FRLHT

Foundation for
Revitalisation of
Local Health Traditions

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A BACKGROUNDER FOR A BRAINSTORMING SESSION ON A COMMUNICATION STRATEGY FOR THE CONSERVATION OF MEDICINAL PLANTS

PREFACE

Loss of biodiversity is not just an environmental problem. Its underlying causes are essentially social, economic and political.

The fact that the richest nations are home to the smallest pockets of biodiversity while the poorest are stewards of the richest reservoirs underscores the interdependency of all nations.

In the developing world, the rural poor depend upon biological resources for an estimated 90 percent of their needs viz. food, raw materials for clothing, shelter, fertiliser, fuel and medicines, as well as a source of work energy in the form of animal traction.

In the industrialised world access to diverse biological resources is necessary to support a vast array of industrial products.

For all humankind biodiversity maintains the ecological balance necessary for planetary survival.

In the coming decades biodiversity will hold the key to the development of new biotechnologies.

Today, it is not just a matter of saving biodiversity, but of devising ways of using it sustainably and, even if it amounts to belated justice, using it equitably.

CONTENTS

INTRODUCTION

The Foundation for Revitalisation of Local Health Traditions (FRLHT) has embarked alongside several other key agencies on an ambitious project to conserve the genetic diversity of medicinal plants in Western and Eastern Ghats of South India. This is perhaps the most focussed post-Independence conservation effort on medicinal plants.

This conservation effort is inspired by the rich and diverse medicinal heritage of the people of India.

The coverage of the project is currently limited to Karnataka, Tamil Nadu and Kerala, for logistic reasons.

The need for a conservation programme is immediate, the thrust of it, within manageable limits and the spirit that moves it, must outlive those behind it.

The "South Indian Experience" is thus bound to spread to other parts of the country in coming years.

This document has been prepared for a brainstorming session on a communication strategy for a public campaign on the conservation of medicinal plants.

The communication elements of this campaign are however broad enough to support other bio-diversity conservation efforts.

WHY DO WE NEED TO CONSERVE MEDICINAL PLANTS

India has perhaps one of the richest ethnobotanical traditions in the world. The incredible fact is that over 7000 species of shrubs, trees, grasses, ferns, roots and tubers are still being used by India's rural communities.

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This unique relationship between Indian society and medicinal plants, is an unbroken 5000 year old living legacy.

This deep-rooted interaction follows ***two*** *intertwined streams:*

- *An immensely rich and diverse ethnomedical or folk stream ... the Prakrit Parampara .... which is still very much alive across thousands of ethnic communities and varied ecosystems - - from the Himalayan reaches of Ladakh to the diverse vegetation of Kanyakumari - and across Meghalaya and Tripura in the North East.*

- *A codefied indigenous system represented by Ayurveda, Unani, Siddha and Amchi (Tibetan) and whose theoretical foundations are articulated in 100,000 manuscripts. Over a 1000 plants are chronicled in tracts and manuscripts belonging to this stream.*

A SAMPLING OF A LIVING TRADITION

A CACTI FOR BURNS

In local traditions. the internal fleshy mucilagnoua jelly of the Aloe plant, known locally as KORPHAD KUMARI, etc, is used externally on burns and wounds, and orally for gynaecological disorders.

VASA

Adathoda vasica or Adulsa \ Adusi Vasa, as it is locally known, is a common treatment for coughs. It is also known to stop bleeding in the case of piles or dysentry.

PUNARNAVA

Boerhanvia diffusa (Punarva) is a plant commonly used to combat anaemia, particularly during pregnancy and is often eaten as a vegetable because of its beneficial effects.

THE TORTOISE'S NECK

The Tortoise's neck used for proplapsed rectum or uterus. The meat is eaten but the neck is hung up to dry. It is then powered and applied on the prolapsed organ which is then used to push the protrubent organ again.

SAPTAPARNI

In Karnataka a decoction of the bark of Alstonia scholaris (Saptaparni) is usually used in every household at the onset of the monsoons to prevent malarial fevers.

