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## MEDICINAL AND AROMATIC PLANTS: CONSERVING BIODIVERSITY AND SUSTAINING LIVELIHOODS IN THE NORTH-WESTERN GHATS, INDIA, AND IN NORTH VIET NAM

TRAFFIC-led projects on the sustainable harvesting of wild medicinal and aromatic plants (MAPs) and implementation of the FairWild Standard are currently under way in a number of countries. One of these is being implemented by the Applied Environmental Research Foundation (AERF), and concerns two kinds of fruit growing in the North-Western Ghats region of India. Another project, in co-operation with the Bac Kan, Provincial Forest Protection Department (BK FPD), focuses on the sustainable wild collection of a range of plant species in northern Viet Nam's Nam Xuan Lac Species and Habitat Conservation Area, Cho Don District, Bac Kan Province. The following three pages report on the progress of the work being carried out in these areas.

Funding for TRAFFIC's work on these projects was provided by Keidanren Nature Conservation Fund (KNCF).

◀ AERF team carrying out field work in Ratnagiri, Maharashtra, Western Ghats, India.



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**INDIA:** two sites were identified in the heavily deforested region of the North-Western Ghats for possible implementation of the FairWild Standard in respect of *Terminalia bellirica* and *T. chebula* (pictured).



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**VIET NAM:** activities focused on the sustainable wild collection of *Alpinia latilabris* (pictured), *A. malaccensis* and *A. menghainensis*, and *Amomum villosum* and *A. xanthioides* in the first phase of a project in Bac Kan province.

► **MEDICINAL AND AROMATIC PLANTS:  
NORTH-WESTERN GHATS, INDIA, PROJECT**

Conservation of biodiversity in a human-dominated landscape has always depended on the extent to which particular values—cultural, spiritual and/or economic—are respected. In India, rapid economic development and the forces of globalization have led to a severe deterioration in cultural values associated with natural resources, their being substituted with monetary ones. This has led to unsustainable exploitation, posing serious threats to the stability of ecologically important habitats such as the forest ecosystems of the Western Ghats. There is, however, an opportunity to enhance biodiversity conservation through the careful use of economic instruments. The medicinal plants sector, though highly promising in terms of combining economic development and biodiversity conservation, has seldom delivered on these expectations. Unfair market practices and a disregard for resource sustainability are some key reasons behind this failure, as evidenced by local extinctions and declines in healthy populations of many economically important medicinal plants. Good management practices that are ethical, inclusive and economically viable may provide a truly sustainable alternative for biodiversity conservation and livelihoods. The principles and criteria of the FairWild Standard and its associated certification system have the potential to make forest conservation economically viable.

This report describes a project being implemented in the North-Western Ghats of India where FairWild certification is being tested as a vehicle for promoting biodiversity conservation and economic growth, through the sustainable collection of target species. In the North-Western Ghats, a global biodiversity hotspot, the majority of the forest landscape is privately owned and therefore unprotected: according to figures available from the Government of Maharashtra, in three districts alone—Raigad, Ratnagiri and Sindhudurg—about 6000 km<sup>2</sup> of forests are owned and managed privately. The average forest cover in these districts is 48% of the geographical area. In the absence of sound biodiversity management practices on these lands, subsidy-driven monoculture plantations, together with a lack of knowledge about economically viable sustainable alternatives, is resulting in large-scale deforestation.

The Applied Environmental Research Foundation (AERF), a conservation non-governmental organization (NGO) based in Pune and the implementing partner for the FairWild project, started an initiative—Myforest (Myforest.co.in)—in 2007 to address the problem of deforestation in this region. Under this programme, AERF offered a financial incentive to the marginal and economically weak farmers to encourage them not to log the forests, signing conservation agreements with them, which last for between five and 10 years. The progress of this approach was initially slow as this was a completely new way of looking at forests. However more farmers joined this initiative once they started to

