

Entering the New Millennium

5 year PERSPECTIVE PLAN

KEYSTONE : 1999 - 2003

PROGRAMME AREAS

- **APICULTURE**
- **MARKETING**
- **NON-TIMBER-FOREST PRODUCE**



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Five year PERSPECTIVE PLAN

KEYSTONE: 1999 - 2003

Mission Statement

Keystone aims to work in areas of Natural Resources & Rural Development with a conscious goal to enhance the quality of life and the environment.

Approach

It means, breaking new paths that are innovative yet relevant and dealing with diverse problems/issues in an integrated manner. The approach, more specifically, will be a professional outlook towards development. Income generation through enterprise development to find means of sustainability for activities on ground would be the basis of Keystone's eco-development initiative.

Background

Keystone has grown from a 4-person team in December, 1993 to a 10-member team in September, 1998 - from a turnover of Rs. 6.60 lakhs (USD 16,500) in 1994-95 to Rs. 13 lakhs (USD 32,500) 1997-98. The chosen area of operation is the Nilgiris district in Tamil Nadu - which may expand as activities grow to the neighboring region of the Nilgiris Biosphere Reserve consisting of Karnataka & Kerala. The projects will primarily be addressing issues of Indigenous communities in mountain regions - more specifically:

- Basic Needs: Field medical support, food security, health & hygiene and training
- Skill Development & Income Generation using indigenous knowledge and local natural resources

Focus

The above issues will not be dealt in an isolated manner but within the overall framework of a clear, effective natural resources strategy - keeping in mind the environmental changes. Three thematic areas of long term action-research and development are envisaged:

1. Apiculture
2. Enterprise
3. Non Timber Forest Produce

Mission Objectives

1. To establish a base for honeyhunters and beekeepers in the Nilgiris.
2. To set up a pilot forest-based community enterprise.
3. To research and develop appropriate technologies in the field of Apiculture, NTFP collection and Marketing.
4. To gather relevant information and explore possibilities to start a formal/informal village institution around select activities.
5. To understand natural resources, its use vis-a-vis indigenous communities and formulate effective strategies for change.
6. To find innovative methods to constantly explore better ways of participation, communication and interaction with the indigenous communities of the hills.
7. To explore new partnerships with interesting projects in other mountain ecosystems for fruitful exchange.
8. To establish a centre for mountain action and research with implementation in the Nilgiris.
9. To implement a market strategy for the promotion and development of tribal products - by ensuring a good price to the primary producer.
10. To support as much as possible the organisation's activities through effective marketing of project items/products and providing consultative services to other development projects.

11. To build up a good team capable of understanding development & environment issues and implementing them through pilot phase projects in select villages.
12. To document and analyze the findings, the process of our experiences in a report which can be used as a working document for field investigations in biodiversity-rich indigenous areas.
13. To publish reports and papers of high quality in reputed journals for better dissemination and feedback on the work in this region.
14. To create a centre for learning, exchange, demonstration on new ways of doing things, new approaches, new technologies and new marketing systems in the mountain region.
15. To develop the indigenous group of people keeping in mind their rich traditions and culture.

How do we do it?

The group for eco-development has to become a critical mass - the apiculture, marketing and NTFP groups. Each one is held and serviced by the management/administration and finance group. A separate cross-section of people will look at the fund-raising efforts through grant-in-aid and consultancies. At Keystone we are not looking at large numbers but each one with a capacity of being able to perform several functions. Team building efforts are required to pool good skills. Recruiting committed and bright personnel would be a priority. A relevant infrastructure at Kotagiri will be built up in the coming five years to give the efforts a necessary push and space for growth. For consultancies, exchanges and building this centre, it is important to form strategic partnerships and select donors for a long term program. A probable list of partners and donors are:

1. The Swallows in Sweden, Lund
2. The Swedish Society for Nature Conservation, Stockholm
3. TARU Leading Edge, Delhi
4. DFID, Delhi
5. AusAid, Delhi
6. Austroprojekt, Vienna
7. Bees for Development, Monmouth, U.K
8. ICIMOD, Kathmandu