A HERBAL BRONCHODILATOR

The plant, Ephedra gerardiana is found only in the Trans-Himalayan region which has a rarefied atmosphere. Nature has provided this particular habitat with this plant which has the property of bronchodilation. Local people routinely make a herbal tea from this plant, which is drunk several times a day.

FURTHER EXAMPLES OF THIS DEEP-ROOTED INTERACTION

Medicinal Plants Used by the Tribal Healers of Karjat block of the Western Ghats

Habits of plants	*nos used as medicines*
1. *Trees*	*168*
2. *Shrubs & herbs*	*207*
3. *Climbers & creepers.*	*105*
4. *Grasses*	*13*
5. *Epipytes & Parasites*	*16*
Total	*509*

Source : R.P. Palekar, ADS, Kashele, Karjat.

Some of the Medicinal and Other Plants Used by the Madhav Koli Tribals

Purpose	*No of plants*
1. *Medicinal uses*	*202*
2. *Veternary uses*	*109*
3. *For fish poison*	*23*
4. *For pest control*	*51*
5. *For water purification*	*3*
6. *Wild edible plants*	*87*
7. *Fodder plants*	*65*
8. *Fuel plants*	*30*
9. *Hunting purposes*	*3*
10. *Cultural and Religious purposes*	*38*

Source: : D.K. Kulkarni Agharkar Institute, Poona

Economic Value of Traditional Medicine

The majority of rural households use plants found in the local environment for managing their primary health needs. If one fixes a price on the use value in terms of the collection cost i.e. on the cost of labour expended in a year for collecting medicinal plants needed for an average family the value of medicinal plants to rural households in India would work out to Rs. 100/- x at the number (100 million) of rural households in India = Rs. 10 Billion.

Half a billion people use neem as a toothbrush. The average toothbrush and a tube of toothpaste at a US drug store each cost more than a dollar. Does this make the toothbrush application a billion dollar business ? If so, the neem value as a chewstick toothbrush is worth magnitudes more than the medicinal exports of India.

If the exchange value of plants is calculated at a market price estimated at what the plant medicines in the market would cost an average family per year the cost can be estimated at least ten times the use value. This would make the economic value of medicinal plants used by rural communities in India Rs. 100 Billion.

It appears that the value of plants used by the Indian villagers for self reliance in Primary Health Care is indeed substantial.

THE HERITAGE OF MEDICINAL PLANTS

OTHER FACTS . . .

Practioners of Indian System of Medicine

ISM category	*No. of practioners*
Ayurveda	*32,190*
Unani	*27,736*
Siddha	*11,746*

Source : Ministry of Health 1981 statistics

Medicinal Plants Used in Folk, Tribal, Ayurveda, Sidhha and Amchi (Tibetan) health systems

Health systems	*No. of medicinal plants*
1. Local health traditions	*7000*
2. Ayurveda	*1200*
3. Siddha	*500*
4. Unani	*400*
5. Amchi	*300*

FOLK - MEDICINE STREAM
Carriers of Village Based Health Traditions

Traditonal Carrier	Subjects	Nos
• Housewives and elders	-home remedies -food and nutrition	millions
• Traditional birth attendants	-Normal deliveries	7 lakhs
• Herbal healers	-Common ailments	3 lakhs
• Bone-setters	-Orthopaedics	60,000
• Visha Vaidhyas (Snake, Scorpion, Dog)	-Natural poisons	60,000
• Specialists	• Nethra • Skin • Respiratory • Dental • Arthritis • Mental Diseases • Liver • GIT • Wounds • Fistula Piles	1000 in each area

Figures based on extrapolations from micro-studies.

CLASSICAL MEDICINE STREAM

Codified Indigenous Medical Systems

A · Ayurved
- Siddha (Tamil Nadu)
- Tibetan (Amchi)
- Traditions all over S.E. Asia (Burma, Mongolia, Thailand Indonasia, Sri-Lanka, Bangladesh, Malaysia)

B · Unani

These systems cover all branches of medicine and surgery, including specialised areas like geriatrics and rejuvenation.

