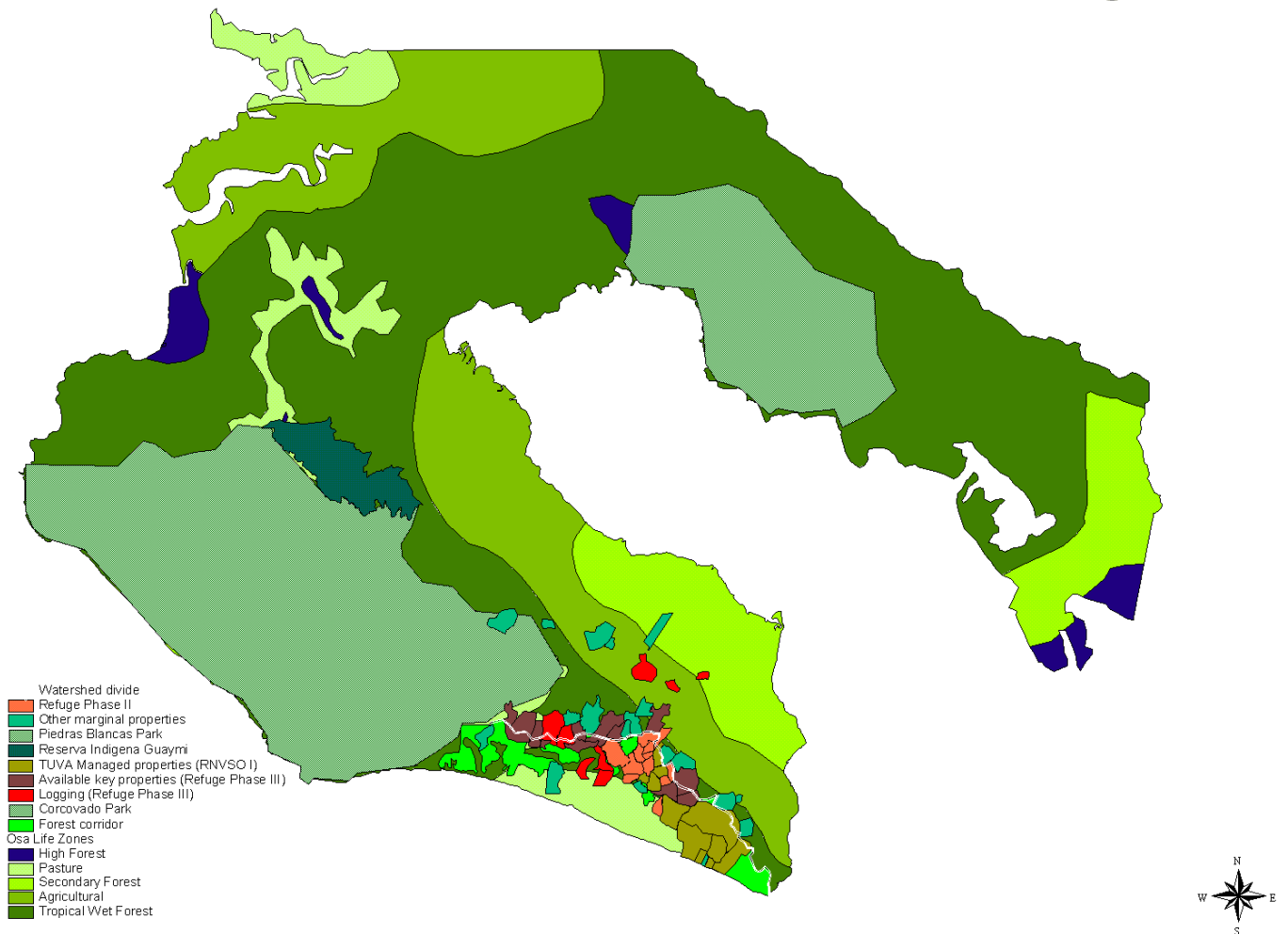
Figure 2: The Piro Forest Corridor and Osa Life Zones

THE PIRO CORRIDOR

- With a core extension of about 50 square kilometers (5,000 Ha.), it runs about 18 kilometers long by 3 kilometers in its widest part extending Southeast of the Park and to the Cabo Matapalo, on the very tip of the peninsula (Fig. 2)
- Although a small sector extends into the northern part of the watershed divide the Piro corridor is formed in its vast majority by properties south of the watershed, in other words, the rivers that run into the Pacific Ocean and not into the Golfo Dulce Side.
- The main rivers in the corridor are Rio Piro, Quebradas Calientes and Pejeperro.

