# **Evaluation of:**

# Conservation, Enterprise and Livelihoods:

Efforts through Sustainable Non-Timber Forest Product Management

in the

Nilgiris Biosphere Reserve

a project implemented by the Keystone Foundation

with support from the Ford Foundation

2002-2007

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## Conservation, Enterprise and Livelihoods – Efforts through Sustainable Non-Timber Forest Product Management in the Nilgiris Biosphere Reserve

# An evaluation of a project implemented by the Keystone Foundation With supported from the Ford Foundation, 2002-2007

#### Introduction

This report is an evaluation of the Non-Timber Forest Product (NTFP) Management project of the Keystone Foundation in Kotagiri, Tamil Nadu, India. Located in the Western Ghats in Southern India, the project's focus is the Nilgiris Biosphere Reserve (NBR). Wth an area of 5,520 square km and 200,000 tribal (adivasi) peoples, the reserve hosts exceptional floral and faunal biodiversity. The report has been commissioned by the Foundation at the request of the Ford Foundation which has supported Keystone's NTFP Project during the last six years.

Since their founding in 1995, Keystone has been actively engaged in numerous internal and external evaluations of various aspects of their work. Rather than greeting another evaluation with reticence, the directors and staff appeared to embrace the idea of taking a brief pause in their busy schedules to reflect on one of their major projects. The multifaceted nature of this project and the number of places, people and species with which the project has engaged make it impossible to comment adequately on the wealth of activities. Thus, the evaluation will select examples, with which to make broader points.

The full terms of reference for this evaluation are given in appendix 1. Prior to the visit, Keystone sent numerous documents including the recently published, Honey Trails in the Blue Mountains (2007), Forest Plants of the Nilgiris (2006), an illustrated medicinal plant booklet, as well as project reports focusing specifically on NTFPs such as Biodiversity Conservation through Income Generation (1998) and more recent reports (appendix 2). The literature allowed a glimpse into the sustained and serious nature of Keystone's interest in non-timber forest products as a resource to assist communities and to contribute to conservation.

During the five-days in the region, the consultant visited: the main campus of Keystone; three communities; two central production centers; one village-based production center; four green shops; one community-based nursery; one forest area which had received ecological assessment; and the Bee Museum and education center.

#### Organization of the report

First, an executive summary is given. Following, each of the six questions posed in the terms of reference are addressed. The final report to the Ford Foundation includes specific responses to these questions, thus, this evaluation will comment and offer suggestions. The next section includes a list of conclusions and recommendations. Lastly, a list of contacts is included which may be useful to Keystone. Appendix one and two list the terms of reference and literature consulted, respectively. Appendix three lists questions which arose based on a reading of Keystone's literature, prior to the visit.

#### **Executive Summary**

On balance and given the resources available and the opportunities presented for work on non-timber forest products (NTFPs) in the region, Keystone has made significant and long lasting contributions to eco-development in the Nilgiris Biosphere Reserve (NBR), and has laid a strong and substantial foundation for future work. Keystone's transdisciplinary methods to approach the topic of non-timber forest products (NTFPs) have resulted in locally and internationally relevant work in forest ecology, trade, art, culture and economics. Methods and approaches exhibit institutional and personal flexibility needed to engage in complex landscapes and issues. Keystone's work offers lessons which may be replicated.

In their mission to improve the livelihoods of tribal peoples, Keystone has reached a significant number of households: 500 families work in harvesting, training and procurement; 28 permanent employees are involved in processing; and 86 villagers are involved as temporary employees. Reaching 46 villages, Keystone has set up six production centers which also serve as areas for information generation and exchange. Experience and training in harvesting and production centers has not only increased income, it has boosted community members self-esteem and offered valuable and transferable job skills. Work in production centers has particularly given women opportunities for work within village settings that they would not otherwise have had. Empowerment of women will offer a multi-generational impact.

Keystone's rigorous work on the ecology of locally valued species and design of protocols for harvesting and monitoring establish Keystone as one of the world's most holistic and leading NGOs working on non-timber forest products. Ecological work on priority species has been well directed, engaging at each step with communities and producing relevant and community-accessible products. The wealth of ecological research results are partially published and warrant additional analysis and publishing. Strategic thinking about impact pathways will help to ensure the work reaches key audiences.

Keystone has been wise to balance its focus on income generation with non-market values of forests. Non-commercial values associated with forests are not easily measured or quantified but are an essential part of the fabric of forest cultures. Keystone's effort to revitalize the use of sacred groves and their associated traditions has met with enthusiastic response from both the Irula and Kurumba peoples. Underlying Keystone's approach is a profound knowledge of and respect for both forest people and the forests within which they carve out their livings.

In the realm of governance, communication with Village Forest Councils and the Forest Departments has increased during the course of the project and regular sessions are held to share project-generated information. Due in part to the phase of the project and staff specializations, work on the ecology and trade of forest goods has occupied more staff time than direct work on issues of governance. Keystone is in a good position to increase its capacity to deal effectively with governance and industry issues related to forest product trade.

Keystone has expanded its range of partners during the last six years, engaging fully with a key regional partner, the Southeast Asian NTFP Exchange Programme, as well as creating its own India Exchange Programme. Keystone promotes active knowledge sharing – with local villagers in its project activities and at a national and regional level.

Keystone will need to consider if and how they want to grow -- horizontally - opening more production centers and shops - or to consolidate those that they have begun, and to begin transfer of power to allow production centers to function more independently. Opportunities for horizontal growth will appear and can continue to help Keystone to meet its mission by reaching out to and serving additional forest peoples as well as helping to conserve forest habitat.

If Keystone delegates additional responsibility and gradually transfers power to production centers and villagers, institutional space can be created for vertical growth. Application of Keystone's findings at the macro-level is justified given the long history and their knowledgeable foundation of the forest and people interface. Vertical growth could entail more focused engagement with national and state policy processes, industries, and/or universities, research and training centers. Industry-related work will likely entail new and/or strengthened collaborations with strategically selected NGOs and industries. National and global industries sourcing forest goods for the personal care, herbal and ayurvedic industries are in great need of information by which to orient their extraction practices. As it considers growth into new arenas, staff will need to reflect upon the competitive advantage of Keystone in different realms.