100,000 manuscripts on medicine reported to be lying around oriental libraries in India, S.E. Asia and also in foreign countries like Germany, U.K., France & USA.

LET US RECOGNISE OUR RICH HERITAGE... LET US CONSERVE IT ...
LET US BUILD ON IT..... AND LET US SHARE IT ON FAIR TERMS

A BRIEF RESUME OF THE MEDICINAL PLANTS CONSERVATION PROJECT

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A chain of 45 medicinal plants conservation areas across the two major bio-geographic regions - - The Western Ghats and the South Deccan Plateau of the Three States.

The overall strategy is to secure the diversity of medicinal plants resources of South India through 30 In Situ and 15 Ex Situ conservation areas.

A chain of Field Nurseries to provide basic planting materials for rural households and various user groups is also being set up.

Model Production Units are being encouraged as an integral part of the conservation strategy to demonstrate eco-development projects that will benefit local communities living around medicinal plant reserves linking bio-diversity conservation to local economic and social needs.

A National Information Resource on medicinal plants called INMEDPLAN (Indian Medicinal Plants National Network of Distributed Databases) has been launched to meet the multi-disciplinary information needs of persons working in fields like medicine, research, pharmaceuticals, community health, agriculture and conservation.

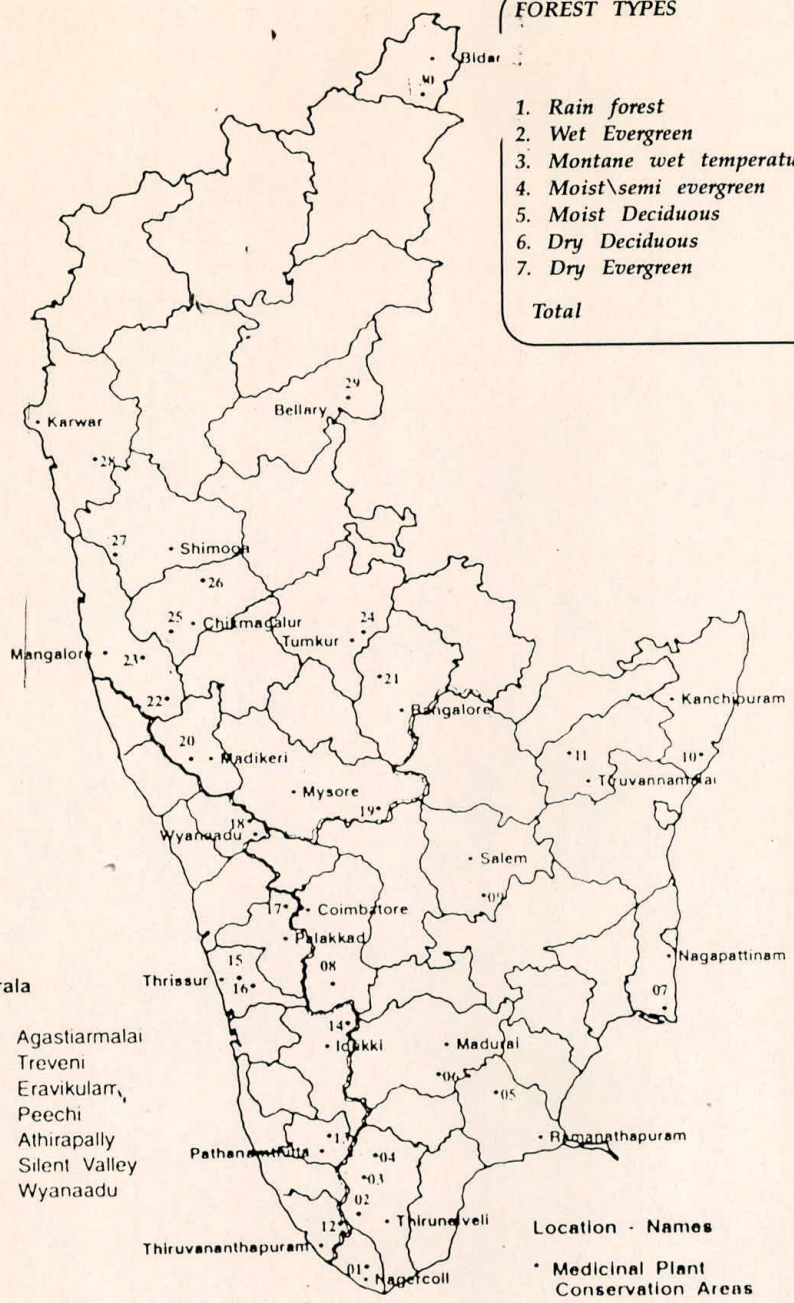
This is a public interest programme and therefore must have public accountability as well as public support.

