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CHOCOLATE, CHAMBIRA AND CHUNCHO—ECONOMIC ALTERNATIVES TO WILD MEAT

Cocoa harvesting and other sustainable initiatives provide conservation incentives for the Waorani communities in the Ecuadorian Amazon

Heavy hunting pressure to supply up to 10 tonnes of wild meat every year to Ecuador's largest wild meat market in Pompeya has led to the rapid depletion of all the large animal populations found in the nearby Yasuní Biosphere Reserve, a region consisting of more than two million hectares of rainforest in the Ecuadorian Amazon, with one of the highest levels of biodiversity in the world. Such exploitation places at risk the food security and livelihoods of the local 3000-strong Waorani people, an indigenous group living within the Reserve, who are committed to making efforts to conserve their resources, culture and way of life. Conservation of the region's dwindling resources is therefore of the utmost urgency.

To this end, the project "*Strengthening Biodiversity Conservation and Management in Waorani Territory: creating sustainable economic alternatives for diminishing wildlife trade*" was initiated by TRAFFIC and the Association of Waorani Women of Ecuador (AMWAE) in 2010 that aimed to identify economic alternatives that would replace incomes generated from

the sale of increasingly overexploited wild meat resources and maintain the variety of wild animals and plants that live in this region. TRAFFIC worked with some nine Waorani communities to devise strategies that would have multiple positive environmental and social impacts, not only to improve livelihoods and enhance food security, but also to promote sustainable use, empower women, offer job/income opportunities and increase territorial stewardship and economic integration.

Following lengthy consultations, a range of economic alternatives was identified; one of these was the planting of cocoa trees to produce ingredients for top quality chocolate, which would not only provide a sustainable source of income but also raise the social profile of the Waorani; furthermore, it could also serve as a model for the production of other non-timber forest products (NTFPs)—for example, Ungurahua *Oenocarpus batua* oil (used as a hair tonic and treatment for scalp conditions) and wild honey.

Wao (short for Waorani) chocolate is the resulting product of a unique partnership between the Waorani, TRAFFIC, and BIOS, a well-known and prestigious

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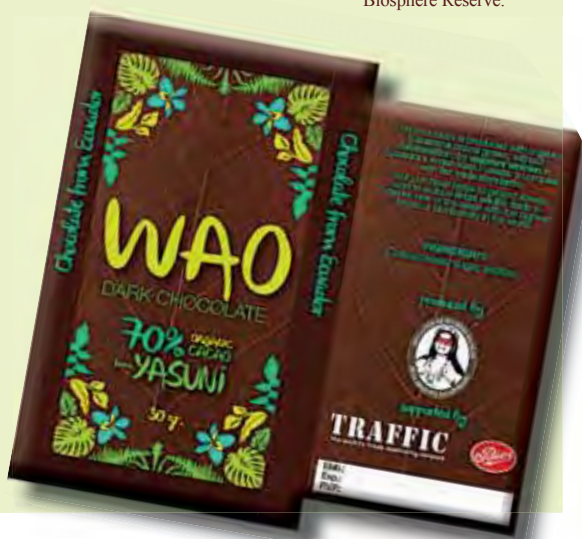
CHOCOLATE GROWING GUIDELINES

The Waorani communities taking part in the scheme use the following guidelines:

- Trees are only planted in areas that were previously cleared—thus production of the chocolate does not contribute to any deforestation.
- Planting trees does not replace or eliminate essential food crops for householders.
- Only the highest quality “cacao fino de aroma” varieties are used.
- All plantations are 100% organically cultivated (Certification with ECOCERT is in progress).
- It complies with the principles of fair trading, with the Waorani women receiving a fair price for their product. (FairTrade recognition is being sought).
- Families monitor their own household hunting pressure, so that wild resources in the area do not become depleted.
- The processing of the cacao beans into chocolate takes place in Ecuador, so that the Waorani can easily access the final product for direct sales locally.

◀ Clockwise, from left: a Waorani woman at work in the “chuncho” (*Cedrelinga catenaeformis*) nursery; cocoa expert, Manuel Zavala, sharing scientific and traditional knowledge among the Waorani community of Tepapade; a Waorani woman preparing “chambira” palm leaves of *Astrocaryum chambira* to make baskets, hammocks and handicrafts to sell to tourists.

▼ Wao chocolate produced by Waorani women in Yasuni Biosphere Reserve.



Ecuadorian chocolate company. As a direct result of this initiative, now in its fifth year, the Waorani have ceased the commercial hunting of wild animals and the wild meat market in Pompeya no longer exists. In Francisco de Orellana (El Coca), the main city in the region, “Yasuni friendly” menus without wild meat options are commonly seen in local restaurants thanks to the concerted efforts of provincial and municipal authorities.