Limitations, Pitfalls and Success

Having decided to base ourselves in the Nilgiris hills - our principal activity will be to implement our ideas in the villages here. This will be a yardstick for our group - what is the significant development we have managed to implement which has a tangible change. Can it be evaluated? Keystone does not intend to be a large staffed organization with a huge administration and a labyrinth of procedures and paperwork. This would take the group away from the real field issues/opportunities. Keystone believes in "small is effective/small is global." One can fine tune processes/models which in turn can be multiplied. One needs to constantly revalidate our basic focus & purpose to basing our work in a place like Kotagiri.

Fund-raising efforts, will for sometime take us away from the working area - but as much as possible these assignments should have a direct or indirect bearing on our work here. This mix is left to the individual and the group - how much do we get involved in other projects compared to the project development in the Nilgiris.



“APICULTURE PROGRAMME: 1999 – 2003”

Perspective Paper

1. BACKGROUND

Relevance of Apiculture in Keystone’s work

Keystone’s work began with the Honeyhunters & Beekeepers survey of Tamil Nadu in 1994. Honey and bees has been and will be a relevant point of interaction with tribal communities. This approach has been quite successful judging from our experience in the Nilgiris over the past 3.5 years. Beekeeping and Honeyhunting have been a focal point of Keystone’s activities in the Nilgiris gradually diversifying into issues of land-use, enterprise, non-timber forest produce collection and basic needs. All these issues have been centered on the Honey Hunter/Beekeeper. This has paid good dividends to establish a presence in the hills and start building a strong base for long- term action. Apiculture will remain one of the principal activities of Keystone with tribal communities on the following lines:

- # Covering more villages and teaching tribals about beekeeping and safer, better honey hunting
- # Establishing a base & network for honeyhunters
- # Working on action-research in the field of apiculture
- # Setting up relevant infrastructure and local teams for developing apiculture in the Nilgiris

Present activities – summary and direction in the future

Keystone started a project on Appropriate Technology for beekeeping in March 1995. The project brought for the first time, into Nilgiris, a new system of beekeeping with traditional materials like

bamboo and forest vine on a top bar hive. There has been some success and also drawbacks. The principal limitation was the inability for the tribal people to accept this as a "bee box". It was not a sufficient incentive from the society's point of view. Some technical problems still remain to be solved. The present activities deal more with income generation through beekeeping using conventional hives with appropriate modifications. Also, a beekeeping resource centre is coming up to cater to the needs of the tribals. This will have demonstration centre for beehives of different kinds, a meeting place and a hands-on rural learning centre. Work on the future will look at the aspects of AT in more detail, now that the beekeeping project has been established in the villages. Scientific research on better strains, characteristics of *Apis cerana* bees will be studied in controlled conditions to explore the possibilities of higher productivity and easier management by the rural beekeepers.

2. ACTION-RESEARCH

Appropriate Technology

Appropriate Technology efforts have to be re-doubled to understand fully the basket hive – it's advantages and disadvantages in the Nilgiris. The possibility of keeping *Apis cerana* bees in different habitats and cavities such as logs, walls, stone rivetements, will be tried. AT experiments on harvesting of *Apis dorsata* will also be initiated in collaboration with other Institutes. Innovations in tools and honey extractors will be tried – to make them cost effective and efficient. An exhaustive documentation on the AT project with tribal communities will be done, so as to help other areas take up the approach & experiments, where similar conditions are prevailing.

Apis cerana bees - queen rearing & bee breeding experiments

Apis cerana – the Indian hive bee has been a topic of discussion and debate since a longtime – whether it is capable of meeting the honey production requirement and if management of this less understood bee can be taken up. There is a school of thought, which advocates the import of exotic

bees – so that the beekeeping industry in India can be revived. *Apis mellifera* – the exotic bee, has its own problems and has been seen not to perform so well in tropical, hot, humid climates like Southern India. *Apis cerana*'s absconding behaviour and its susceptibility to the TSBV (Thai Sac Brood Virus) has made the bee unpopular with several beekeepers, in recent times. Action-research on aspects of bee behaviour, genetic strains, variation of sizes with altitude could throw some light on possible queen rearing experiments and culturing good strains. In the Himalayas – Himachal & Nepal, experiments on these lines have shown the presence of good *Apis cerana* stock. Collaborative efforts have already begun between Nepal & Nilgiris on apiculture information exchange and visits. This should lead to finding and rearing a good stock of *Apis cerana* in the Nilgiris.