FRLHT's perspective for a Medicinal Plant Conservation Strategy for India

Goal	Projects & Actors	Type of Conservation to be achieved
To Conserve genetic diversity of Medicinal Plants	Network of wilderness reserves in different vegetation types from evergreen forests to scrub and mangroves in cooperation with state forest department.	IN-SITU (conservation)
	Field Gene Banks in all Phyto-bio-geographic provinces, established by NGOs & Research Institutes.	EX-SITU (conservation)
Research in Domestication, plant breeding and Agro-technology	Project sponsored by industry & implemented by Agricultural Universities & NGOs.	EX-SITU (Research)
To ensure sustained supply of planting materials to rural and urban households	Network of nurseries and seed banks in all bio-geographic provinces established by farmers, panchayats, NGOs, social forestry departments and town & city municipalities to supply region specific packages of medicinal plants.	EX-SITU (propagation)
	Home Gardens, Sacred groves, Community gardens, & Municipal gardens, through grass-root initiatives	EX-SITU (gardens)
To supply plants to commercial users	Drug farms & Plantations through private initiatives, polyculture models.	EX-SITU (cultivation)
Involvement of local community in IN-SITU conservation.	Value added processing of Medicinal Plants, to make herbal products	Eco-development project to benefit tribal and other local communities living and Medicinal Plant resources.

THE HERITAGE OF MEDICINAL PLANTS

FOREST TYPES	No. of MPCAs covered in Kerala	Karnataka	Tamil Nadu
1. Rain forest	1	—	—
2. Wet Evergreen	2	2	1
3. Montane wet temperature.	1	—	1
4. Moist\semi evergreen	1	4	1
5. Moist Deciduous	2	1	1
6. Dry Deciduous	—	5	5
7. Dry Evergreen	—	—	2
Total	7	12	11



Kerala

12 Agastiarmalai
13 Treveni
14 Eravikulam
15 Peechi
16 Athirapally
17 Silent Valley
18 Wyanaadu

Tamil Nadu

01 Petchiparai
02 Mundanthurai
03 Kutallam
04 Thaniparai
05 Alagarkovil
06 Kodaikanal
07 Kodiakkarai
08 Anamalai
09 Kollihills
10 Kurumbaram
11 Thenmalai

Karnataka

19 BRT Hills
20 Talacauvery
21 Savandurga
22 Subrammaya Temple
23 Charmadi
24 Devaranarayanadurga
25 Kudremukha
26 Kemmangundi
27 Agumbe
28 Devimane
29 Sandur
30 Karpakkapalli

MEDICINAL PLANTS CONSERVATION AREAS (MPCAs) IN SOUTH INDIA

LET US RECOGNISE OUR RICH HERITAGE... LET US CONSERVE IT ...
LET US BUILD ON IT..... AND LET US SHARE IT ON FAIR TERMS

THE PUBLIC CAMPAIGN MUST INVOLVE :

THE KEY CAST

- *Local Village Communities*
- *Forest Departments of the Three States*
- *Community Organisations in the region*
- *Conservationists, ecologists, botanists*

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AND

THE SUPPORTING CAST

- *The Media (Print, Radio, TV and other A/V units)*
- *State Governments of Karnataka, Tamil Nadu and Kerala*
- *Respected Public Figures (Elders) of the Three States*
- *Folk Art Repertory from the Three States*
- *Schools and Colleges in the region*
- *Corporate sector*

