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Awono, A., Ingram, V., Schure, J. & Levang, P. 2011. Guide for small and medium enterprises in sustainable non-timber forest trade in Central Africa. Yaoundé, Cameroon, CIFOR. Small and medium forest enterprises (SMFEs) based on NTFPs are already contributing to poverty reduction of rural and urban people, and providing a diverse range of food, energy, medicines, materials and culturally important goods. These businesses can be promising avenues for economic development and resource conservation if they practise sustainable forest management. Moving SMFEs from opportunistic entrepreneurs to economically viable businesses, however, requires an enabling environment with laws and policies that promote legal access to the resource base and incentives for sound forest management. Many businesses need support to add value to the products they deal in and to manage the resources needed for effective forest and

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Analysis of patterns of bushmeat consumption reveals extensive exploitation of protected species in eastern Madagascar. PLoS ONE, 6(12): e27570.

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NTFPs are important in many ways for food security, livelihoods and health of small farmers and forest dwellers in the developing world. Often they are traded internationally and in some cases the majority of a given product crosses international borders. In these cases, external markets on the other side of the border determine the vibrancy of the sector. And often little is known about participants and their roles in international supply chains. Given the importance of NTFPs for these vulnerable groups (small farmers and forest dwellers), and the knowledge gap, especially regarding the international NTFP trade, the Global NTFP Partnership decided to do an analysis of available information to identify issues and options for interventions. The NTFP Partnership and INBAR intend that this publication, although focusing on a limited number of NTFPs in four countries, will be useful for a wider audience interested in understanding the issues and designing interventions around NTFPs and the communities depending on them.

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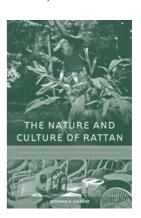
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Shanley, P., Cymerys, M., Serra, M. & Medina, G. (eds). 2011. Fruit trees and useful plants in Amazonian life. Non-Wood Forest Products 20. Rome, Food and Agriculture Organization of the United Nations, the Center for International Forestry Research (CIFOR) and People and Plants International. Download: www.fao.org/docrep/015/i2360e/i2360e.pdf/ (Please see pages 17, 19, 21, 24, 26 and 75–77 for more information and extracts from this publication.)

**Siebert, S.F.** 2012. The nature and culture of rattan: reflections on vanishing life in the forests of Southeast Asia. Honolulu, Hawaii, University of Hawaii'i Press.



The nature and culture of rattan examines the ecology, use, management and cultural significance of one of the world's most important forest products. It does this through the knowledge, practices and lives of rattan cane collectors and artisans in three Southeast Asian forest villages where the author lived and worked over a 25-year period. Author Siebert brings to life crucial issues in tropical forest conservation and management, including government policies; household livelihood strategies; conflicts between local resource use and Western protected area management approaches; and the value of integrating scientific inquiry with traditional ecological knowledge and practice. A comprehensive Web site with many photographs, suggested readings and discussion topics accompanies the book: www.cfc.umt.edu/rattan/ (Please see pages 10–11 and 40 for more information.)

Soriano, M., Kainer, K.A., Staudhammer, C.L. & Soriano, E. 2012. Implementing multiple forest management in Brazil nutrich community forests. Effects of logging on natural regeneration and forest disturbance. Forest Ecology and Management, 268: 92–102.

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Ethnobotanical knowledge, populations and *ex situ* conservation trials in *Juglans regia* Linnaeus (Juglandaceae) in Sikkim. *Pleione*, 5(2): 304–313.

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# **Sunderland, T.C.H. & Pottinger, A.H.** (eds). 2011. *The International Forestry Review.* Special Issue: Forests, Biodiversity and

Food Security, 13(3). Commonwealth Forestry Association.

Torre, L. de la, Valencia, R., Altamirano, C. & Ravnborg, H.M. 2011. Legal and administrative regulation of palms and other NTFPs in Colombia, Ecuador, Peru and Bolivia. Special issue on Neotropical palm. Botanical Rev., 77(4): 327-369. NTFPs derived from palms and other plants are economically and culturally important to a large part of the more than 240 million people who live in the forest areas of developing countries. The sustainable extraction of NTFPs is increasingly regarded as an important part of forest conservation strategies. This paper provides an overview and comparison of existing statutory legislation with respect to the extraction and trade of NTFPs in four Andean countries and discusses its adequacy with respect to ensuring legal and sustainable extraction and trade of NTFPs. Forest laws are primarily concerned with the regulation of timber. Hence, legal and administrative frameworks to regulate the extraction and trade of NTFPs are fragmented and ambiguous. By providing an overview of the existing legal situation, this paper seeks to inform and open debates about ways to improve the regulation of the extraction and trade of NTFPs in the region. (Please also see entry under Balslev

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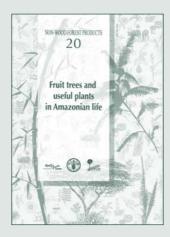
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## NEW PUBLICATIONS FROM FAO'S NON-WOOD FOREST PRODUCTS PROGRAMME

### FRUIT TREES AND USEFUL PLANTS IN AMAZONIAN LIFE



Fruit trees and useful plants in Amazonian life, a collaboration between the Center for International Forestry Research (CIFOR) and FAO, serves two main purposes. It provides extensive information on Amazon fruits and Amazon communities, illustrating how local peoples have adopted and adapted to the plant kingdom around them to distil vital nutrients, medicines and other products fundamental to their survival; it also shows how scientific information can be presented in an innovative and more inclusive way, one that can be adapted accordingly by other actors worldwide.