Institutionally, a significant amount of the management, fundraising and strategizing remains in the domain of the Directors, over time it will be useful to create a strong second tier of staff to share and take over parts of the Directors' responsibilities. Scholarships for study, investment in training, opportunities for participation in management meetings and delegation of additional responsibility to staff will help to build further internal capacity. A visiting scholar program can also assist in this.

Communication at Keystone among and between staff and between projects is high. The institutional culture is dynamic and management has fostered an exceptional degree of interaction, particularly considering the diversity of backgrounds of the staff. Sustained dedication and commitment of staff is evident as they persevere in the hard field work and political reform necessary to reach the very difficult goal of ecodevelopment. Many groups attempt to improve livelihoods through forest products - due to the innumerable obstacles - few succeed. Some of the characteristics that make Keystone unique include consistent commitment and genuine personal interest in and care for the forests and forest-reliant people on the part of the Directors and staff. Built on long-term field presence, Keystone's scientific rigor is matched with imagination, creativity and humility. The ingredients which have led to success at Keystone merit analysis as there are lessons to learn for applied conservation and development projects, policy makers, and donor agencies.

### **Questions and Responses from the Terms of Reference**

1) Review the information, resource assessment and conservation initiatives taken in the programme to promote a sustainable resource base. How have they been done, what is their outreach, and how has the community gained/been involved in this?

#### Methods to discern species with relevance locally and internationally

Site and species selection is critical in ethno-ecological work – as these lay the groundwork for project success or failure. The NTFP project began in Coonoor and Kotagiri; after establishing the project in these regions, in 2006 the project expanded geographically to include the southern hills of Pillur, Sathyamangalam Hills and the northern plateu of Sigur. Each region features different floral diversity, tribal peoples, geo-political environment and habitat threats. The next task, choosing a few species out of the hundreds making up a biodiversity hotspot such as the Nilgiris Biosphere Reserve is a daunting one and can easily lead to a study without relevance for local people. Many resource assessments are conducted with minimal local consultation.

The species selected for in-depth study range from having both endogenous and/or exogenous importance values. By choosing species of interest locally, but also those which are ecologically vulnerable to land use change and/or extraction with global significance, Keystone has straddled local and global conservation and development issues. Among others, some of the key products selected for study include: the cornerstone of their work, honey which has strong socio-cultural significance: amla, (*Phyllantuhs emblica* and *P. indofischeri*), fruits with widespread importance and which have food value; black dammar (*Canarium strictum*), a resin which is widely used in ritual practices; and (*Cycus circinalis*), an at-risk species, which is marketed in spite of a trade ban. As is common across the world, in spite of their importance to local villagers, none of the selected species had received in-depth ecological or trade study.

#### Community involvement and spin-off activities

An essential part of Keystone's approach has been true integration of villagers into their resource assessments, species prioritization, nurseries, value added and production and sales centers. Cooperation between Keystone staff and community members (even those who initially "tagged along out of curiosity"), made it possible for Keystone staff to see the forest and its resources according to local perceptions. By engaging in this manner, at each step of the way, Keystone has sharpened its vision of which species are ecologically, economically and culturally useful to invest in. Methodologically it was essential that each of the phases of the assessment were accomplished with villagers as the cultural significance of various species became clear to the scientists and highly relevant spin-off activities (nurseries, seed banks, sacred groves) have been initiated and are underway. The center's openness to explore spin-off activities, even those seemingly unrelated to NTFPs (i.e. women's traditional pottery making) has enriched the center's significance to communities and strengthened their relevance in the region.

#### Multi-pronged resource assessment process

Keystone's intensive methods indicate their serious involvement in working with and for communities. Months of investment in resource assessments and years of ecological studies in different zones and a range of plots have been undertaken to better understand how habitats influence populations. Numerous methods are used to cross-check their findings. Participatory mapping identified areas of resource aggregation, resource conflict, ancestral domain and boundaries and resources that would likely have been overlooked through outsider's eyes. Keystone discovered that while harvest plays a role in the population dynamics of the species it is but one of numerous other factors. Assessing species from an ecosystem perspective to monitor the health of the ecosystem is just one of Keystone's approaches with value in the broader national and international context.

#### International significance

Keystone's study of species such as *Canarium strictnum* is important in that worldwide, resins are an essential and widely used plant product, but lacking in study. Work on this species can help to improve overall scientific understanding of resin ecology and use. In addition, the study contributes to a current international debate regarding the roles and limits of traditional ecological knowledge. Results demonstrate that highest grade resin and sustainable collection is ensured when collected from natural fissures as has been done in the past. The findings indicate that current collection practices of harvesters are not likely to be sustainable and point to sensible strategies to reverse this trend: improved prices for high grade resin through a sustainable labeling scheme; combined with forest cultivation.

The data gathered range from PRA maps of species location, to the relation between the impact of harvesting, grazing and fire on seedling density. Keystone's robust data sets have been painstakingly gathered and will merit sharing, not only with the Forest Department and villagers with whom it was gathered, but also with the broader scientific community through publishing. Keystone has made valuable collaborations with university students and researchers and should continue doing so to ensure that such rigorously collected and unique data are widely accessible.

With the assistance of a grant from IDRC, Keystone is consolidating its resource findings and working toward developing a set of protocols for harvesting and monitoring NTFPs. Such an initiative can feed directly into other national and international efforts such as, the development of producer guidelines, industry association standards and medicinal plant collection guidelines. It is only with the input of rigorous local level studies, that international initiatives to develop ecological guidelines can be reliable.

2) Review the programme for its effectiveness in addressing livelihood aspects of the community. Has it increased incomes significantly, has it addressed large number of members of the community, have the benefits been fair and well spread?

Keystone has set up an ambitious program for improving livelihoods through collection and sale of NTFPs. It is not common to see an NGO involved so thoroughly in the production chain all the way from resource assessments to sustainable sourcing to marketing and sale. Yet to have an impact in this region where prices for NTFPs are low, where state control is high and where options for small holders (other than wage labor for plantations), are scant, a detailed, thorough and committed engagement has been necessary.

#### Households reached and benefits along the market chain

Keystone has reached a considerable number of people in 46 tribal villages through employment, harvesting and production centers; 500 adivasi families work in harvesting, training and procurement; 28 permanent employees are involved in processing; and 86 villagers are involved as temporary employees. Keystone has had a major impact on select families involved, including livelihood improvement, self-esteem, transferable work skills, gender balance and improved equity.