think about resources in a holistic way. Through this initiative, AERF has secured protection for 2000 acres of forests up until 2022. Though this is a significant step forward in arresting deforestation, it is now necessary to create a revenue model based on sustainable use of this vast resource in order to create financial self-sufficiency necessary to sustain this conservation initiative. About three years ago, AERF became aware of the potential of FairWild certification in addressing some important sustainability issues of biodiversity conservation. In 2010, AERF, together with the University of Kent, supported by a Darwin Initiative Scoping Grant, carried out a feasibility study for this project in the North-Western Ghats region. The motivation for the study was provided by the active involvement in the initial phase of Pukka Herbs—a European manufacturer of herbal teas and medicinal health products, whose interest in purchasing organic and FairWild-certified primary processed fruits of *Terminalia bellirica* and *T. chebula* helped AERF to shortlist two sites for possible implementation of the FairWild certification. The first of these—the Bhimashankar Wildlife Sanctuary in the North-Western Ghats—is traditionally known for the collection and sale of *T. chebula* by the tribal community *Mahadev Koli*. The second site—the forested areas located in Sangameshwar, in Ratnagiri district—is rich in populations of *T. bellirica* trees. The fruits of these trees have proven anti-inflammatory and anti-viral properties and are used in “triphalā”, said to be one of the most central products consumed as part of Ayurvedic practice.

After assessing the potential benefits to conservation and rural livelihoods in these areas, AERF carried out some initial work towards FairWild certification using existing funds. However in June 2013 AERF, in partnership with the Durrell Institute of Conservation and Ecology at the University of Kent, and Pukka Herbs Ltd., secured financial support from the UK Government’s Darwin Initiative, followed by a grant from the Keidanren Nature Conservation Fund (KNCF), jointly with TRAFFIC, to promote the FairWild approach. These funds have enabled the implementation of this programme to gather pace. In the last six months, AERF has conducted capacity-building sessions for the local communities, carried out a situation analysis, as well as a trial collection and primary processing of the collected fruits. A few of these activities had to be repeated in order to meet the requirements for organic certification. The final selection of beneficiaries has been completed and the project is set to receive its first audit in the coming year.

The project has achieved two significant outcomes benefiting both conservation and the communities. The study carried out by the AERF research team in 2011 identified that, out of 33 nesting sites of the Malabar Pied Hornbill *Anthracoceros coronatus* and the Great Hornbill *Buceros bicornis* in the Sangameshwar block, 23 were found in *Terminalia bellirica* trees. There is therefore strong incentive not to cut down the trees if the fruit can earn communities a decent income which, in turn, sustains the conservation of hornbills. As for the impact on communities, the *Mahadev Koli* tribal people of Bhimashankar Wildlife Sanctuary, who for centuries





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Clockwise, from top: *Terminalia bellirica* (with Great Hornbill *Buceros bicornis*, centre), Sangameshwar; ripened fruits of *T. chebula*; first author, front row, third from left, with community members from Dhagewadi village, Bhimashankar Wildlife Sanctuary in the North-Western Ghats.

have engaged in the collection and local sale of *Terminalia chebula* fruits, have now understood the potential and scale of the mainstream economy based on the processing of these fruits, and will soon have the capacity to do so. Hitherto, a lack of sufficient incentive and the requirement for documentary evidence of ownership of the resource has meant that they also have been deprived of the economic opportunities available in the domestic market. However, the intensive capacity-building sessions, coupled with documentary requirements of FairWild and organic certification, is helping these communities put their land records straight and officially claim ownership of the trees on their land. This is an extraordinary

outcome, which provides a fine example of stakeholder groups—communities, NGOs, the private sector and academic institutions—coming together for a single cause, and using a combination of good practices and economic incentives to precipitate biodiversity conservation and sustainable livelihoods. Such consensus augurs well for such initiatives achieving successful outcomes over the longer term, both for the local communities in these selected sites in the North-Western Ghats and the rich biodiversity they harbour.

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## ► MEDICINAL AND AROMATIC PLANTS: VIET NAM PROJECT

Since mid-2011, TRAFFIC has been co-operating with the Bac Kan, Provincial Forest Protection Department (BK FPD) to implement activities focused on the sustainable wild collection of medicinal and aromatic plants (MAPs) in northern Viet Nam by applying FairWild Standard principles. The FairWild Standard incorporates principles of ecological and social responsibility and provides a fair and value-added management and trading system for wild-collected natural ingredients.

