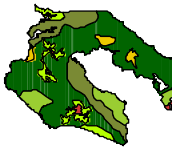
TUVA
United Lands of Neighbors for the Environment

REMAC
zero felling

QUALITY TROPICAL HARD WOODS

from the



Use it or loose it: the need for integrating social and environmental goals

With the objective of finding new ways of utilizing the potential of the Osa forests to contribute to the economic and social developement of the region, the TUVA Foundation (United Lands of Neighbors for the Environment), a non-profit costarican organization founded in 1990, is working with small producers to locate, extract, mill and sell high quality tropical woods without cutting down a single tree. TUVA's stated mission is the advancement of community-based conservation: a strategy that promotes the effective involvement of local inhabitants in the protection and management of the local ecosystems. TUVA's role is that of a facilitator in the process of integrating conservation initiatives within the rural development of the buffer-zones around Corcovado National Park, the most important in the country and one of biodiversity richest protected areas in the world.

To fulfill its mission TUVA has helped in forming the Osa National Wildlife Refuge, a new kind of protected area that mixes private and public lands and that integrates conservation goals with low-impact forestry production aiming at developing an ecosystem-based cooperative management model for a 5,000 ha. biological corridor next to the park. The main objective is to effectively enable local communities to make full use of their own organization, knowledge and capabilities to manage the local environment in ways which satisfy both their own perceived social and economic needs and the priorities set for the region by the National System of Conservation Areas.

Changing the outlook of the Osa Peninsula: Forest Management and Rural Development

With a deforestation rate of almost 5%, the highest in Central America, between 1980 and 1995 the Osa has seen dissapear 40% of its 100,000 ha.of forests and with them many possibilities for a better future. This in spite of the efforts of the government, that in the five years between 1975 and 1979 included 88% of the Osa within different types of protected areas. One of the main projects of the TUVA Foundation, the Osa Fallen Timber Extractive Reserves (REMAC) addresses the main difficulties that have discouraged sustainable natural forest management (insecure land tenure, national policies, overregulation and cultural bias) and provides technical and financial support to promote associations of small producers to engage in low-impact natural forest management. By following a multiple-use approach, the project management units, certified by Smart Wood, produce at the same time quality timbers plus tradeable non-timber products such as the enviromental services of carbon sequestration, biodiversity, hydric cycle regulation and other ecological outputs.

Sharing the cost: flowing non-timber benefits to local owners

Traditionally, non-timber benefits resulting from natural forest management, such as the social functions and environmental services of the forest, flow to people other than the land owner so the social returns become larger than the private returns. Together with the US National Fish and Wildlife Foundation, TUVA has pioneered a system in which this conservationist organization, interested in forest habitat, pays $0.25 cents for every $1 of certified timber sold out of a REMAC management unit. Independent certification serves to guarantee the health of the forest habitat and local owners receive payment for a non-timber service of their forest production plots, so they do not have to bear all the conservation cost.

FSC©

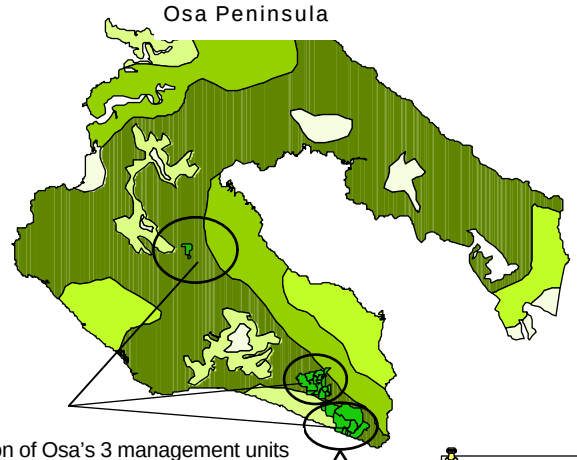
SMARTWOOD™
CERTIFIED FORESTRY

TUVA-REMAC forest has been independently certified by SmartWood in accordance with the rules of the Forest Stewardship Coun- cil A.C.

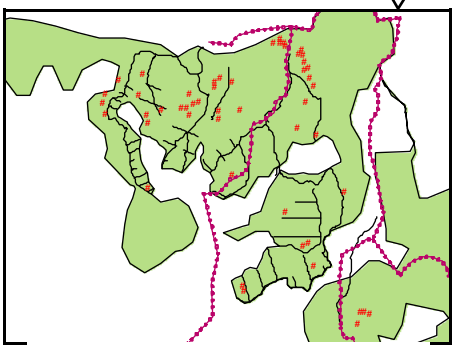
SW-FM-023

THE OSA FALLEN TIMBER EXTRACTIVE RESERVES

Under the concept of several "extractive reserves" dedicated to the conservation through the use of the Osa's rain forests, TUVA currently operates three natural forest management units with a total extension of approximately 750 hectares. These management units are located in the buffer-zones around Corcovado National Park and promote the economic utilization of a very frequent ecosystem resource: the constant formation of "light-gaps" produced by the falling of a big tree that opens a large space in the canopy and creates opportunities for the younger trees to grow very fast. The Osa's very dynamic forests have very high turnover rates: their potential production capacity is the highest in the country and is estimated in approximately 186 cubic meters per hectare. Tree species diversity is also very high, with more than 170 different species per hectare. Our management system carefully monitors and maps all tree falls year round, and with appropriate low-impact technologies it makes possible the profitable utilization of only a small fraction of the overall forest potential. We extract an average of 0.75 cubic meters per ha./year of commercial woods on a continued basis, which is only about 30% of the total mass (2.50 cubic meters per ha./year).of fallen trees found in the monitored light gaps.