The publication is a testament to the enormous potential that integrating

traditional and scientific knowledge can have for both local communities and academic and development professionals alike. It also serves as a reminder to the scientific community that science should be shared with local people and not confined to journals and closed circles of technical experts. From Brazil nuts and cat's claw to copaíba and titica, this publication shares a wealth of information on a wide range of plant species that only close collaboration between local peoples and researchers could possibly breed.

Fruit trees and useful plants in Amazonian life – No. 20 in FAO's NWFP series – has been edited by Patricia Shanley, Margaret Cymerys, Murilo Serra and Gabriel Medina.

Copies of this publication can be purchased from FAO's Sales and Marketing Group at publications-sales@fao.org. or downloaded from:

www.fao.org/docrep/015/i2360e/i2360e.pdf/



### HEINZ BECK ENDORSES FAO'S AMAZON PUBLICATION – YOUTUBE

A video of Heinz Beck – the world-renowned Executive Chef of the Roman restaurant, La Pergola – endorsing Fruit trees and useful plants in Amazonian life is available on YouTube. He also talks about the various foods from the forests that he uses in his kitchen. www.youtube.com/watch?v=qX2gqSPzOB4/



# Patricia Shanley talking about *Fruit* trees and useful plants in Amazonian life

The closing event for the 2011
International Year of Forests was held
on 20 December 2011 at FAO
headquarters in Rome. The event
launched Fruit trees and useful plants in
Amazonian life and had as its guest
speaker Dr Patricia Shanley, Senior
Scientist at CIFOR and lead editor of the
publication. We would like to share her
inspirational speech with our readers.

It is an honour to be here with all of you to celebrate the International Year of Forests. We are particularly grateful that FAO has embraced such an unusual book. It is unusual as it was originally written in large part by and for people who do not read. These include peasant farmers, hunters, gatherers, traders and midwives. Right alongside, 90 leading tropical forest ecologists share their findings, some from a lifetime of research.

This book strives to make science accessible to rural households that daily decide whether forests stand or fall. Unlike ourselves who are mired in too much information, people in remote areas are not on the receiving end of research. For this reason, the book

synthesizes rigorous ecological and trade data on 33 regionally important species. This is integrated with local knowledge of management, use and processing that has been accumulated over generations. Much of this information is conveyed through illustrations, cartoons, music and folklore.

What do folklore, art and music have to do with forests and food security?
Everything – cultural and emotional connections to nature are what link people to their landscape. By placing scientific and traditional findings on the same page, the book celebrates and affirms local knowledge and fortifies the role of rural people as custodians of the forest.

For example, the chapter on *uxi*, a regionally popular fruit, illustrates the income of timber compared with fruit on one hectare; vitamin content; and recipes of how to make jam, puddings and soap. For children who may be hungry, it teaches the use of a special whistle to call the wind to help fruit fall from the tree. It also shows how to use the seed to make a good luck charm, like the one I am wearing. A cartoon shows a farmer planting an *uxi* tree stating that and scientists say it is not viable to plant *uxi*. Clearly, farmers sometimes know more than scientists.

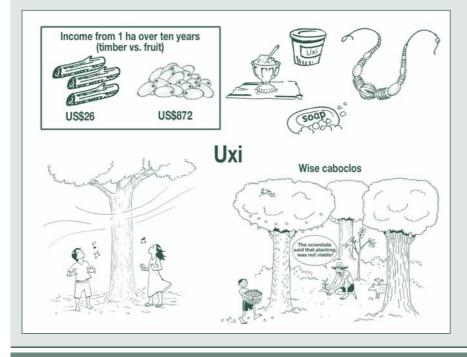
The story of how this book came to be is two decades long, but I will share only highlights. Fresh out of forestry school, I was invited to work with forest communities along a tributary of the Amazon, the Capim River. At that time, logging companies were entering the region and would soon be extracting 15 of the most valuable fruit and medicinal oil trees. The villagers wanted to know, "Will we benefit more from selling timber or keeping our forests for game, fruit and medicines?".

It was a straightforward question, but one which we are still working on. The tree species most important to their livelihoods were not internationally traded and so poorly studied. There were no data on fruit production by which to compare timber values. So for five years we counted fruit, flowers and game capture beneath massive *piquia*, *bacuri* and *uxi* trees. And for 20 years we have documented fruit tree mortality and the changing household consumption of forest goods after successive logging events. What did we find out?