The current project activities, made possible through funding provided by the Keidanren Nature Conservation Fund (KNCF), focus on MAP species recognized as being threatened by overexploitation driven by commercial demand and limited knowledge of sustainable harvesting practices. Activities implemented in Bac Kan in the first two years were made possible through funding to TRAFFIC from the Critical Ecosystem Partnership Fund (CEPF) and aimed at strengthening the capacity of the local collectors and authority's capacity to protect threatened MAPs in Nam Xuan Lac Species and Habitat Conservation Areas (NXL SHCA). This protected area was officially established in 2011 according to a provincial decision although, since 2003, with the support of the PARC (Creating Protected Areas for Resource Conservation using Landscape Ecology) project, this site has been operating with a trial management structure, which aims to introduce in NXL SHCA a co-management approach to conserve biodiversity, particularly flagship species. A series of trainings, meetings and consultations were conducted for local collectors and stakeholders to increase their understanding of the role MAPs play in the ecosystem and collectors' livelihoods, current threats to MAP populations, wild plant resource management, harvest monitoring, sustainable collection and value adding processing techniques, and to assist them with connections to stable

markets for their MAP products. The additional funding provided by KNCF has provided an opportunity for TRAFFIC to strengthen market linkages for communities (from collectors to the end-users) with the objective of increasing the income of local collectors and achieving fairer trade along the trade chain.

The approach used for plant selection and project implementation has been to engage project partners from the local communities—specifically ethnic minority groups and partners—to solve issues of economic and health security in their own communities. The consultative approach is key to implementing the principles of the FairWild Standard. Two species groups were selected for the first phase of the project (*Alpinia latilabris*, *A. malaccensis* and *A. menghainensis*, and *Amomum villosum* and *A. xanthioides*) and an additional five target species are being considered for the second phase under KNCF funding (*Stemona tuberosa*, *Cibotium barometz*, *Homalomena oculata*, *Ampelopsis cantoniensis* and *Gynostemma pentaphyllum*).

The main aim of the activities funded by KNCF is to build on the dialogue between the different trade chain actors. The intermediaries and several domestic pharmaceutical companies have already expressed their interest in the sustainably

collected wild MAP products supported by the project. They have indicated that they believe the benefits from the trade chain would be shared more fairly for all if stakeholders can reach a commitment to a benefit-sharing mechanism and local collectors apply the FairWild Standard principles. Additionally, this second phase of the work has “pushed” local authorities towards a leading role as implementers and managers of the activities, shifting TRAFFIC’s role towards providing financial and technical support until links can be facilitated between local communities and other stakeholders to ensure appropriate regulation and MAP species management.

Numerous challenges have been encountered during project implementation. The first of these challenges has been to overcome the initial limited commitment from the local collectors regarding sustainable harvesting practices. The collectors are understandably often concerned more about increased income and stability than conservation and the benefits of sustainable harvesting. It is also often difficult to reconcile the benefits and interests of different stakeholders. The project is trying to distribute the profit fairly along the trade chain but different components of this chain have different objectives. Traders and pharmaceutical companies want to

promote the wild-collected products to increase their profits, while local collectors are focused on collecting as much of the required product as possible to provide for their families. It has also been a challenge to find appropriate methods to promote the wild-collected products in domestic and regional markets. Once harvested, it is often impossible to distinguish wild-collected from cultivated products so it can be difficult to persuade customers to pay more for products derived from wild-collected plants and there is little domestic demand for certified products, such as FairWild.

While it will take more time to help local communities and authorities to be able to manage MAP species independently and sustainably, and to improve their livelihoods and protect the ecosystem vital to these species, pharmaceutical companies and stakeholders have expressed an interest in this work and an initial commitment to working towards fairer trade. By demonstrating the economic value of sustainable natural resource use, TRAFFIC hopes to reduce the current ecological degradation of the NXL SHCA and ensure the future conservation of the species it supports.

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▼ Training was provided to collectors in Xuan Lac Commune to help them identify which species they are allowed to harvest and which are under threat and need to be protected.



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▲ A Tay woman from Ban Tun village, Xuan Lac Commune, after harvesting fruits of *Amomum villosum* and *A. xanthioides*.