THE KEY COMMUNICATION PROBLEMS ANTICIPATED IN THE IMPLEMENTATION OF THE CONSERVATION EFFORT

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- *Low self-esteem of folk and traditional knowledge systems despite their inherent strength and rich diversity*
- *The 'elitist idioms used to express concern for bio-diversity conservation and therefore its limited appeal to village communities*
- *How to transform the self-image and the role of the Forest Department, from being "managers" of an Economic bioresource, to that of being "conservators" of the biodiversity and the cultural heritage*
- *How to further inspire community organisations who are concerned with social justice, to commit themselves to the long term sustainability of a biodiversity conservation programme*

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ACTION ROLES FOR THE KEY ACTORS

- *COMMUNITY ORGANISATIONS: By creating a highly visible " here and now " beneficial link between genetic resources being conserved in the parks and the community's needs. This link can be created by the 45 Conservation Centres providing planting resources for community gardens and nurseries which will service rural households with a package of plants useful for primary health care.*

- *THE FOREST DEPARTMENTS : By creating a new public image for the Forest Departments through the Media, as " Protectors" of genetic resources and cultural diversity of the communities ... by organising training programmes for forest officers on conservation biology and the close relationship between biodiversity and cultural diversity.*

- *VILLAGE COMMUNITIES: By creating an awareness in the local community about their INTELLECTUAL PROPERTY RIGHTS in the context of the international biodiversity convention. By documenting ethno-botanical knowledge and creating COMMUNITY REGISTERS of the local knowledge of biodiversity which could be used as statutory instruments for safeguarding the IPRs of a community ... and become a statutory chronicle of each community's, contribution to bio-diversity conservation for posterity.*

- *ECOLOGISTS AND BOTANISTS : By encouraging long term institutional commitments of schools colleges and universities for monitoring regional bio-diversity as a social responsibility and service of academicia to the society.*

ACTION ROLES FOR THE SUPPORTING CAST

- *MEDIA : Projecting the theme of biodiversity and cultural diversity in public service advertising in print, radio, TV and other A/V media.*

- *STATE GOVERNMENTS : To recognise local community conservation action by way of rewards and incentives for the best community gene banks, gardens, nurseries exhaustive community registers and sustainable use of local biodiversity.*

ENVIRONMENTAL AWARD FOR KARNATAKA VILLAGE

Hunsur, a village at the foothills of the Sahyadri range, near Sagar, is now a pilgrimage centre for environmentalists. The people of Hunsur were awarded the very first environmental award instituted by the Karnataka government for having successfully protected their forests not only from the State government's developmental plans but have also established a Forest Panchyat which regulates when the forests may be used by the villagers.

- *PUBLIC FIGURES: To bestow blessings on the different activities of the campaign.*

- *FOLK MEDIA: To celebrate the richness of the community's heritage through traditional folk media like Bayalatta, Yakshagana, Kathakali etc.*

- *CORPORATE SECTOR : To sponsor conservation projects and various elements of this public campaign.*

THREE ELEMENTS OF A COMMUNICATION STRATEGY

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■ *A Central Unifying Message*

To Recognise Our Bio Resources
To Conserve Them
To Use Them Sustainably For Our Own welfare and
To Share It With Others on Fair terms

■ *A Unifying Visual Symbol...*

Symbolising tribals and rishis as the oldest carriers of the Society's knowledge of biodiversity this symbol can be displayed and used...by all conservation projects... to link community Intellectual Property Rights (IPRs) with biological resources being conserved by parks, nurseries ponds, wetlands, mangroves...
.... on entrance ways in stone and all-weather boards near community gardens and nurseries,
.... on posters to be displayed at panchayats, colleges, schools and mandals.

■ *A Theme Song*

Celebrating the Richness of Biodiversity and related Cultural Diversity.