LAND TENURE IN THE PIRO CORRIDOR

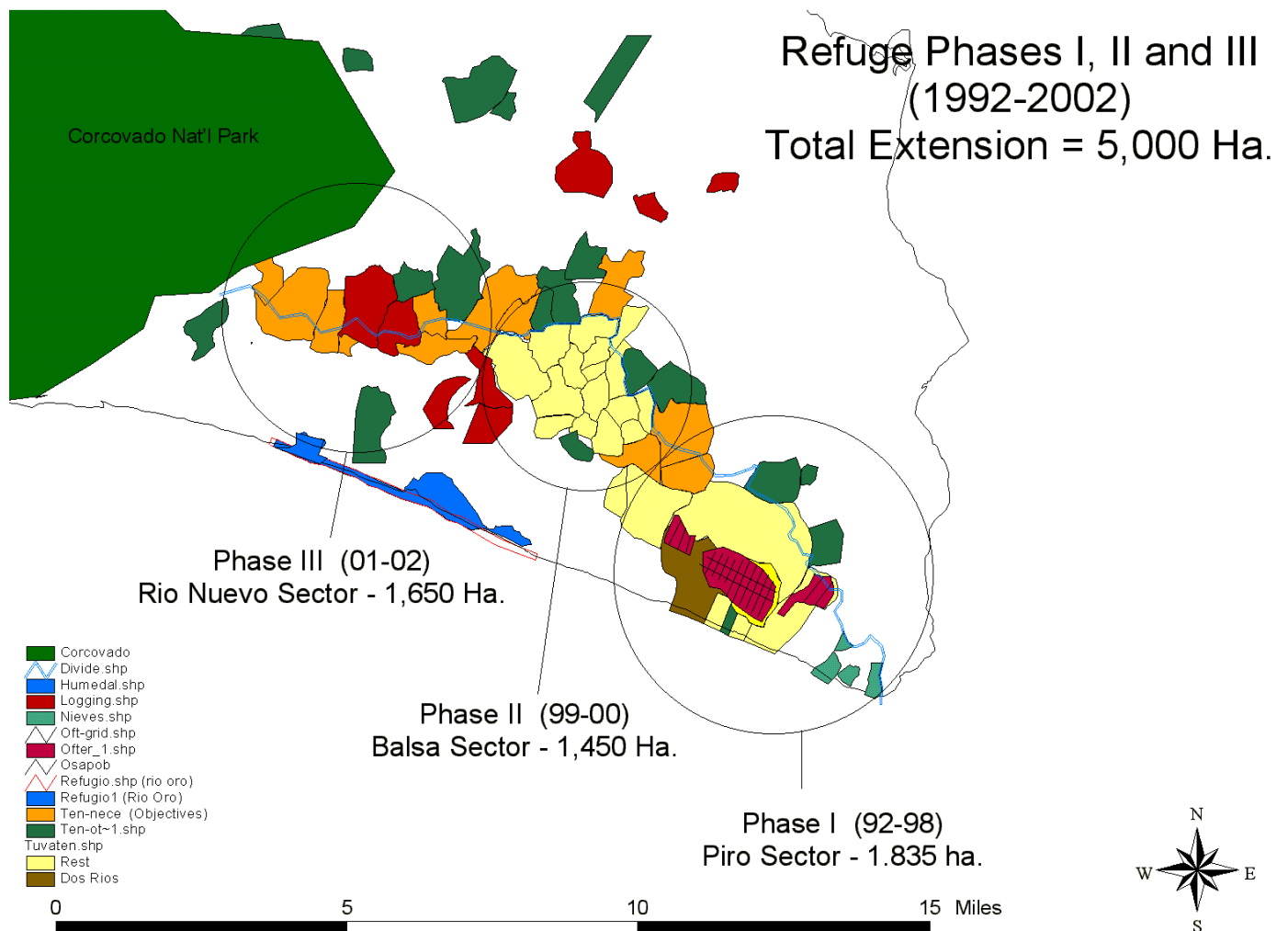
- There are about 50 different properties covering near 5,000 Ha. along the core Piro Corridor.
- Of these properties, TUVA has been instrumental in the purchase of 18 of them by North-American conservation investors and environmentalists.
- Currently TUVA manages 12 of these properties, with an extension of about 1,500 Ha.



THE OSA NATIONAL WILDLIFE REFUGE AS TUVA'S MAIN CONSERVATION STRATEGY

- The strategy to secure one decade of conservation work in the Piro Corridor Sector was to apply for its recognition as a National Wildlife Refuge in 1997. This was to guarantee the survival of the conservation gains beyond the life of the foundation itself. The executive decree granting the official status as a protected area in Costa Rica was published in December 1998, and included 1,835 Ha., or Phase I. (see map on this page)
- There are two more phases planned to reach the park and close the corridor, Phase II is already well underway and most key properties have been purchased. Maybe 3-4 key properties are still left out (see Table 1, Fig 4) . This phase will be completed by the end of 2000. It would be very desirable to find conservation partners for these left out properties.
- Phase III (Rio Nuevo) is the evaluation stage and is scheduled to start in the year 2001. Properties and owners for this sector are listed in Table 1, and Fig 4.