3. IMPLEMENTATION

Beekeeping resource centres - information, hands-on training, demonstration and exchange

Apart from taking the beekeeping project to new villages and thereby teaching a skill to help get a higher income, there is a need to set up beekeeping resource centres. Importance of other apis species such as *Apis florea* and dammer bee colonies will be imparted. Planting and cultivation of bee flora will be done. These will disseminate appropriate knowledge regarding hard ware and software about apiculture to interested communities. Follow-up of beekeeping efforts through individuals has its own limitations. Creating a facility, where hands-on training can be imparted, demonstration hives are working and relevant information is available. This approach to implementation can be effective in promoting beekeeping in remote areas.

4. FIELD STUDIES

Sustainability in harvesting techniques and fluctuations of *Apis dorsata* populations

Apis dorsata – the giant rock bee is a migratory species. It prefers to nest under rock crevices, in cliffs and on trees. In the Nilgiris, it is mainly on high cliffs. There is a speculation that *Apis dorsata* populations are dwindling. The reasons could be lack of food, nesting areas, or over harvesting by honey hunter communities. To understand this triad between the forest, the honey hunter and the Giant Rock bee – studies have to be conducted on its ecology and behaviour in this area. Population fluctuations, the quantity of honey harvested, migratory periods. Sustainable harvesting practices using appropriate gear and technology have to be tried to make this activity ecologically sound.

Studies on honey gathering practices – emerging changes in ecology & culture

The second important study is to look at the eco-anthropological aspects of the honey gatherer. What is the emerging changes the traditions and forecast the possible scenario in the coming future about this cultural activity of honey gathering. Honey hunting is an age-old tradition. It has undergone vast changes today, and for a lot of communities it is a season to make their savings through honey collection.

5. ECONOMICS OF APICULTURE EFFORTS

Potential increase of income through this activity in the next five years

Apiculture development projects are useful only if they enhance significantly the income of beekeepers and honey hunters. Better management methods should able to generate more honey per unit. With good marketing – the remuneration should be good. Apart from honey, collection and processing of bees wax is also an area where better income can be expected. Today, on an average

a tribal beekeeper has 1-2 beehives. With better training this number has to be increased to 5-10 bee boxes per person. Then only, can this project bring in substantial amount of returns for the tribal to be interested in the activity.

6. LOCAL CAPACITY BUILDING

Apiculture team – skill up-gradation, team building, new areas of operation, training

The entire above project ideas and aims will not be possible without a good team. At present the apiculture group consist of Leo, Chandran, Mani, & Pratim.. Skill upgradation, hands-on training, confidence building has to begin so that the team is capable of handling the apiculture programme in the next 5 years. Identifying weak areas and working on it has to become a priority. Making a phase by phase plan of action for the next few years – evaluating closely, one's own skills and capacities are important. Each of the team members has to grow and impart their knowledge to more and more people – so that the apiculture in the Nilgiris can be revived through this systematic effort.

Further training & upcoming events:

- # Apimondia September 1999 - Vancouver
- # Nepal Apiculture project – possibilities of exchange
- # DBA (Danish Beekeepers Association) – UHF (University of Horticulture & Forestry)? – Keystone action-research project on Improving *Apis cerana*
- # Mountain Apiculture Centre?
- # Visit and establishing the Lindum centre for advanced beekeeping training?