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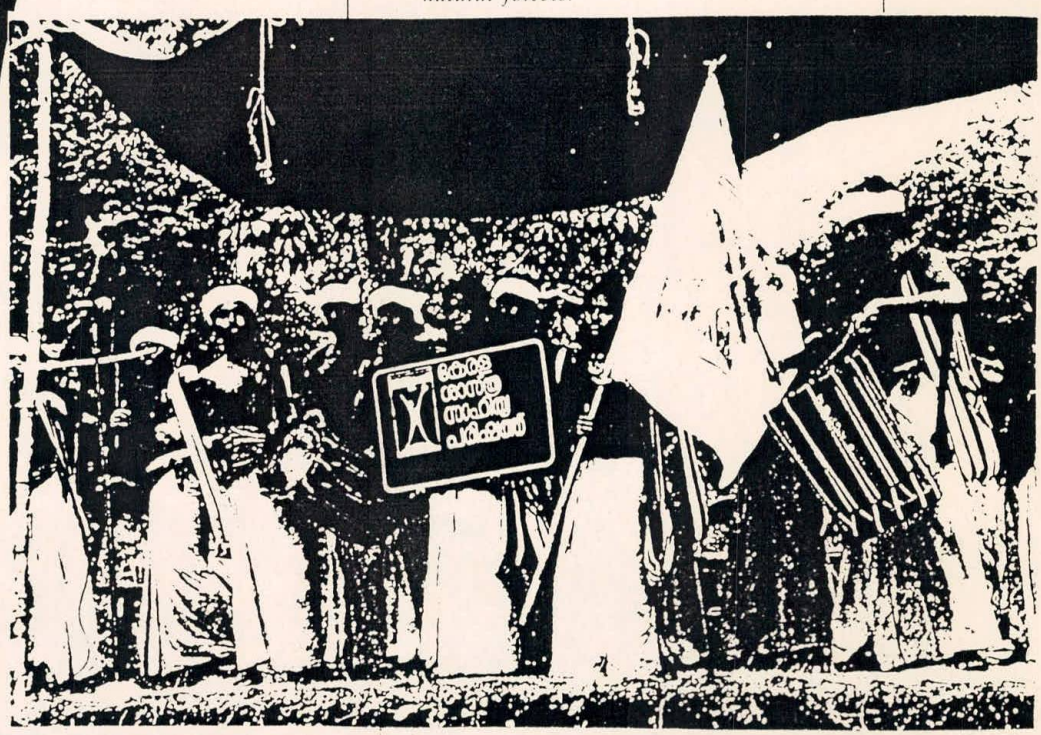
OTHER CONSERVATION EFFORTS IN SOUTH INDIA

Kerala Sastra Sahitya Parishat

The KSSP , the country's oldest people's science movement, has consistently taken a leading role in the various conservation efforts. It was the KSSP that first brought to the public attention the conservation value of the Silent Valley. It has subsequently documented Kerala's Sacred Groves and has successfully lobbied for halting all commercial harvests from Kerala's natural forests.



OTHER CONSERVATION EFFORTS IN SOUTH INDIA

CENTRE FOR ECOLOGICAL SCIENCES (Indian Institute of Science, Bangalore)

Prof. Madhav Gadgil has been awarded a grant under the 1993 PEW Scholars programme in conservation and development. Under this grant Dr Gadgil will be organising a network of undergraduate colleges located in the vicinity of the Western Ghats to join hands with the local communities to work out a comprehensive people-oriented strategy for conserving the biodiversity of the Western Ghats.

" It therfore makes abundant sense that nature conservation must continue to be pursued as a people's movement , and not as a bureaucratic effort. But over the years it has been taken over by the Forest Department, interpreting nature conservation as a task to be performed by force of arms keeping the local population and their livestock away. This has clearly been a misguided approach, an error to which the scientific community too has contributed ' — Dr. Madhav Gadgil.

M S SWAMINATHAN RESEARCH FOUNDATION (MSSRF)

With the creation of the Centre for Research on Sustainable Agriculture and Rural Development (CRSARD) in 1990, MSSRF began a series of dialogues, " Reaching the Unreached "and which began with 'Keystone International dialogue on plant genetic resources 'followed by 'Biotechnology', 'Information Technology', and 'Ecotechnology and Rural employment .MSSRF is concerned with methods of recognising and rewarding rural and tribal men and women, who over the millenia, have conserved genetic diversity of inestimable economic value....