Land use percentages per sector	Total	Nat Forest	Pasture	Sec forest
Sector 1 – Piro	600	42%	10%	48%
Sector 2- La Balsa	920	64%	5%	20%
Sector 3 - Rio Nuevo	580	71%	1%	28%



Code	Altitude	Priority	Owner	Sector	Location comments	Size (Ha.)	Natural Forest	Pasture	Second Forest	Logging plans	Price Ha x 1000	Title status
			SECTOR 1 - PIRO	(Refuge Phase II)								
P1	Ridge	M	Catalino Bellanero	Piro	Shares boundary with TUVA	200	100	10	90	no		no
P2	Ridge	M	Evaristo Bellanero	Piro	Shares boundary with TUVA	300	100	20	180	use permit		applied
P3	Med	M	Rosita Mesen	Piro	Shares boundary with TUVA	40	30	0	10	no		no
P4	Low	M	Porfirio Sanchez	Piro	Shares boundary with TUVA	60	20	30	10	1999		yes
Total						600	250	60	290			
			SECTOR 2 - ARBOLITO	(Refuge Phase II)								
B1	Ridge	L	Cruz Garcia	Cerro Arbolito	Shares boundary with TUVA	40	30	0	10	no		applied
B2	Ridge	L	Eduardo Melendez	Cerro Arbolito	Shares boundary with TUVA	60	25	20	15	no		?
B3	Ridge	L	Juan Rangel	Cerro Arbolito	Shares boundary with TUVA	60	30	0	30	no		applied
B4	Ridge	L	Alfredo Lopez	La Balsa	Shares boundary with TUVA	250	200	0	50	no		yes
B5	Low	M	Rodolfo Chacon	Agua Buena - La Balsa		40	10	20	10	no		no
B6	Med	H	Alejandro Montenegro	Agua Buena - La Balsa	Shares boundary with TUVA	300	200			1999		no
B7	Med	H	Melvin Montenegro	Agua Buena - La Balsa	Shares boundary with TUVA	46	40		6	applied		applied
B8	Low	H	Alvaro Cedeno	Agua Buena - La Balsa	Shares boundary with TUVA	24	13	5.5	5.5	no		no
B9	Low	H	Gemelos Cedeno	Agua Buena - La Balsa	Shares boundary with TUVA	100	40	0	60	no		no
Total						920	588	45.5	186.5			
			SECTOR 3 - RIO NUEVO	(Refuge Phase III)								
R1	Ridge	M	Rafael Godinez	Agua Buena headwaters	Shares boundary with B6	40	40	0	0	1999		no
R2	Ridge/low	M	Reynaldo Avellan	Agua Buena - Rio Oro	Limits with corridor	100	40	0	60	no		no
R3	Ridge	M	Rafael Coneja	Rio Nuevo headwaters	Limits with Corcovado	250	200	0	50	no		applied
R4	Ridge	M	Trino Corea	Rio Nuevo headwaters	Shares boundary with R3	100	90	0	10	0		no
R5	Ridge	M	Evin Zuniga	Rio Nuevo headwaters	Shares boundary with R3	90	40	5	45	no		yes
Total						580	410	5	165			

Table 1: Listing of owners

TOTALS ALL SECTORS	2,100	1,248	111	642	
Percentage	100%	59%	5%	31%	
Type of land	Size	Natural forest	Pasture	Sec forest	

TUVA'S PARTNERS AND THE GENERALSPONSORS ASSEMBLY

- TUVA's main governing body is the General Sponsors Assembly, formed by land owners (also called here partners) that have purchased properties recommended by TUVA to form the ecological corridor and by other associated individuals.
- The Sponsors Assembly includes individuals that the Board of Directors has appointed for their outstanding contributions or scientific cooperation. The assembly members decide by vote the mission and objectives of the foundation and work very closely with the Board of Directors with five members (including one from the executive branch of the government and one from the municipal branch as prescribed by the law of foundations in Costa Rica)
- TUVA manages the properties for the partners that wish so, who contribute a yearly management fee that goes to TUVA's yearly general operations budget (\$60,000). The amount of the management fee is voluntary, but its minimum is calculated based on the property size. A good rule of thumb was in the beginning the formula "one dollar per hectare per month". This was raised to \$1.50 in 1994, and some partners contribute amounts above that amount. For example a property of 300 Ha. could pay between \$5,000 and \$7,000 per year in management fees.
- Management by TUVA includes basic house and water lines maintenance, access roads, fences and gates, property boundaries (required by law), monitoring of access to the property (logging, poaching, squatting), administration of permanent caretakers (if needed), representation in Environment Ministry meetings, and others. TUVA also serves as a link to manage some legal and financial aspects.
- Partners have access to TUVA's office and radio-communication system and to the field staff to help them with property surveying, to access a pool of horses, to our vehicles for transportation and many related services and logistics in the area.
- In exchange, and besides the annual fee to cover management costs, TUVA requires the owner to dedicate the property for conservation and conservation-research purposes and avoid irrational development, as stated in the regulations (management plan) contained in the refuge declaration and in the management contract.
- TUVA asks the owners to allow some parts of the land to be used by TUVA's authorized staff for research purposes, in order to find models for biodiversity conservation and management. Some of these include light gap management and research (zero felling log extraction with buffalo, forest inventories), trails for researchers, sampling, etc.
- TUVA is currently drafting a set of documents to add extra protection to the lands, above the refuge status, by means of a network of independent and/or interlocked conservation easements, to guarantee that the conservation status survives potential changes of ownership.
- The refuge status has many advantages as it grants a special condition to the land, like protection from squatting, tax-exemptions, and others.