7. PROGRAM INTEGRATION

Interface between Apiculture, NTFP & Marketing : sharing of skills, ideas & strategies

The Group for Eco-development Initiatives becomes a reality when each group interacts and compliments the other. Close exchange with NTFP and Marketing is only a logical step – as both these activities are closely linked to honeybees, honey hunters & beekeepers. Common strategies to scope new markets of honey and bees wax or to start a pilot village production centre has to come about through overall teamwork. This links up closely with the NTFP project's value addition centres.

8. BIODIVERSITY & CONSERVATION

Habitat Conservation of Indigenous people in mountain areas – the role of bees

Beekeeping does not only mean honey production and training new beekeepers. The increase in the number of bee colonies in the wild and cultivated areas would enhance the overall local biodiversity. Pollination is the most important and least understood areas of apiculture in this region. The Nilgiris, being one of the Biodiversity hot spots of the region (as declared by the MAB of UNESCO) requires to be conserved and protected. Only appropriate interventions that are ecologically sound and socially relevant for the indigenous people need to be initiated. This would truly qualify for Eco-Development. Mountain areas such as the Nilgiris (from whatever is remaining) are critical for biodiversity conservation. Bees have a crucial role to play in the pollination of wild plant species and maintaining the food chain. Contacts have been established with remote tribal communities located inside Sanctuaries and National Parks. An apiculture project with these communities with appropriate technologies will be initiated. Studies in the next phase can be started on the impact of beekeeping in the Nilgiris from the biodiversity perspective.

“MARKETING PROGRAMME: 1999 - 2003”

Perspective Paper

Keystone, as an organisation, was begun with the thought and determination that marketing would be one of the key arms of the development effort. However, it was clear that marketing of the produce from our work areas would not be an end in itself but a means to achieving other important objectives. It also means that there would be limitations in our 'business' venture.

The marketing effort has been initiated in Keystone with a focus on

- # providing better income options for the tribals, making use of their skills
- # making optimal use of the resources available
- # funding small village initiatives

The overall purpose in starting economically viable ventures was to ensure that over the long run, Keystone would be partly independent and self supporting. It should also help in starting up new initiatives in sectors where no funding is available but which are critical as far as the field activities of the organisation. One immediate example is the field medical support that is being provided to the villagers where Keystone is working. There are certain times when tribals need medical help - we have been able to tie-up with a local hospital to provide such assistance. These expenses are met out of the sales proceeds.

Realising its importance, marketing was taken up as a priority activity. Since apiculture was one of our primary working areas, the focus of the work was on the honeyhunting community and their threatened environment. Development of the honey market has seen the maximum effort. From 1995, when we started procuring honey from scattered groups, today, honey is coming in from different corners of the district.

Honey was the only item for which we got a grant/loan to carry out the operations - it was provided by the Small Industries Development Bank of India (SIDBI). But that one item has helped spawn a host of other items - bees wax, silk cotton, pepper and coffee. All these products have been developed with self-finance, with clear objectives of conservation based enterprise in mind. It must be kept in mind that these items are in limited supply and therefore have a high value. Also, the sales of these items would allow funds to be ploughed back into the villages, for these and other products.

During the past year, there has been planting of different kinds of millet, the first crop of which is expected at the end of 1998. There will be inputs from the Keystone Biodiversity Programme, where it has been planned to value-add to a few Non Timber Forest Produce (NTFPs). These value added NTFPs will also be added to the Keystone product range. The primary focus in the coming years will be concentrate on few core products rather than spreading ourselves thin in a number of products.

The products at present are:

- honey
- bees wax
- organic agricultural produce: pepper, coffee, millet, etc.
- NTFPs
- homestead produce like silk cotton

During the next few years, the following issues have to be addressed, in the above mentioned products:

Procurement/Pricing

- # consolidation of present sources
- # find new areas/villages from where we can source

Presently, there are a few villages from where the items are being collected on a regular basis. This means that it leaves the marketing system very vulnerable if there is a failure of a crop. It would help in stability if there is a diversified area from where the produce is being collected.