In addition to those who directly work at green shops, production centers and harvesters, family members of workers are well served by Keystone. One woman shyly related that her husband has been sick and unable to work, thus her work at the production center is her family's principal earning. Although each of the women working at the production center has suffered from discrimination and surmounted many obstacles to work outside of the home, they radiate a strong spirit of loyalty and dedication to the production center and their work.

This is also evidenced by the stories of the women and men working in the centers. While the numbers appear to be few in some centers, the impact of such a major change in their lives is difficult to measure. These changes also have the potential to be cross-generational as the children of these courageous women are growing up with entirely new role models in their families.

On the other hand, some harvesters complain that they receive far less benefit than those who work in collection centers. It will be useful to document and analyze price markups along the market chain to see who is benefiting most from the various products being sold. This will offer an indication as to which products are worth pursuing and which may not be offering adequate benefits. Consolidation of the information and data will allow better assessment of the impact on livelihoods. For example, what is the heterogeneity of the HHs involved in the projects and those affected? Are they the lesser or better off HH? What is the gender balance?

#### **Inclusion of non-market values**

Keystone's focus on both commercial and non-market values associated with NTFPs is well founded. Emphasis on purely income generation through NTFPs, can neglect other critical aspects of the role of NTFPs in rural livelihoods – such as socio-cultural and psychological. Keystone has been wise to balance its focus on income generation with other, more difficult to grasp, but vital elements of the role in forests in local livelihoods (i.e. honey songs, kinship rituals - brother-in-law securing the honey collector's rope, sacred groves). These elements are not easily measured or quantified but are an essential part of the fabric of forest cultures; however, as forests decline, these are easily eroded. Keystone products and activities which celebrate these traditions (sacred grove calendars and monthly meetings, medicinal plant booklet in local language, forest culture celebrations, forest product tools sold at green shops, urban and rural environmental education, resin painted cards) should continue as they are a core aspect of Keystone's uniqueness and strength. Hundreds of NGOs work on income generation through forest goods - fewer address the non-economic value of forests to people.

# 3) How has the institutional model worked in different centres? How can this be made more holistic and a receptacle for all aspects concerning sustainability and access?

Keystone's own question – is this institutional model sustainable? – or is a closed loop – is a critical one to address. Answering this effectively will require additional monitoring of project outcomes and analysis of data gathered during the six-year period. The institutional model and how it works is dependent on various parameters including: site location, staffing, forest department regulations, and resource access. Each of the six production centers are distinct based on the tribal group involved and the resources in or near the site. Based on viewing of two centers – one small and one large - getting the right team is essential as well as a good location and access to resources.

#### **Capacity building**

Identifying motivated, interested individuals to begin production centers is central. Keystone has adeptly identified and tapped into the enthusiasm of particular villagers whom they are training – such individuals will be a key to transferring power and long-lasting change. Wage-labor personnel, who come for short shifts during the year and who become acquainted with Keystone's work, are another potential source.

Fiscal responsibility is central to building capacity. Accumulated profits have fed into a revolving fund which is an important financial mechanism to help ensure that villagers can make decisions independently and invest as needed. This fund should be continued and training across production centers expanded. Profit sharing and membership are two additional strategies which can provide individual incentive. The learning curve is extremely steep for rural people to become adept at new tasks such as accounting, quality control and standardization. Patience and sufficient time will be needed to allow villagers to familiarize themselves with such new concepts and practices.

#### Technical recommendations and product mix

The 2007 technical evaluation of the production centers offers specific recommendations which, although ambitious for village-level production, are valuable and offer a guidepost as to how to move forward over time. Some of the recommendations have already been implemented such as using new formats for record maintenance, inventory management and sales. Some of the additional topics mentioned in the report which bear attention include: hygiene, quality control, grading mechanisms and internally enforced standards.

During the project time frame, many new products have been developed and tested. Product development reflects innovation, tapping into the local knowledge of tribal peoples regarding species abundance, as well the knowledge base of Keystone staff (i.e. grandmother's recipes). Some products are based on wax, a by-product of honey gathering (lip balm, candles) and others on agricultural products (mango pickle, jams and marmalades). Including agricultural products in the product mix is an extremely important strategy to diversify the product base with abundant, easy-to-gather species which are sourced sustainably from homesteads. Because sustainability of forest species is more difficult to ascertain, endeavors to develop multiple products from one forest species which has received study (such as amla), offers a useful diversification strategy.

#### Horizontal growth

One key question for Keystone's future whether and how they want to grow horizontally - opening more production centers and shops – or to consolidate those that they have begun, and begin to transfer power to allow production centers to function more independently. Opportunities for horizontal growth will appear and, can continue to help Keystone to meet its mission by serving additional forest peoples.

Each site, species, village and state offers new challenges, thus horizontal growth need not result in Keystone becoming stale. On this path, Keystone and its local partners would refine their methods and institutional model to function more effectively. Over time, costs as compared to the benefits will become lower and efficiency will increase. Ideally, progress will begin to occur spontaneously, with neighboring villages learning lessons from Keystone's centers. This path could help Keystone to offer eco-development models with potential replicability beyond the NBR and/or India.

#### **Support**

The NTFP project is tremendously cost-effective; the majority of the support was used directly for the development of resources centers, enterprises, information dissemination and training. Support has resulted in an astounding number of high-quality products: 2 comprehensive field guides; numerous posters; > 200 seeds deposited in collections; 6 production centers; 8 village-based nurseries and numerous green shops and scientific articles. A relatively modest proportion of the support has been designated for the human resources necessary to guide and develop this project. The Ford funds have been vital in supporting seven exceptional full time and three part time Keystone staff as well as 114 village people. What was critical about the support was that it was granted for six years. Eco-development cannot happen in an accelerated time frame and it is to Ford's credit that they initially invested for no less than three years and extended the support for an additional three years.

# 4) How has the programme integrated with government initiatives like JFM in the states? What more can be done in this aspect?

As part of the NTFP project, Keystone set up a steering committee with the Forest Department to evaluate the progress of the project and to share its result. Each six months a meeting was held to address policy issues. Representatives from the District and regional offices forest managers, researchers from the NGO, ATREE and Keystone staff took part in these meetings. Engaging openly with policy makers and the Forest Department is an important step. The complexity of policy issues and the history of lack of empowerment of tribal peoples indicate that such initiatives will necessitate long term attention. Any change in the Forest Department will no doubt be slow in coming but this is a step forward in improving communications and relations.