Location of Osa's 3 management units (Guaymi, Piro, Balsa)



Detail of management unit showing grid and location of individual fallen trees

Making forestry attractive to smallholders

Local producers have already sold more than 80,000 board feet of high quality tropical hardwoods with a market value of near than $40,000 without cutting a single tree. In 1992, under the system of middlemen and outsider loggers, the same amount of wood would have represented no more than $2,000 in income for these same producers, or 5%. Much better profits are slowly changing attitudes towards forest management opportunities amongst the Osa rural population.

Research, technical assistance, training and marketing for community forestry

In order to make forestry a profitable and attractive option for local land-owners that otherwise may decide to change land to other uses, a combination of policy changes and support activities are necessary. Together with local knowledge and the tested and proven local social institutions, policy reform and outside support may be able to create a market-oriented system that saves the forests and creates better options and services for local residents and society in general. For seven years TUVA has promoted practical research and participatory technology development and currently is working to create markets for the timber and non-timber products of the fallen timber management units. TUVA hopes that with good markets the OFTER approach could expand as a community-forestry model for the Osa that benefits smallholders, consumers and society in general.

AVAILABLE TIMBERS (SAWN IN 3" x "12 x 11.5' BOARD SIZES)

LOCAL NAME	BOTANICAL NAME	TRADE NAME	AVAILABLE M^3	# OF TREES
Reseco	*Tachigalia versicolor*	Pellejo de toro	287	73
Chiricano	*Vantanea barbourii*	n/a	284	97
Nazareno	*Peltogyne purpurea*	Purpleheart	168	19
Caobilla	*Carapa guianensis*	Andiroba, Crabwood	99	43
Nispero	*Manilkara achras*	Chicozapote, Sapodilla	82	11
Cedrillo	*Tapiriria sp.*	Fresno, cedro dulce	79	42
Manglillo	*Aspidosperma sp.*	Amargo	87	49
Ajo	*Caryocar costaricensis*	Cagui	64	20
Cedro maria	*Calophyllum brasilensis*	Jacareuba, Santa Maria	43	17
Masicaran	*Qualea paraensis*	n/a	39	19
Cristobal	*Platymiscium pinnatum*	Panama redwood, roble, granadillo	37	20
Ira Rosa	*Ocotea sp.*	n/a	33	20
Pilon	*Hieronima alchorneoides*	Urucurana	24	9
Canfin	*Tetragastris panamensis*	n/a	23	12
Mayo	*Vochysia sp.*	n/a	22	10
Cerillo	*Symphonia globulifera*	Manil, Manni, Anani, Chewstick	17	17
Manu	*Minquartia guianensis*	Aratta, Manwood	15	11
Mora	*Chorophora tinctoria*	Fustic, Moral, Mora Amarilla	10	7
Yema de Huevo	*Chimarrhis sp.*	n/a	10	8

AVAILABLE HARDWOODS DESCRIPTION

(continued on next page)

LOCAL NAME	BOTANICAL NAME	TRADE NAME	KG/M3	DESCRIPTION
Reseco	*Tachigalia versicolor*	Pellejo de toro, tostado	400-460	Light wood. Medium grain, light brown-golden color. Very easy to work. Only local uses known but very popular for furniture and artisanry.
Chiricano	*Vantanea barbourii*	n/a	700	Heavy, strong, hardwood. Fine grain. Red-brown color, with black stripes. Only local use for housing construction, exposed beams and furniture.
Nazareno	*Peltogyne purpurea*	Purpleheart	800	Very heavy and hard wood. Unique purple color with very fine grain. Used for flooring, panelling, furniture and artisanry, weather resistant.
Caobilla	*Carapa guianensis*	Andiroba Crabwood	500-640	Semi-light and semi-hardwood. Brown uniform grain. Sold as mahogany. All-purpose wood, good for framing and furniture.
Nispero	*Manilkara achras*	Chicozapote Sapodilla	1040	One of the hardest woods in C.R, and the famous wood of Mayan temples. Comparable to Minquartia in durability and weather-resistancy. Used for buried posts, coachwork, framing, doors, artisanry.
Cedrillo	*Tapiria sp.*	Fresno, Tapiriri, Fruta de paloma	400	Light, semi-hard wood of the cedar type, with easy-to-work properties. Used in inside furniture and boxmaking.
Manglillo	*Aspidosperma sp.*	Amargo	500-560	Semi-light and very bitter, termite-resistant wood. Fine and even grain. Peach to pink color. Very valued locally for framing and furniture.
Ajo	*Caryocar costaricensis*	Cagui	500-550	Semi-light medium-hard durable wood. Medium-coarse grain, light in color. Only used locally mainly for outside heavy construction.
Cedro maria	*Calophyllum brasilensis*	Jacareuba Santa Maria	470	Light and semi-hard but extremely weather resistant wood. Fine even grain. Creamy toasted color. Pliable and easy to work with. Used for exterior construction, furniture, cabinets etc. One of the favorite woods of Costarican woodworkers.
Masicaran	*Qualea paraensis*	n/a	500-700	Semi-hard wood, medium heavy, cream color, straight grain, suitable for furniture and turning.
Pilon	*Hieronima alchorneoides*	Urucurana	600-840	Semi-heavy durable medium-coarse grain, red brownish to pinkish color. Used locally for framing and mainly for boat building.