Pricing has been a crucial factor in the marketing effort - the procurement price should be commensurate with the effort and quality of the product. Till today, the middlemen and traders dominate the market with adhoc prices, which is nowhere in relation to the prices at which the products are available in the market. We have been able to offer significantly higher prices in all the products and should continue to be able to do so. This not only provides a higher income to the tribals but also helps to understand the worth of their product and the underlying conservation priorities.

Production/Processing/Storage

- # maximum processing/value addition to be done in the village like cleaning, drying, etc.
- # new & different bio-inputs to ensure that the products are organically grown
- # appropriate systems to streamline processing systems in the Keystone Centre
- # storage systems for raw and processed products
- # develop rigorous internal quality control standards

It has been our effort to consistently ensure the quality of all products that are sold. Since all the products are handmade and packed, we have to doubly make sure that all aspects of hygiene and cleanliness are taken care of. This means that internally, for each of the products, there should be a mechanism to check whether it meets certain baseline parameters.

The processing centre, based at Kotagiri, initially designed to handle only honey, is now the hub for all other products also. However, this means that continuously, there is a pressure on the staff to process and pack all products, leaving them little time to concentrate on the marketing aspects. Over time, most of the processing activities have to take place at the village level - apart from providing employment/income opportunities, it helps them to learn new skills of organising small scale village based activities.

Most of the processing systems have been in-house designed, based on the requirements. This has also meant that each system takes into account the present and future capacities and that minimum

wastage occurs. e.g. the filtering system for honey was initially designed with just one filter. This meant that more than one filtering meant a lot of wastage of honey which stuck to the filters and vessels. Now, a multi-layered filtering system takes care of the problem.

Marketing

The effort in the initial years has been to find alternative shops in different cities to be able to market the products. However, it is increasingly clear that these outlets, though good for the organisation in terms of gaining credibility, form a very small portion of the turnover. If the products are good, other dealers/buyers have been much more professional in their dealings. We have to be able to find a mix of these dealers to be able to support the marketing. Some of the important aspects that have to be looked at:

- # product catalogue
- # new packing designs and labels
- # innovative ways to keep Keystone products as top of the mind recall e.g. stickers, matchboxes,
- # look for corporate customers, so that products are sold as corporate gifts - high value, one time boosts to sales at low periods
- # find more dealers to be able to offset highs/lows of other dealers
- # find export markets
- # atleast two exhibitions per year

Keystone must always be limited in its marketing venture by the understanding of two very important factors:

- The goods will never be mass produced and so our volumes will be limited to that extent. We should also look at our capacities and our overall framework within which we are operation - this will determine the kinds of volumes of different products that we are finally wanting to achieve.

- The purchase/production will be from the Nilgiris as it is our working area. Hence, it will not be possible for us to market a wide range of products. In the products that we are dealing with, we should be able to source from a wide area.

Research

The products currently being marketed can be further value added to get more returns. This could be done by having a number of variations of one item - eg. Pepper could be also be sold as white pepper, green pepper in brine, pepper pickle etc. A similar variety of items are possible to make from honey and bees wax, which include creams, soaps, polishes, etc. Research is required on the production processes and the markets for these items. The production units scale and viability also must be worked out.

Research is also required on finding markets for the NTFPs which would be value added through the Biodiversity programme. It is still too premature to elaborate this as it all depends on which NTFPs are selected and which market segment it would cater to.

Networking/Tie-Ups

- # Swedish Society for Nature Conservation, Sweden (eco-mark, research)
- # Central Food & Technology Research Institute, Mysore (packaging and processing)
- # Institute for Marketecology, Bangalore (setting standards for small growers)

BIODIVERSITY PROGRAMME

Non Timber Forest Produce Project

Perspective Paper: 1999-2003

BACKGROUND

The Keystone Biodiversity Programme is initiated to:

- # *Conserve natural resources, protect indigenous, rare and endangered species, augment resources, preserve the water and soil regime by promoting rational use of the same.*
- # *Provide income and resource use alternatives for indigenous people and other communities living adjacent to forests, develop community participation, awareness and local capacity building amongst them, protect their rights and help provide for their needs in a manner which encourages rational use of resources.*

The first amongst a series of projects, is related to Non Timber Forest Produce (NTFP). The project was first visualised in 1994-95, but could not take off due to lack of funds and personnel. The project aims to look at the ecological and economic aspects of NTFPs found in the Nilgiris, ascertain the extent of trade and related village economy, map their availability, determine sustainable harvest, etc.