The chronology of Keystone's activities has given them a firm knowledge base by which to engage in an informative manner with government. Prior to engaging in sensitive governance and policy issues, Keystone has proven itself by getting a strong grasp of the technical issues surrounding species composition and ecology, tribal relations, local political structures, and marketing realities. In a related project, approximately 200 members of Village Forest Councils have received 3-day training programs at Keystone as well as Range Officers and Forest Guards. Keystone has rightly earned a respected position throughout the NBR which strengthens it ability to press for policy reform.

Due to the primary focus of the project on forest product collection and commercialization, the governance aspect of the work has been given less directed attention than the resource assessment and marketing work. Some researchers and staff are engaged in the issue of governance, but it is often as a byproduct of their more focused work on trade and ecology. If the governance aspect of the work is one which Keystone decides to invest more in, they will likely need to consider additional staff with expertise in this realm and/or enhanced collaboration with other institutes.

Keystone has a difficult challenge in the governance arena by working across three state boundaries (Tamil Nadu, Kerala and Karnataka) where each state has different regulations regarding forest products. Such a variety of policy environs offers a fertile backdrop to assess under which policies eco-development is more effective. It also offers a potential foundation on which to offer recommendations based on Keystone's findings. For example, in Kerala, where tourism is expanding, what leverage points exist to engage the state to address the unsustainable extraction of forest products by the ayurvedic industry? Which state allows tribal people's livelihoods to grow in ways which they choose, but to retain aspects of their culture that they continue to value?

# 5) Review Keystone's role in the overall NTFP management scenario and assess what more needs to be done and what aspects need to be streamlined and improved.

What is striking about Keystone's approach to NTFPs, is that in spite of the myriad of major and minor obstacles – many centuries old - they press on in a complete and committed way. Some donors, scientists and research institutes have abandoned NTFPs

concluding these represent an archaic activity which is irrational economically. Some contend that NTFPs constitute "a poverty trap" - one which is not worth investing in as such "inferior and substitutable" products will not yield sufficient income to "lift" rural people out of poverty (in the sense of increasing their income). Generally espoused by economists lacking direct field knowledge, this view represents a conceptual, macro-level obstacle for groups working with forest peoples and products. As this international debate continues, it will be important for Keystone to publish their findings and to engage in policy dialogues to represent the views and experience of forest people.

Micro-level obstacles are also numerous. Ecological work does not generally offer concrete, short or medium-term gain for communities. Over time, community members can benefit from ensuring a sustainable resource base, but this is often not a priority interest and they generally need compensation to engage in assessments and monitoring. However, the process of identifying indicators in monitoring can assist in critical documentation of valuable, local ecological information. Activities which support documentation and analysis of the details of management practices, such as the pioneering NTFP management workshops hosted by Keystone, should continue.

Marketing of forest goods is also often beset with difficulties, ranging from their invisibility and gross economic undervaluation to non-transparent trade channels, confusing legal status, and lack of power on the part of collectors and vendors. This is particularly the case for groups with weak literacy and numerical skills. Keystone's approach to tackle and realign all aspects of the trade chain from source to sale is ambitious. Such an approach will not have success with all products and in all locales, but can assess under which conditions this approach is working so as to replicate in other areas with those conditions. Lessons learned from Keystone's in-depth work will be valuable to inform conservation and development project design.

Keystone's marketing work could potentially leverage more change through collaboration with a network of NGOs and research institutes. Collaborative work could assist to engage in: watch dog efforts of the major industries extracting forest species; lobbying for policy reform; promoting increased awareness among consumers; and serving to raise understanding among industries and governmental bodies of sustainability issues involved the increasing trade in herbal products.

#### Following are some recommendations on Keystone's NTFP eco-development:

#### Predict vulnerability and experiment with management options

Increasing demand for natural personal care products in the ayurvedic and herbal industries as well as for medicinal plants by the pharmaceutical industry have major implications for sustainable harvest of forest species. It will be important for Keystone to engage with partners to predict which forest species may be vulnerable to over-exploitation and of these, which might potentially be cultivated and/or managed. Conservation plans should be developed for species which are vulnerable and are not easily managed and/or planted. Experiments in cultivation should be undertaken of those

which may be domesticated. If local management practices exist for any of the species in high demand, these merit detailed documentation.

#### Continue integrating traditional and scientific knowledge

The products produced such as comprehensive field guides, a medicinal plant booklet in the local language, and posters each demonstrate deep knowledge of the region, and are innovative in format, language and design to meet the needs of forest communities. Grounded in excellent science and integrating fascinating aspects of indigenous knowledge, these products are pioneering in both their approach and their accessibility to local people. Keystone's staff has forged new ground in 'publishing for the people' and such an approach is rare among researchers, NGOs and academic institutes. The products reflect not only creativity at the tail-end of the research, but a research process that asked relevant questions and integrated local concerns from the beginning. Some communication experts posit that another 50% of the work lies ahead in ensuring that these products are disseminated to the right persons and institutes. It may be useful to include a one-page insert questionnaire in key publications to assess reader's reactions.

#### Continue seed collection and community-based nurseries

Monitor germination rates and success rates so as to feed into nursery planning for the future. Based on villager interest and success rate in establishing trees, consider using the seedlings for restoration work and/or marketing seedlings. Continue the practice of encouraging local input on species diversity. Continue seed collection and farmer seed-exchange programme and consider collaboration with international centers working on seed banks such as IPGRI (Bioversity).

#### **Document the process of community monitoring**

Community monitoring is being raised internationally as a potential strategy for conservation strategies to work, yet relatively little is published on how and why different groups are engaged in it, nor the outcomes. Keystone could offer a useful contribution, particularly if the difficulties and achievements are described and analyzed.

#### Consolidate and analyze

Keystone has generated a significant information base. It will be important to consolidate and analyze this (as researchers are currently doing) and strategize about where and how leveraging this information will best serve their overall objectives. Linking with select advocacy and research NGOs to convey a joint message from numerous collaborators will likely prove more effective than acting independently.

#### Pursue useful collaborations with universities and researchers

Expand the current internship program to select undergraduate and higher education students for the purpose of continuing well directed research at Keystone. In this way, well-selected ethno-ecological research can continue, but staffing and field costs are reduced. Research should be within the mandate and strategic plan of Keystone.