AVAILABLE HARDWOODS DESCRIPTION

(continued)

LOCAL NAME	BOTANICAL NAME	TRADE NAME	KG/M3	DESCRIPTION
Canfin	*Tetragastris panamensis*	n/a		Local uses, light cream to brown color, used locally for furniture.
Mayo	*Vochysia sp.*	Quaruba	450-510	Light and soft wood. Pink to light orange in color. Very easy to work with. Very similar to Andoung and Cedrela. Used for framing, boxes and furniture.
Cristobal	*Platymiscium pinnatum*	Panama redwood Roble	500-680	Heavy, hard wood. Brownish red color with lines of red and black interspersed in the grain. Considered one of C.R finest woods. Used for flooring, furniture, artisanry, musical instruments.
Ira Rosa	*Ocotea sp.*	n/a	350	Light but hard woods. Different species offer variable color and grain. Only local uses for furniture.
Cerillo	*Symphonia globulifera*	Manil, Manni, Anani, Chewstick	710	Very heavy semi-hard wood. Medium grain. Creamy to yellowish in color. Easy to work with. Used for flooring, furniture and boxing.
Manu	*Minquartia guianensis*	Aratta Manwood	720-960	Heavy, very hard and very durable wood. Fine grain, and dark brown heart wood. Used only locally for boat construction.
Copo hediondo	*Couratari guianensis*	Mahot Wadara	620	A heavy but soft wood. Medium grain. Creamy color with pink and yellow tones. Easy to work with. Used for framing, flooring, furniture and toys.
Quina	*Ocotea veraguensis*	n/a	350	Light but hard woods. Different species offer variable color and grain. Only local use, for furniture.
Mora	*Chlorophora tinctoria*	Fustic, Moral, Mora Amarilla	750-960	Extremely heavy and hard wood, very durable with fine to medium grain. Light creamy or yellowish color. Used for flooring, furniture, heavy construction and agricultural implements.
Yema de Huevo	*Chimarrhis latifolia*	n/a		Yellow-whitish wood, straight smooth grain, easy to work, suitable for light-weight indoor furniture.

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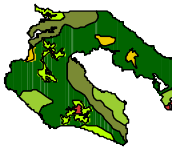

Until today, REMAC `s tropical woods have only been commercialized locally in their country of origin, Costa Rica. It is the first time that we propose to open markets in Europe. Our forestry products are SMART WOOD[CM] certified which ensures:

T**Long term survival of the forest resource of Osa.**
T**Preservation of wildlife habitat and biodiversity**
T**Support for stable local economic development**

LOW INTRODUCTORY PRICES FOR EUROPEAN MARKETS

Our forestry products are based on ZERO FELLING management, therefore there is a fixed quantity of wood to be marketed yearly and no more. We have a "non-elastic offer", and we know exactly wich kind of wood there is, how much and where. Orders can be filled FOB-Limon or DDU-European port. Also sawnwood and finished products can be obtained DDP - Colmenar, at our ***new*** distribution office in Spain.

CURRENT PRICE RANGE

FOB - Limón M³	**$390 - $490**
DDU - Europe M³	**$440 - $540**
DDP - Cádiz M³	**$650 - $750**

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HELP STOP CREAMING
use new hardwoods!

Only a few of the more than 100 commercial species available in the Osa forest are now being used by european manufactures,such as Andiroba, Mahot, Manil or Central American Cedar. There are many other beautiful tropical woods that local artisans have been using for generations to build their houses and furniture, such as Reseco, Manglillo, Yema de Huevo, Ajo, and others. We have detailed information on the physical and mechanical specifications for these woods, so equivalencies with better known species can be found. By buying alternative woods with the same uses, you will be helping to stop creaming, which causes forest degradation.

For an information package, please send us your:

NAME _____ ORGANIZATION _____

ADDRESS _____

CITY _____ COUNTRY _____

PHONE _____ FAX_____ EMAIL _____

Please mail this coupon to: Fundacion TUVA, Muros de Palacio 10, 29170 Colmenar, Malaga, Spain