In 1997-98, a survey has been conducted in the Nilgiris, which has mainly covered the economic and development aspects of NTFP. This information is presently being collated and analysed – and will bring out several important issues related to policy, research, action, & networking. The ecological aspects still need to be covered.

THE FUTURE

In the coming years, a simultaneous effort has to be made on all aspects of the project. They can be divided as follows:

Policy

An effort has to be made to see what can be done in the governance and present system of control and management of NTFPs. The Forest Department, co-operative societies, middlemen and traders are the main role players today. Involving the primary collectors (indigenous people) for a more pivotal role is necessary to ensure the twin objectives of conservation and economic gain. More specifically, the project has to pursue the following:

- Intervention in the law related to use and sale of NTFP vis-a-vis indigenous people
- Initiating an NTFP directorate to manage resources in a sustainable manner, with more returns accruing to the indigenous people
- The role of the State/Forest Department and that of local initiative

Research

Not much information is available today regarding the ecological aspects of NTFPs in the Nilgiris. Though research has been done on the availability of various species – their present status and level of exploitation is not known. Estimation methods on the basis of which forests areas are given on contract are also unscientific and need to be improvised. From primary data it is also evident that there are several medicinal plants being harvested for both commercial and non-commercial purposes, though the indigenous knowledge of medicine is slowly being eroded. Research would therefore, focus on the following:

- Ecological aspects related to NTFP – availability, habitat, survival
- Sustainable harvesting techniques and methods
- Scientific thumb rules for estimation of NTFPs in a given forest area

- Healing properties of medicinal plants & possible cultivation
- Tribal/local medicinal plants first aid kit (planting herbs in-situ, storage, etc)

Action

Using local resources to generate avenues for income for indigenous people is important. In the Nilgiris, though some efforts have been made to meet the basic needs of these communities, no sustainable income source has been carved out with them, making them dependent on the plantation industry as daily wage workers. Keystone has already been working with some communities on one of the major NTFPs of this region – honey and bees wax. Taking this experience further, Keystone would expand into working with other NTFPs and incorporate in this enterprise homestead produce of these communities, thus providing a sustainable, self-reliant income generating option.

- Set up 2-3 value addition units in different locations in the Nilgiris, selecting appropriate areas of high availability of NTFP and high dependence of indigenous communities
- Use appropriate technology in drying, storage and production process of NTFP value addition
- Start ancillary industries, using similar technology, from local and village produce. e.g. dehydrated fruits, breakfast cereals, coffee processing, etc
- Set up village institutions using participatory methods, to undertake the functioning of these centres
- Build up local cadre and capability in various aspects of running production centres
- Set up appropriate market mechanisms for sustainability of these units

Networking

In this local effort, it would be important to learn from the experience of others and exchange expertise regarding several aspects of the project. Keystone would set up exchanges and networking possibilities with:

- Foundation for Revitalisation of Local Health Traditions, Bangalore (medicinal plants)
- HOPE, Nilgiris (Medicinal plants - cultivation)
- Royal Veterinary & Agricultural University, Denmark (Policy, Research),
- Kerala Forest Research Institute (tribal medicine kit)
- Solar Energy Unit, Pondicherry (solar drying)
- Centre for Scientific Research, Auroville (Appropriate technology)
- AFPRO (food processing)
- Biodiversity Conservation Network (research, information)
- ATREE, Bangalore (research, methodology)
- Indian Institute of Forest Management, Bhopal (research, information, academics)
- Dr. K.C. Malhotra, ISI, Calcutta (Joint Forest Management, ethno-botany)
- Other similar work being undertaken as eco-development efforts, in India and abroad.