# Continue exchange programs, workshops and collaborations with select international and national NGOs

It is to Keystone's credit that it has attracted some of the most well known and respected NTFP experts in the world to Kotagiri. Collaboration with the SE Asian NTFP Exchange Programme (Jenne de Beer and Crissy Guerrero) has been mutually beneficial in terms of intellectual exchange, grass roots strengthening and to diversify funding sources. More recent collaboration with People and Plants International has resulted in excellent ecological studies of *Carnarium* sp., cycads and NTFP management workshops. It will be important to continue being highly selective as to collaborators; to date, Keystone has shown great aptitude as they have attracted both high quality people and institutes.

#### 6) Given the current situation, provide some guidelines for work in the future.

If Keystone delegates additional responsibility and gradually transfers power to production centers and villagers, institutional space can be created for vertical growth. Application of Keystone's findings at the macro-level, is justified given the long history and their knowledgeable foundation of the forest and people interface. What might vertical growth look like?

#### Vertical growth

First, vertical growth could include focus on some of the underlying and systemic reasons for exploitative harvest, declining resource assess and inequitable pricing. Work in this realm could include the application of Keystone's results at the macro-scale, entailing greater engagement in policy processes at the national and/or international level. Secondly, vertical growth could include engagement with the private sector through analysis and critique of key industries engaged in the collection and sale of forest goods from the NBR (i.e. ayurvedic, personal care, pharmaceutical). Such work could leverage change among large industries to engage in due diligence regarding the ecological and socio-economic aspects of harvesting. Industry-related work will likely entail new and/or strengthened collaborations with strategically selected NGOs and industries.

Vertical growth might also include greater connections with international research centers and/or universities advancing the concept of Keystone as a Field University or "Mountain Knowledge Center". Movement in this direction could include Keystone offering methodological contributions based on its research and development processes. A model and/or conceptual framework for marketing NTFPs could result from such work; guidelines for donors or project design; and/or potential theoretical contributions. This work could be accomplished with collaborating students and researchers but remain grounded in Keystone's long-term, applied field studies.

In reflecting on its path ahead, it will be useful for Keystone to conduct a SWOT analysis (strengths, weaknesses, opportunities and threats) of horizontal and vertical growth. The lure of vertical growth might be that of venturing into a new geo-political sphere. However, it will be important to factor in that work in the governance realm entails potentially intractable problems. Analyzing and working with the private sector also has numerous obstacles, but both offer potentially substantial pay-offs in terms of broad-

based impact. The staff and Directors will best make these decisions based on opportunities available (for production centers/shops, industry or political engagement...), the level of capability of current staff, and the viability of gradual transfer of power. Directors will also need to consider the competitive advantage of Keystone in different realms. What is unique about Keystone's background and knowledge base and where does this position the Foundation to make a difference, particularly as opposed to other institutes? Keeping a strong presence on the ground will continue to serve Keystone well.

#### Some additional recommendations for Keystone's work in the future include:

#### Network with NGOs working with industries and policy makers

For policy interventions to be successful, timing is critical. The current bill on Forest Livelihoods, for example, offers a window of opportunity where tribal peoples could gain legal access to NTFPs and more land under their title. As local and international certification initiatives become more familiar, another option will be to explore the potential to introduce certified (socially and ecologically) products into the marketplace. In Bangalore, the NGO, Revitalization of Local Health Traditions could be a useful collaborator.

#### **Engagement in select international meetings & processes**

Keystone can both learn from and offer valuable input for international meetings – specific to themes on which they are working (i.e. honey) as well as themes into which they may move (i.e. industry standards for sustainable sourcing of forest products, CBD, Biodiversity Action Plan).

#### Analyze process and share lessons learned

Within the next few years, Keystone may consider hosting a seminar (possibly with other projects with similar goals in eco-development), to draw out lessons learned from their 15 plus years of experience. Such an internal and/or shared exercise would focus on process, and the methodological and conceptual ingredients of success (and difficulties) of eco-development work. To date, Keystone's publications have rightly focused on specific outputs related to particular projects (honey, sacred groves, medicinal plants, field guide). In the future, it may be useful to produce a publication relating to process and the unique set of ingredients that have led Keystone to be so successful in a field in which there are often disappointing results. This exercise could assess aspects of the work that they have engaged in which may be replicable elsewhere. The output of such reflection could be useful to donors, project officers and NGOs and governmental organizations involved in project design.

#### Streamline decision making

It will be useful over time to transfer some decision making currently in the hands of Directors to Coordinators of projects. In this way, capacity can be built and power can be gradually transferred to staff on numerous tiers of the organization, resulting in a more stable organizational structure.

#### Delegate responsibility at production centers

Give increased attention to training of staff in production centers to gradually transfer control of various aspects of the work to locals. The goal of this transfer will be to eventually have Keystone in a support or advisory role and the evolution of production centers into independent resource centers. Resource or community centers could be places not only to produce products, but also to share information and raise awareness. Some centers may not have the ability to achieve this in the short or even medium term, but having this as a goal can give staff motivation to build their skills and become role models for others. Exchanges between production centers are an excellent training scheme and should be continued and strengthened.

#### Seek out scholarships

Keystone scientists are excellent candidates for undergraduate, masters and doctoral programs. Scientists involved in the NTFP project have more than enough experience and data to pursue advanced degrees. It will be useful to gather and share information on scholarships for higher education. Higher education on the part of the second and third tier of staff can help to bring up a new generation of leadership.