With the assistance of expertise provided by cocoa expert Manuel Zavala, the Waorani have learned how to cultivate, nurture, and process the cocoa beans. As the initial purpose of planting cocoa trees was to sell cocoa beans above the market price to replace and supersede income from the sale of wild meat, the decision to produce the Wao chocolate in Ecuador has been a radical and challenging step but one that has created a unique precedent: an indigenous community that is evolving from being a supplier of raw materials, to being engaged in the manufacture and retail of high-value end products, boosting the prestige, self-esteem and income of community members. With local acceptance high, the ambition is to export the chocolate products. The project thus provides an innovative model of linking chocolate production to conservation, supporting the development of a niche international market for biodiversity-friendly chocolate. This product’s credentials go much further than those for most organic and fair-trade chocolate that is already available on the market, in that they are linked to the tangible conservation of threatened wildlife resources in a part of the world where biodiversity conservation and zero-deforestation is of top priority. In addition to this example of cacao cultivation from the Yasuni Biosphere Reserve, there are also possibilities in the region for sustainable production from wild crops. In Bolivia, a co-operative experimented with FairWild certification of wild cacao for production following the principles of sustainable and fair trade in wild plant ingredients. Opportunities to make connections with other relevant projects such as these are being sought.

In Yasuni Biosphere Reserve, TRAFFIC has also helped support interventions to improve the sustainable harvesting of “chambira” *Astrocaryum chambira* palm leaves, a plant traditionally used by Waorani women to make baskets, hammocks and handicrafts to sell to tourists. Guidance follows the FairWild principles of fair and sustainable wild resource management, resulting in joint work between members of the community, scientists and non-governmental organizations to develop a management plan, carry out a resource assessment and prepare training materials. The lessons are still being learned as the process matures and the results become apparent.

Nurseries growing “chuncho” or “tornillo” *Cedrelinga catenaeformis*, a valuable native timber species, are also being created to sell saplings to local government agencies, oil companies and farmers for reforestation projects. “Chuncho” has a higher than average capacity to absorb and store carbon from the atmosphere, making it a powerful ally in the battle against global warming.

The Waorani have further diversified their income and reduced hunting pressure on wild mammals by introducing fish farming into some communities as a complementary source of protein (especially the native Pacu *Piaractus brachypomus*), and to strengthen food security.

- ▶ A view of the Waorani territory in the Yasuní Biosphere Reserve.

The Waorani people own approximately 800 000 hectares of tropical forests in the Amazonian region of Ecuador.

- ▼ Waorani children (bottom left); woman preparing “guanta”, or Lowland Paca *Cuniculus paca*, a much prized local delicacy, but an animal under pressure from illegal hunting (bottom right).



ANA PUYOL / TRAFFIC

This package of economic practices has served to reduce the unsustainable use of resources while preserving and reinforcing the identity of an indigenous group and its cultural values, which too often in the region have been eroded or lost. In South America, traditional approaches for regulating the wild meat trade have been dominated by interventions which prioritize enforcement and control systems. The innovative initiatives described here, which are directly benefiting some 660 Waorani people, demonstrate that, in the context of such high biodiversity, poverty and lack of institutional capacity to deal with illegality, implementing innovative sustainable economic alternatives, while simultaneously developing enforcement strategies, is the most viable way to reduce illegal wildlife trade and address resource depletion. Further, one of the key achievements of the project has been the empowerment and participation of the Waorani women in important decision-making processes such that they now command strong and prestigious roles which has been critical in revitalizing these communities.

Enforcement solutions in the region have been failing for decades and yet, in just over two years, a strategy has been devised that has resulted in the closure of Ecuador's principal meat market and the establishment of alternative economic solutions that will help drive the Waorani's future in a sustainable direction. Many challenges remain and significant support is needed to establish the optimal conditions necessary to consolidate and sustain this positive momentum. However, it is a strategy with potential for myriad benefits, both in the Amazon and elsewhere.

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Greening traditional Chinese medicine industry supply chains in China

China, the origin of and biggest centre of production for many medicinal and aromatic plant materials used in traditional Chinese medicine (TCM), produces a wide variety of plant-based herbal medicines and ingredients that are consumed both within China and worldwide. However, wild TCM plant resources in China, as in other parts of the world, are under threat, with populations declining across the country, in large part owing to over-harvesting to meet high demand from the TCM and herbal products industry.

In response to this global problem, TRAFFIC, WWF, IUCN, the German Federal Agency for Nature Conservation (BfN) and others developed the FairWild Standard, which provides guidance on sustainable and equitable sourcing of wild plant products. The Standard and guidance tools are now being used by industry to improve product sourcing guidelines, by governments to design harvest and trade controls, by communities in their management systems, and by intergovernmental agreements (e.g. the Convention on Biological Diversity). This article introduces a project in which the TCM industry is being encouraged to take responsibility for the sustainable use of wild plant resources by following the principles of the FairWild Standard, and aims to further the availability of market-based mechanisms such as FairWild certification, which is not currently available in China.

The project *Engaging the private sector in sustainable management of medicinal plants—the multiplier effect* is being implemented over two years (2013–2015) in China's Zhejiang and Hunan provinces. It brings together four partners: TRAFFIC, the World Federation of Chinese Medicine Societies (WFCMS), Wecome Pharmaceutical Ltd and the WWF China Programme Office, to create a mix of conservation expertise and TCM