KEYSTONE CENTRE, KOTAGIRI
An Environment & Development Centre in the Nilgiris

Background

Keystone is a group, working in areas of Natural Resources & Rural Development with a conscious goal to enhance the quality of life and the environment. It attempts to be an innovative, small, vibrant organisation aiming to achieve, through small measures, conservation of natural resources, revival of traditional knowledge, effective use of habitat and ecologically sustainable development. It seeks to understand the intricate links between the forests and tribal communities.

Keystone began its journey in 1993, when it set out to survey honeyhunting and beekeeping amongst indigenous people of Tamil Nadu. This brought us to the Nilgiris - where ecological degradation is on the rampage and indigenous people are fast losing their way of life. Kotagiri, in the eastern part of the Nilgiris, is a place close to forested areas and home to the tribals. Keystone decided to move from Pondicherry (it's registered base) to the hills, to be closer to the issues of concern and to sink our hands deep into action and applied research in the field.

Over the past three years, it has specifically been involved in projects related to apiculture, water, traditional agriculture, skill development and value addition in the village, marketing of honey and bees wax items and promoting ecological growing of crops. The work is concentrated with Kurumba and Irula tribal communities of the Nilgiris, and seeks to look at new ways to address the problems of environmental degradation, rural poverty and loss of traditional knowledge. Now, expansion of work into several other aspects of documentation of NTFPs, Kota Pottery Revival, organic labeling of products, etc. is taking us ahead.

Today, Keystone operates from a rented premises in Kotagiri and has invested a large sum of money to build up a processing centre, The Hive, which is also a training centre for beekeepers and honeyhunters of this region.

The Need for Keystone Centre

After working in the hills for 3.5 years, Keystone has decided to make this its permanent base. The need to address the issues facing these hills and carry forward the three main project areas, elaborated in the perspective papers is essential. The present level of activity coupled with future expansion is difficult due to limitations of a rented area.

This is why Keystone has bought a piece of land in the hills to house the office/training cum information centre/ processing unit/sales outlet permanently. It hopes to create over a period of time a centre for learning, information and action for this mountain region in this premises. The need for the centre is also to have it as a demonstration place of appropriate building technologies, use of alternate energy, conservation and recycling of water.

The infrastructure will incorporate the following main structures, each having an inter-disciplinary and multi functional space allocation.

- Mountain Apiculture Centre
- Value Addition & Processing Centre: Honey, beeswax, pepper, coffee, NTFP, silk cotton; Sales Counter, Packaging, Storage
- Environmental Lab, Workshop, Honey testing, Experiments in Value addition
- Information, Training-cum-demonstration, Action-research

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**ECO-DEVELOPMENT PROGRAMME
OF KEYSTONE FOUNDATION
IN THE NILGIRI HILLS, TAMIL NADU, INDIA
Estimated Financial Requirement**

Infrastructure for the Keystone Centre for Environment & Development

Project Activity Centres (4 Units)

- # Mountain Apiculture Centre
- # Training, Information & Networking Centre
- # Marketing & Processing Centre
- # Eco-Development Centre

Exchange Programme Facility & Coordination (2 Units)

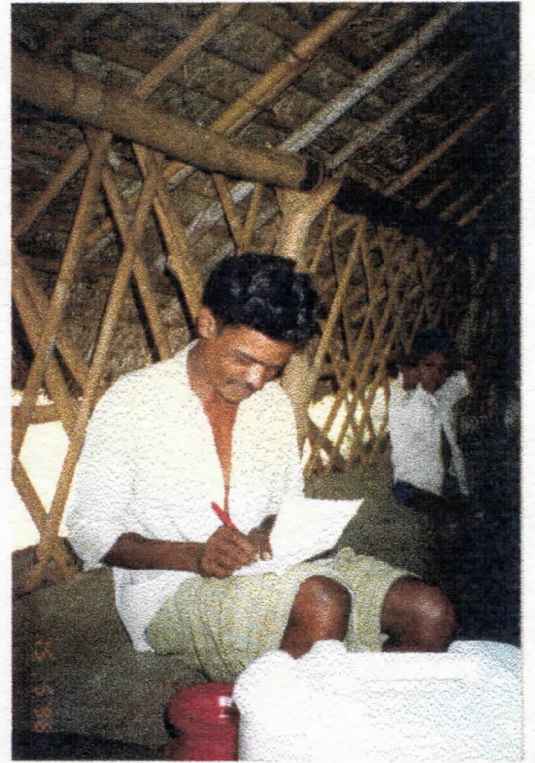
- # Keystone Guest House: for resource persons, students and visitors
- # Field Manager's House: supervisor & in-charge (logistics, security, etc.,)