### **Summary of Conclusions and Recommendations**

#### An overall assessment of the project concludes that:

- Keystone has established itself as a valued and credible contributor on issues related to the ecology, management and trade of forest goods in the Nilgiris Biosphere Reserve (NBR).
- Keystone has brought about positive change in the rights and resource issues and trade of forest goods of local people in the NBR.
- Keystone has produced numerous high quality reports and has hosted meetings and workshops in which it has made valuable and innovative contributions to NTFP harvesting, management and trade practices both within India and beyond.
- Keystone offers an experimental model for progressive methods and approaches in bridging conservation and development.
- The staff of Keystone are highly respected and demonstrate an impressive range of competencies in the field of NTFPs and forests and livelihoods issues.
- Keystone's approach to its NTFP work is highly participatory, engaging local people in the resource assessments, value addition, and sale of forest goods.
- Keystone is flexible and opportunistic, responding to opportunities which have
  led the institute into work with pottery, sacred groves, museum development,
  urban and rural environmental education, health, nutrition, and the creation of
  numerous green shops and production centers.
- Prioritization of species has involved numerous methods and resulted in a balance of species and products of value locally and internationally. Scaling up of this effort to include other regional groups (i.e. Western Ghats Exchange Platform) can leverage additional power in assessing conservation and development potential.
- Market and ecological information is being disseminated at various levels. Efforts
  to ensure communication of results to local people and government officials
  should continue and potentially expand.
- Capacity building workshops for community members are a strong feature of Keystone's commitment to conservation and micro-enterprise development. These should continue and exchanges between production center staff and villagers be expanded.
- Keystone is in a good position to increase its capacity to deal with governance issues related to forest product trade. Communication with Village Forest Councils and the Forest Departments has increased during the course of the project and the regular sessions are held to share project-generated information.
- However, dealing with three different regulatory environments of the three states in which Keystone works in the NBR, presents challenges. In addition, it must be recognized that issues of forest trade, pricing, policy reform and property rights in India are complex issues that go beyond the forestry sector. Additional work in governance may require greater staff capacity in this theme, networking with other NGOs and more focused commitment.

#### Assessment of the NTFP activities, team and partners concluded that:

- Keystone will need to consolidate some of the current activities and allow some
  activities to become independent over time (i.e. production centers, green shops).
  In the future, Keystone can work toward acting as a support but become less and
  less engaged with the daily decision making at production centers which can be
  transferred to local staff.
- Plans underway to develop protocols for the harvesting of non-timber forest products have the potential to be useful both within and outside of India and should continue. Current partners (SE Asian NTFP EP and People and Plants International) are excellent collaborators for such work.
- Efforts to support local capacity in self-assessments and auto-monitoring can lead toward local labeling initiatives which will support sustainability and independence at the local level and trade centers.
- Monitoring of project impacts will allow for improved assessment of Keystone's
  work and assist in future strategic planning. With the help of an impact
  assessment specialist, Keystone could identify a limited number of indicators to
  enable the performance of projects to be assessed. Non-economic indicators such
  as gender, health and culture should be included.
- Capacity building will be needed in accounts, stock keeping, quality supervision and administration (as detailed in 2007 technical report).
- Trans-disciplinary methods have contributed to Keystone's success in working with and for tribal populations in forested regions and should remain a core aspect of Keystone's approach.
- Keystone's staff should remain open to new activities based on opportunities which arise, even those which are not linked to NTFPs. Spin-off activities (i.e. pottery, farmers' seed sharing banks, bee museum) have not distracted from, but have greatly enriched Keystone's work and contributed to meeting its mission.
- Agricultural products should continue to comprise part of the product mix at green shops and production centers. Product diversification through partnering with projects and NGOs in other regions also contributes to the sustainability and success of the green shops.
- Revitalization and documentation of land based traditions should remain a vital
  part of Keystone's portfolio. Lessons from Keystone's pioneering work on local
  seed collections, sharing of traditional crops, and sacred groves should be
  documented and shared with the broader scientific and development community.
- Incipient plans to engage with large industries and/or policy processes which impact the harvesting of large quantities of forest goods present new challenges, but merit attention. Activities in this realm will likely entail new collaborators.
- It could be useful to engage in ethnographic studies of the prevailing trends and subtle changes that come about as the result of eco-development in select villages (community self esteem, health, gender relations, familial obligations, social status, nutrition, conservation ethic, age-related trends in wage labor). This would require spending time in villages without a specific project objective (i.e. ecology or commercialization), seeking out the less visible changes in adivasi life.

#### Assessment of the institute recommends that:

- Continue the beneficial process of constructive, critical analysis which entails asking difficult questions of the institute and its members. Maintain the practice of including such reflection and commentary within internal and external reports.
- Keystone has avoided prescription of generalized panacea solutions to forest rights and access which has served it well. Over time it will be valuable to articulate the range of eco-development/forest-based enterprise models and strategies that respond to locally specific conditions.
- Increase the intensity of effort to collaborate with key research universities, institutes, and individuals to analyze and publish the rich, long-term findings of the NTFP project. Consider support and scholarships to assist staff enter studies for advanced degrees.
- Reflect on what types of uptake pathways for what type of products ensure that products are disseminated in such a way as to reach the right audiences.
- Ensure an appropriate balance between research and advocacy and seek key partners to leverage the information generated at Keystone.
- Continue its inter-disciplinary approach of integrating art, culture, music, crafts and forest-based traditions as a core part of its research and development activities
- Keystone should continue promoting an active knowledge sharing network within and outside of India with local villagers in its project activities and at a national and regional level.

#### Additional institutional considerations:

- **Enforce leave**: Directors are highly committed and thrive from the work, but need time away which will help to guard against 'founders syndrome'. At the start of the year, at least one month annually should be scheduled for time away from the institute which is not linked to daily work activities. This will need to be mutually enforced.
- **Invest in building a second tier**: build capacity and confidence in current staff in various aspects of running the institute so as to delegate additional duties to support staff, and diversify staff portfolios and increase aptitudes.
- **Build capacity in proposal writing**: offer opportunities to build staff skills to design projects and write proposals so that over time, this critical function of the organization will be shared more equitably.
- Nourish the interaction and "chaos": The human resources evaluator who commended Keystone on their chaotic nature and diverse staff has insight. The tea-time ritual whereby personnel meet on the lawn and exchange ideas strengthens the casual nature of Keystone, giving it more the feel of a 'village' than an institute. A high level of interaction among staff has arisen organically and should be nurtured.
- Continue to promote synergy between projects: projects are intertwined in such as way that each project complements the other. This exceptional blending of diverse themes (in spite of differing budgets and project time frames) should be maintained.

- **Remain non-technocratic**: Keystone is small enough but with a sufficient critical mass and positive interactions between staff that communication should remain direct. Keystone should maintain their institutional culture of not e-mailing colleagues at the center. To remain productive, the staff may also want to consider the "never open your e-mail in the morning" dictum.
- Share responsibility in receiving visitors: The influx of visitors appears large and growing; this has many positive aspects but the Directors should not have to repeatedly divert attention from their work. Sharing responsibility for introducing Keystone to visitors will allow staff an opportunity to better articulate and understand the broader mission and various programs of Keystone.
- Maintain attention to key details: The thoroughness and care with which the directors have designed and continue to manage Keystone is impressive. Although this is time consuming and compels Directors to maintain involvement in details (such as the design of labels & decorating the bee museum), this commitment to detail is part of what has branded the center and made it unique.
- Continue and expand links with universities and international and national institutes which can learn from, replicate and draw on lessons from the work of Keystone. Based on long-term, rigorous research with forest people and plants, researchers at Keystone can make a significant contribution to the scientific literature on NTFPs. Current NTFP literature is polarized, and often based on short term data. Although Keystone should not detour from its applied work and development mission, collaboration with universities and/or other research institutions for the purpose of analyzing and publishing project results, could advance the theoretical debate on forest products and help to intelligently guide donor agencies and project design.

