



PROCEEDINGS OF THE WORKSHOP ON
GUMS AND RESINS IN INDIA

11th April to 13th April 2006
Hotel Jungle bells, Tyda, Near Araku Valley,
Andhra Pradesh, India

NTFP Exchange Programme South and South East Asia
&
Regional Centre for Development Cooperation, Bhubaneswar

1. Introduction to the workshop

Gums and resins, commonly used in every day life, are having ample importance as non-timber forest produce. Apart from use in torches, embalming chemicals, waterproofing and caulking ships, incense, paints and medicines, a major portion of the gums and resins are also used as food additives. So food industries worldwide are emerging as potential users of gums and resins. Gums and resins are having a niche market globally. A recent statistics says export of gums and resins from India were to the tune of Rs. 5 billion per annum. In spite of a shift in the global market from natural products to synthetic one, the former has its own place and share in the market. The reason is the growing consciousness for organic/ natural foods. Still a lot to be done for accelerating the production and trade situation both qualitatively and quantitatively. Opportunities to be explored after having a first hand knowledge on the world trade scenario of the produce. Many organizations are working in this line to know the situation. NTFP Exchange Programme in South and South East Asia, a joint initiative of local and regional NGO's and indigenous organizations in the region is doing a study on the world market of resins and gums. The objective of the study is to assess the overall trade policies and instruments, market situation, production, consumption, value chain, technologies etc. The expected outcome of the study would help in developing strategies for the future.

The workshop at Araku Valley was a part of the endeavor of NTFP Exchange Programme to assess the policy, institutions, procurement and trade situation in India. Two workshops were organized in 2004 & 2005 especially with the partners of NTFP EP in India to discuss the local situations in harvesting, procurement, value addition and marketing of gums and resins. The first one was organized by the Keystone Foundation at Nilambur, Kerala and the second was held in Karjat, Maharashtra by the Academy of Development Sciences.

The *objective* of the workshop at Araku Valley was to discuss:

- The overall policy and legal framework dealing with gums and resins,
- Issues in resource management, sustainability, marketing etc,
- Current trends in global and domestic market according to the market survey being undertaken by NTFP EP and
- Future intervention strategies for promotion of institutions, sustainable harvesting, value addition/enterprise development, marketing etc.

2. Participants of the workshop

The workshop at Araku Valley was organized jointly by RCDC Center for Forestry and Governance, Bhubaneswar and NTFP Exchange Programme South and Southeast Asia during 11th April to 13th April at Hotel Jungle Bells Tyda near Araku Valley in Andhra Pradesh of India. It was attended by more than 40 participants from various research organizations like SFRI, TFRI, Centre for Science for Villages etc. State agencies working on NTFP like MFP Federations from Chhattishgarh, Tribal Development Co-operative Corporation and Forest Development Corporations from Orissa and GCC (Girijan Co-operative Corporation) from Andhra Pradesh, civil society organizations working on gums and resins across the country, Traders and last but not the least, the representatives of the gum pickers association, Andhra Pradesh. There were also representations from indigenous communities association from Philippines and a forestry research organization in Vietnam.

An effort was made to assess the policy, institutions, harvesting technologies, market situation in India as well as Philippines and Vietnam. A detailed list of participants has been annexed to this report.

3. Proceedings of the workshop

DAY ONE: 11th April 2006

Mr. Manoj Pattnaik Director, RCDC CFG, Bhubaneswar extended a warm welcome to all the delegates to the workshop. After a quick introduction of the participants he described the need of such a workshop at this juncture, as well the objectives, structure and the expectations from the workshop. He urged the participants to focus on three important aspects during the course of the workshop, which would have greater impact on the gums and resins policy and trade in the country i.e. a) detailed analysis of the current state of affairs of the gums and resins, b) factors affecting or responsible for its demand/supply and c) development of a blue print for the future interventions in enhancing the production, value addition and trade.



Ms. Snehlata Nath, Keystone Foundation, Nilagiris, Tamil Nadu briefed about NTFP-EP exchange programme in South and south East Asia, its objectives, interest areas etc. She mentioned that the programme started in the year 1998, however it got registered in the year 2003 having its office at Manila, Philippines. The exchange is a network of NGO's and CBO's and operates in south and south East Asia. Primarily it works with the forest based communities on sustainable management of natural resources- specifically NTFPs, tenurial security, forest rights, promotion of subsistence use, value addition, marketing and advocacy on policies. The activities were done through exchange of expertise, experience sharing and promotion of appropriate research.



The other aspects touched by her were about the history of gums and resins campaign in India and the outcome of previous workshops conducted by NTFP-EP during the year 2004 at Nilambur, Kerala and Karjat, Maharashtra. Finally she gave an introduction about the world market study on gums and resins, which is being done by Profound, Netherlands and India market study by RCDC-CFG.

Business Session – I on Policies governing management and trade of gums and resins

The first presentation was delivered by **Mr. A.K.Singh, Executive Director, Chattisgarh MFP federation** related to NTFP policies in general of Chhattisgarh and gums and resins in particular. He mentioned that Chhattisgarh, which is having 43% of its total geographical area under forest cover has a great potential for NTFP trade and market. He elaborated how major gums in the state are nationalized and are categorized as grade I and grade II gums for better marketability and quality grades, the system of management of trade of gums and resins in the state and finally some of the tax structures levied in the state for gums and resins. He also identified various loopholes in the sub sector, which are affecting the livelihood of millions as well as trade and revenue.