USD \$ 100,000

Projects

- i. Apiculture (Village implementation, Action-Research, Appropriate Technology)
USD \$ 80,000
- ii. Marketing Enterprise (Production, Research, Value addition, Local Enterprise)
USD \$ 32,000
- iii. Non Timber Forest Produce (Ecological Research, Action-Research, Local Institutions, Village Production Centres)
USD \$ 75,000

GRAND TOTAL FOR FIVE YEARS: \$ USD 287,000



THE KEYSTONE TEAM OF 1998

Board of Advisors

1. Dr. C.L Gupta (Alternative Energy, Physics, Rural Energy, Policy & Research Methodology)
2. Prof. Dr. K.C. Malhotra (Anthropology, Human Genetics, Bio-Statistics)
3. Rev. P.K. Mulley (Cultural Anthropology, Tribal History, Indigenous communities)
4. Mr. T. Ramaswamy, Jt. Secy. (Retd.), Government of India (Finance, Government Liaison)
5. Mr. B.J Krishnan (Legal Matters)

Trustees & Directors

1. Mrs. Shipra Gupta, Trustee (Educationist)
2. Mr. Somnath Sen, Trustee (Consultant; Director-Taru Leading Edge, Economics, Institutions, Strategic Management)
3. Mr. Mathew John, Director (Rural Management, Finance, Administration, Marketing & Enterprise Development, Trustee)
4. Mr. Pratim Roy, Director (Development, Ecology, Natural Resources, Trustee)
5. Ms. Snehlata Nath, Director (Economics, Rural Development, Indigenous People, Enterprise Development, Tribal Economy, Basic Needs)

Staff

1. Mr. Robert Leo (Field Manager, Apiculture, Village Implementation, Rural Development, Training & Skill development)
2. Ms. Jeya A. Rani (Office Accountant, Administration and Management)
3. Mr. Miller J. Ashok (Field Assistant, Marketing of tribal products)
4. Mr. Haritharan N (Field Assistant, Marketing of tribal products)
5. Mr. Chandran (Field Assistant, Apiculture: Village Coordinator)
6. Mr. Mani (Field Assistant, Village Development)
7. Mr. Krishna (Field Assistant, Non Timber Forest Produce Project)

Partner Institutions & Individuals

1. The Swallows in Sweden, Sweden
2. TARU Leading Edge, New Delhi
3. Department For International Development (DFID), New Delhi
4. AusAID, New Delhi
5. Bees for Development, U.K
6. Mogens Jensen, Apiculture Advisor, Denmark
7. Tamil Nadu Forest Department, Government of Tamil Nadu

LEGAL STATUS OF KEYSTONE FOUNDATION

Keystone Foundation is a registered Trust under the Indian Trust Act, 1881. It has obtained recognition from the Ministry of Home Affairs, Government of India, under the FCRA (Foreign Contribution Regulation Act) to receive funds from abroad for Development and Environment related work. Keystone Foundation works in the area of Natural Resources and Rural Development with indigenous communities in the Nilgiris district, Tamil Nadu, India. It is a not-for-profit organization with professionals having expertise in different fields.

The Foundation has its registered office in Pondicherry but its main operations and project-office is at Kotagiri in the Nilgiris. At present, it is working out of rented premises but has purchased more than one acre of land from its own resources to build the Keystone Centre. This has cost the organization approximately USD \$ 25,000. The amount has been raised through loans from friends, relations and well wishers and from Keystone's core savings and project consultancies.