#### **Potentially Useful Research Contacts**

The contacts below will be interested in Keystone's work. I have mentioned the work of Keystone to each of the research contacts listed below, and Keystone Directors and staff should feel free to use my name in contacting them.

Dr. Douglas Daly: The New York Botanical Garden, Bronx, NY

Expertise: Botany, authority on the Burseraceae family, therefore could be a good contact for Anita.

DDaly@nybg.org

#### **Dr. Campbell Plowden**: Center for Amazon Community Ecology

Expertise: Non-timber forest products, is particularly interested in resins, so may be a good contact for Anita for exchanging of ideas regarding the ecology of resin producing species. Very enthusiastic about the subject matter, founded this organization on his own to support community initiatives in NTFPs and native arts etc. cplowden@comcast.net Web site: www.amazonecology.org

**Dr. Laura Snook**, Coordinator of Genetic Resources Program at Bioversity (formerly called the International Center for Plant Genetic Resources), Rome, Italy. Bioversity is one of the 16 CGIAR belonging to the Intl. Agricultural Research network such as CIFOR. Bioversity has coordinated a global seed bank of wild seeds and would be very interested to learn more about Keystone's seed collection and seed sharing work.

#### Dr. Jean-Laurent Pfund: Center for International Forestry Research

Expertise: Leader of the Landscape Mosaics Project at CIFOR

The project is multi-disciplinary and includes many of the facets of work that Keystone is engaged in. A potential collaboration might be possible. I have discussed this with Jean-Laurent and he will write to Anita, Sneh and Sengil. Jean-Laurent has indicated that he hopes to invite Anita and Senthil to the next Landscape Mosaics workshop. JLPfund@cgiar.org

**Dr. Sonya Dewi:** International Center for Agroforestry Systems

Expertise: GIS, landscape level analysis of changing resource use Sonya is responsible for the landscape analysis for the Landscape Mosaics project and will eventually be a useful contact for Senthil.

SDewi@cgiar.org

Chris Barr: Center for International Forestry Research

Expertise: Finance and Trade (financial incentives to deforestation)

Works on issues relating to bank and private financing of unsustainable extraction practices (i.e. pulp and paper). As Keystone considers working on national policy issues and industry impacts on forest cover (i.e. Aruyvedic industry), Chris's experience might be useful.

CBarr@cgiar.org

#### Sarah Laird: Director, People and Plants International

Expertise: biodiversity prospecting, benefit sharing. If Keystone decides to work on issues related to the ayurvedic industry, Sarah's experience would be highly beneficial. Sarahlaird@aol.com

#### Nonette Arroyo and Chip Fey: Samdhana

Founders of Samdana, a recently created institute with a retreat/seminar center in Bali. Samdhana promotes exchanges between researchers and activists engaged in human rights and natural resource issues. Chip and Nonette are based in the Philippines and have heard of Keystone and would be interested to be in touch. Nonette@samdhana.org

**Dr. Charles Peters:** New York Botanical Garden and People and Plants International Expertise: Ecology –Chuck can offer useful input on the ecological monitoring and protocols. Good scientist for review of draft protocols. <a href="mailto:CPeters@nybg.org">CPeters@nybg.org</a>

#### Dr. Bruce Campbell: Center for International Forestry Research

Expertise: ecology and socioeconomics –Bruce is currently directing projects in Africa and Australian aboriginal areas using honey production as a central micro-industry for small holders.

<u>BCampbell@cgiar.org</u> and a CIFOR researcher working on this in Zambia: Davison Gommbel

DGommbel@cgiar.org

#### **Donor**

The Christensen Foundation, San Francisco, California USA Review their web site to understand how unique they are and how they may fit in well with what Keystone works on.

#### Annexure 2

# Terms of Reference

For Ms. Patricia Shanley who will be evaluating Keystone's NTFP Programme between 10<sup>th</sup> and 17<sup>th</sup> February, 2008

Keystone Foundation is a NGO working on issues related to conservation and livelihood with indigenous communities in the Nilgiri Biosphere Reserve. For more details see <a href="https://www.keystone-foundation.org">www.keystone-foundation.org</a>

Since 2002, Keystone has been working on NTFP issues in a focused manner with funding support from Ford Foundation. After a period of 6 years, much headway has been made in this field through this and other small projects and networks. An external evaluation is planned to discuss the work done over 6 years and develop a future direction. For this purpose, an external evaluator Ms. Patricia Shanley has been selected, who is currently working with CIFOR in Indonesia. Her vast experience in the field and research achievements can be seen in her CV [Annexure 1].

The evaluator needs to undertake the following analysis:

- 1. Review the information, resource assessment and conservation initiatives taken in the programme to promote a sustainable resource base. How have they been done, what is their outreach, how has the community gained/been involved in this?
- 2. Review the programme for its effectivity in addressing livelihood aspects of the community. Has it increased incomes significantly, has it addressed large number of members of the community, have the benefits been fair and well spread?
- 3. How has the institutional model worked in different centres. How can this be made more holistic and a receptacle for all aspects concerning sustainability and access?
- 4. How has the programme integrated with government initiatives like JFM in the states? What more can be done in this aspect?
- 5. Review Keystone's role in the overall NTFP management scenario and assess what more needs to be done and what aspects need to be streamlined and improved.
- 6. Given the current situation, provide some guidelines for work in the future.