First, the subsistence value is substantial and far outweighs that of timber. Villagers receive the equivalent of approximately €1 per entire tree for timber, while each of the trees annually produced from 200 to 3 000 fruit – worth €50 or more. Villagers also noted that they were never sick during the season of forest fruit.

With data from hunters, we ranked trees according to how much game was captured beneath each species. Underneath the *piquia* trees, villagers captured 232 kg of game during only one flowering season – illustrating the intimate connection between fruit trees and family protein intake.

We also discovered a threshold – selective logging was initially compatible with the use of other forest products, but there is an irreversible point after which a forest does not readily recover. The first timber sales go well – few species are extracted and villagers receive quick cash. But as the frequency and intensity of logging increase, the forest becomes degraded until fire enters and consumes the rest.



Unsustainable logging of locally valued species can lead to catastrophic changes in landscapes and livelihoods.

Witnessing a steady decline in consumption of forest goods, we began to hold community workshops where villagers who had collected data, shared them to help others make more informed decisions regarding timber sales. We must have hit a nerve. Suddenly we received invitations for workshops from villages near and far.

So Jurandir (a macho caboclo),
Curumi (the son of an Indian shaman)
and I rolled the posters into our
backpacks and headed down rivers and
logging roads. One afternoon, hiking
miles out of a workshop we forded a
stream. Wet, tired and dirty, the futility
of our endeavour hit us: we would
never be fast enough to slow the tide of
exploitive logging sweeping across
Amazonia. That evening, in the
darkness of a small boat, we put our
workshops on paper and sketched out
the first draft of the book which we
have in front of us today.

The first edition was modest. Publishing for the poor in Portuguese is not a competitive career move. Everyone working on the book did so for free. But the response was overwhelming. Not only villagers and schools, but taxi drivers, housewives, industry executives and even loggers lined up to get copies.



A copy found its way to the Minister of the Environment, Marina Silva. She read it from cover to cover and asked for an expanded edition with species from across the Brazilian Amazon. Apparently, no-one wanted to lose cultural and culinary treasures such as *bacuri* ice cream, *açaí* wine and *buriti* jam.

So our young daughter and I began to travel across the basin when she was six months old, and over the next five years made trips together in search of scientists and villagers who had deep knowledge about useful species. Many were reticent to write in slang and publish in pictures – this book would not boost their publication record – but the spirit of the book grabbed them and, to their credit, they defied convention and shared their research with villagers.

Writing a book is only 50 percent of the work, however; the rest is distributing it strategically and getting it into the hands of people who truly need it. Fortunately, we have developed exceptional partnerships with groups within Brazil's social movement, such as the National Council of Rubber Tappers that works within extractive reserves throughout Amazonia. Governmental agencies such as the Minister of the Environment and Embrapa (Brazil's National Agricultural Research Agency) have helped enormously, by publishing thousands of copies of the book to distribute to rural smallholders. Radio programmes, a documentary on the role of women in forests and adult literacy courses have extended its reach into homes and schools nationwide.

Today, we are pleased to extend the reach of the book internationally. Our hope is that the English version may serve as a springboard for others in Asia, Africa, Latin America and Europe.

None of this would be possible without the long-term devotion of many people and before closing I would like to introduce you to two notable contributors who could not be with us today.

You may recognize Mangueira and his family from your invitation. Mangueira's family (Editor's note: please see photograph on back cover) and our research team have worked together for

20 years, measuring the game meat, fruit and fibres they glean from their forest. The results from only one hectare were so astonishing that they have never permitted their forest to be logged. They are the only family in the area that has held back the tide of logging, living within an island of primary forest surrounded by degraded areas.

Gloria Gaia is a peasant farmer and community organizer who has struggled against illegal logging on her own land. She has since taken on the task to ensure that others do not suffer the same fate. Living under difficult conditions and working with little support, she tirelessly brings the book and medicinal plant workshops to remote villages throughout Amazonia. Her workshops have catalysed communities to protect valuable species from logging, to create forest reserves and to ensure that women are part of the decision-making process regarding forest stewardship.

The trees that Mangueira and Gloria love and care for – bacuri, piquia and uxi – are wild; they are not cultivated, but are managed in forests and peri-urban areas, thus protecting valuable ecosystems. As more people live in cities and technology takes the place of play, we need to ensure that children play outside among the trees. Today, I would not be standing here if my parents had not chosen a house on a dead end, along a river in the woods.

In closing, I would like to share two tree branches with you. This one is beech which signifies prosperity. This other is magnolia, signifying love of nature. For a long while, prosperity was achieved at the expense of forests.

However, we are beginning to recognize that true prosperity and cultural resilience can only be achieved with a deep love of nature, such as that which Mangueira and Gloria live by.

Forests do not merely regulate climate and nourish our bodies; we have evolved together and they are integral to our imaginations and our souls. I suggest that we are not closing the International Year of Forests but opening ourselves to embrace their magnificence and essential role in our lives.