OTHER CONSERVATION EFFORTS IN SOUTH INDIA

THE APPIKO CHALUVALI

The Appiko Chaluvalli (Hug-the -trees-movements) was launched in 1983, to oppose the lopsided forest policy which emphasis the revenue earning capacity of the Forests. The Appiko Chaluvali which is working in the vilages right from Kodagu to Uttara Kanara, has managed to stop 'C' and 'D' lands from becoming monoculture plantations.

KARNATAKA FOREST DEPARTMENT INITIATIVE

Medicine and Silviculture - A Step in the Right Direction

The North Zone Silviculture wing based in Dharwad has established a medicinal plant garden in Terakanahalli village near Sirsi in Uttara Kannada. The garden occupies an area of 170 acres on which grow 200 species of herbs, shrubs and creepers, and 100 tree species. The yield from these plants will be made available to traditional medicial practitioners and ayurvedic institutions, and saplings will also be provided to those who wish to raise their own medicinal gardens. Several panchayats have come forward to raise such gardens.

Dhanvanthri Vana : Bangalore

Another garden of 35 acres has been established in the Bangalore University campus for the Directorate of Indian Medicine, Government of Karnataka. This garden is expected to service ayurvedic and unani colleges in the city as well as supply planting materials to keen citizens for home gardens.

OTHER CONSERVATION EFFORTS IN SOUTH INDIA

THE VRIKSHAMITRA OF DHARWAD

The Samaja Parivarthana Samudaya of Dharwad, took on the might of the Karnataka Plywood Limited company, and in a long-drawn battle which ended in 19993, got the Government of Karanataka to " WIND UP " the KPL. The Government of India's Ministry of Environment awarded the Vrikshamitra award in 1993 to the Samaj Parivartana Samudaya.

LOKSWASTHYA PARAMPARA SAMVARDHAN SAMITHI

LOKSWASTHYA PARAMPARA SAMVARDHAN SAMITHI is a grassroots movement to revitalise local health cultures and re-establish a functional relationship between the traditional knowledge systems of village communities and use of local biodiversity for achieving self reliance in primary health care

TOO HONEST FOR ITS OWN GOOD

A Tamil Nadu Quango, the Madras Institute of Development Studies, was reportedly blacklisted for its too honest an evaluation of the Tamil Nadu Forestry project.

TRIBALS OF KARJAT

Under the guidance of Dr. R. H. Richarria, the tribals of Karjat have with the help of a local NGO, the Academy of Development Science, created a community gene bank of over 350 traditional rice cultivars of the Konkan region. These are now being used to develop hybrid rices by simple hybridisation and multiplying seed through clonal propagation .

OTHER IMPORTANT ELEMENTS OF BIODIVERSITY

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- *Medicinal Plants comprise only one component of biodiversity that needs to be conserved.*

- *Mammals (domesticated and wild), birds, insects, a range of micro-organisms, aquatic, flora and fauna, all these comprise other important elements of biodiversity that need to be conserved and used sustainably.*

- *The landscape, seascape, wetlands, rivers, fields, swamps, roadsides are all important habitats for conservation.*

THE THREE ELEMENTS OF THIS CONSERVATION STRATEGY CAN BE USED TO COVER ALL THESE CONCERNS

TASKS FOR THE BRAINSTORMERS

HOW TO SENSITISE, ENCOURAGE AND INVOLVE . . .

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- *LOCAL COMMUNITIES AND COMMUNITY ORGANISATIONS and enlist their support for the conservation effort in the region*
- *THE FOREST DEPARTMENT to fulfil their immense social responsibility for conserving society's plant genetic resources for present and future generations.*
- *THE GENERAL PUBLIC .. from lay persons to ecologists, botanists, students, corporate bodies etc.., in documenting, monitoring, conserving and sustainable utilisation of their regional biodiversity*

and . . .

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OPERATIONALISING THE COMMUNICATION STRATEGY THROUGH

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- Practical Steps
- An Activity Calendar
- Impact Monitoring