It is suggested that the evaluator:

- a. Reads through all reports, papers and publications of Keystone compiled during this project period. List provided in Annexure 2.
- b. Visit the production centres and resource assessment plots.
- c. Interacts with project staff and village people
- d. Interact with the Forest Department in key places
- e. Discusses the programme with the larger Keystone team or network members

#### **Expected Outputs:**

- 1. Sharing of experiences from other projects around the world with Keystone members
- 2. An evaluation report for the programme describing its positives and negatives and a guideline for the future

#### Suggested Tentative Programme:

#### February, 2008

19th - Arrival

20th - Keystone Office & Orientation

21st - 1 field visit (incorporating all aspects)

22<sup>nd</sup> - Discussion with staff & visit to Green Shop

23<sup>rd</sup> & 24<sup>th</sup> - Field work - Hasanur

25<sup>th</sup> & 26<sup>th</sup> – Sharing of experiences, any other exercise the evaluator wants to incorporate, report writing

[This is just a suggestion and subject to change by the evaluator]

#### Remuneration:

Payment has to be made to CIFOR at their medium rate of \$400 per day. Reimbursements of travel – as submitted by the evaluator will also be made. All local expenses will also be borne by Keystone.

### Annexure 2

# 1. Available

		Type of	
Title	Year	material	Availability
Income generation through biodiversity	1998	Report	Spiral bound
Canarium strictum	2001	Poster	Printed matter
Cycas circinalis	2001	Poster	Printed matter
		Workshop	Electronic/ Spiral
Proceedings of Workshop held NTFP harvests and Issues - EP	2001	proceedings	bound
Non Timber Forest Produce of the Nilgiris	2002	Poster	Printed matter
		MS	
Eleviatics Dhytosocialogy and Pogonoration Status of Woody		dissertation- Student	Electronic / Cnivel
Floristics, Phytosociology and Regeneration Status of Woody vegetation in the Eastern Slopes of the Nilgiris	2003	research	Electronic/ Spiral bound
Preliminary study on Birds and Butterflies of Konnakarai slopes of	2003	rescuren	Electronic/ Spiral
Nilgiri Mountains	2003	Summer project	bound
Preliminary survey of Otters along the Kolikorai and Kolithorai			Electronic/ Spiral
streams in the Nilgiris	2003	Summer project	bound
		MS	
		dissertation-	
Studies on Non Timber Forest Products in the Eastern Region of	2002	Student	Electronic/ Spiral
the Nilgiri Biosphere Reserve	2003	research	bound
Medicinal Plants of the Kurumbas	2004	Book	Printed matter
Pillur valley	2004	Poster	Printed matter
Proceedings of Workshop held on Harvest and Conservation issues of Gums and Resins-EP	2004	Workshop proceedings	Electronic/ Spiral bound
Sigur Plateau	2004	Poster	Printed matter
Final report to Ford Foundation-(A) Analysis of vegetation,	2001	1 oote1	Timited matter
Ecological Status of Selected NTFP species and Biotic			
Pressures using GIS tools for the Eastern and Southern			
Slopes of the Nilgiris. (B) Forest Nurseries in the Nilgiris	2001-	<b>.</b>	Electronic/ Spiral
C) Value Addtion.	2004	Report	bound
Ecological Monitoring - Processes, Proceedings and Protocols- IDRC + PPi	2005	Workshop	Electronic/Spiral
IDRC + PP1	2005	proceedings	bound
Analysis of 10 years of Honey data	2006	Report	Electronic/ Spiral bound
Analysis of 10 years of Floriey data	2000	Report	
Analysis of the value addition centers	2006	Report	Electronic/ Spiral bound
That you of the value addition centers	2000	перы	Electronic/ Spiral
Census of the Kurumbas of the Nilgiris	2006	Report	bound
Forest Plants of the Nilgiris	2006	Book	Printed matter
Harvest, Trade and conservation of the endemic multi use cycad,			
Cycas circinalis L. in the Nilgiri Biosphere Reserve, South		_	Electronic/ Spiral
India-IDRC	2006	Report	bound
Impact of harvesting on the regeneration of <i>Cycas circinalis</i> in the		3.60.11	Electronic/ Spiral
NBR	2006	MS dissertation	bound

Population Structure of a tropical tree: <i>Canarium strictum</i> in response to three different harvest situations	2006	MS dissertation- Student research	Electronic/ Spiral bound
Proceedings of workshop on Ecological Monitoring - Exchange Program	2006	Workshop proceedings	Electronic/ Spiral bound
Resin-tapping and trade of <i>Canarium strictum</i> Roxb. (Burseraceae) and its effects on populations in the Nilgiri Biosphere Reserve, South India-IDRC Bees and Honey Collection- A conservation and development	2006	Report	Electronic/ Spiral bound
project in the Western Nilgiri Biosphere Reserve- Siemenpu	2005- 2006	Report	Electronic/ Spiral bound
Analysis of the value addition centers	2007	MS dissertation	Electronic/ Spiral bound
Ecological status of 3 sacred groves in the Nilgiris Honey Trails in the Blue Mountains-IUCN	2007 2007	Report Book	Electronic/ Spiral bound Printed matter
Wild Foods of the Sigur Plateau	2007	Poster	Printed matter

# 2. Planned

Title	Month	Type of material
Biodiversity of the Konavakarai Slopes, Kotagiri	Oct-07	Posters
Forest Nurseries of the Aracode Valley, NES, Kotagiri	Oct-07	Posters
Value Addtion Processes of Dhimbham Hills	Oct-07	Posters
Nilambur valley	Oct-07	Posters
Forest Plants of the Sigur Plateau	Dec-07	Book
Thumbrules for harvest of different plant parts	Dec-07	Manual
Nursery Techniques - Forest Species of Kotagiri and Coonoor Ecological Status of the NTFPs of the Eastern Slopes of the	Dec-07	Report
Nilgiris	Dec-07	
Forest Use Maps of NTFP villages in the NBR	Oct-07	Maps

#### Annexure 3

#### Questions which arose based on a review of Keystone's NTFP literature

- a) **Eco-development:** Might development be highlighted at the expense of non-economic values of forests and tribal life? Is there sufficient attention given to non-market values associated with forests?
- b) **Institutional structure**: what kind of institutional and funding structure could support so ambitious a program with so many facets? How could this be sustained? What can Directors remove from their current list of duties if they move into new realms of management and/or research/development.
- c) **Products**: many products have arisen from the interlinked projects (books, seed collection, resource centers, green shops, posters...) What are the impact pathways for the intended audiences? Is use and/or potential impact monitored in a systematic way?
- d) **Documentation of history**: so much has happened at Keystone in a relatively short time frame. Does there exist a succinct background document which captures this richness so that new staff and visitors to Keystone can get a rapid glimpse of from where the institute came from and where it may be headed?