Later **Mr. K.Rajeswar Rao, G.M, Marketing, of GCC**, presented a brief background of GCC's work on NTFP in the state with special focus on resins and gums management and trade. There are about 25 NTFP items nationalized in the state and are controlled by GCC in 10 divisions and by 43 societies. For the overall management and trade of the NTFPs, the state government takes care of the establishment charges of GCC; there are no provisions of royalty by the government.

He explained how GCC took the initiative to develop the quality of gums and resins in the state by wide-ranging research and hard work and is able to make a reputed brand for the product group in the country as well outside. The initiative, which started in the later half of the 90's under the auspicious leadership of the CMD Mr. Vijay Kumar, was a struggle for GCC, because the demand for gums and resins died abruptly, and a huge market slipped off from GCC's hand. During the period, through united effort lots of research was carried out by GCC on harvesting and marketing requirement all over the world and the results were transmitted to the gum pickers through rigorous training and capacity building. Which ultimately bore results and the quality of gums could be restored.

Mr Venu Rao of LAYA raised a question whether the prices offered by GCC for gums are in tune to the market and the role of government in the intervention. The answer was that collectors get a good price from GCC and no monopoly exists, and the government evaluates the pricing mechanism time to time. Mr. M.V. Rao supplemented saying that government had to intervene some years back, when there was incalculable tree loss as a result of bad harvesting practice. Dr Soham Pandya of CSV, Wardha cited the example of Maharashtra where community wanted a free market, after getting disappointed by government price.

Mr. Padmanava Choudhury, Tribal Development Cooperative Corporation of Orissa spoke on the policies and trade on gums and resins in the state. He mentioned that prior to 2000, the Tribal Development Cooperative Corporation and Orissa Forest Development Corporations were the monopolizing agencies for gums and resins. That means they can only

handle the produces. However, after March 2000, all the gums are under specified forest produces or lease bar items i.e. the forest department can only provide the collection rights to whom so ever it thinks right. However, no collection rights have been given in the state since September 2005. Marketing of resins are completely banned in the state.

Business Session – II on Sustainable harvesting of different Gums and Resins, various technologies and practices

Dr. M. V. Rao, Scientist, Vijaywada started his presentation citing the example of GCC facing the crisis of dead stock of gum karaya (around 3000 tones) during the 90's. He elaborated how he along with the active support of GCC staffs, Kovel foundation members and the gum pickers were able to convert the market situation of karaya from a looser one to a winner one. During those days he tried to revive the situation through extensive research in the laboratory as well as field experiments on sustainable gum tapping and safe processing methods. And finally, he along with others able to trace out the problems for which karaya is loosing ground and accordingly developed remedial measures. His research findings can be divided into three levels, one is at the technology level, second one is at the practice level by the pickers and third is at the storing level. Regular training to the gum pickers those days resulted in harvest of international quality gum Karaya.



He practically showed different grades of gum Karaya and its characteristic features like swelling ability and viscosity and its impact on market. He also described the applications of gum Karaya in different industries. It is used mainly as a bulk laxative, denture adhesive, ostomy appliances and appetite suppressant etc

Nerto Colili of NATRIPAL wanted to know if the technology could be used in Philippines. Dr Rao suggested that these simple techniques could be used everywhere.

Dr Rakhi Yadav, State Forest Research Institute, Jabalpur, Madhya Pradesh presented on Sustainable harvesting, processing, grading and marketing of some gums and resins of Madhya Pradesh. Her presentation reflected sustainable harvesting, processing and marketing of *Sterculia Urens* and *Boswellia Serrata*. She elaborated how determination of optimum number of blazes, best direction of blaze and understanding of gum yield in white barked and red barked trees matter. She provided details of processing, drying, grading and marketing of *Boswellia serrata* and *Anogeissus Latifolia* gums.



Processing and drying	Grades	Marketing
1. Boswellia serrata The gum oleoresin is stored in baskets, lots of guggal are placed one over another while sloping on one side. Oil starts coming out. Resin and gum left in the basket is allowed to dry.	Gum resin is broken into small pieces. Five grades 1 Super fine grade - transparent & white. 2 Quality I slightly brownish 3 Quality II more brownish and translucent 4 Quality III Brownish to green translucent and opaque. 5 Powder-coarse to fine powder	Main market Sheopur & Shivpuri, market is steady.
2. Anogeissus latifolia also known as Ghatti gum or Dhaora gum. The tears are collected and sold to local traders. The traders get the gums sorted, removing impurities.	The criteria for grading are color & transparency. The color varies from whitish to amber. Four grades 1 Grade I- Sev 2 Grade II- White 3 Grade III- samudha 4 Grade IV- siftings	Main markets are Shivpuri, Sheopur, Burhanpur and Khandwa. The market is buoyant.

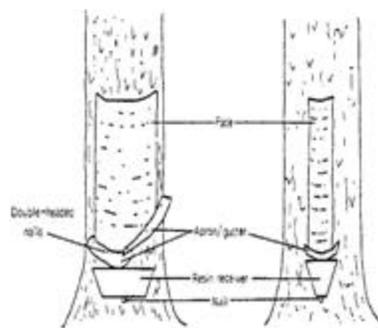
As per the research findings of Dr. Rekha, 3 Blazes per tree yields best result. Blaze in south direction is better. Red-barked trees yield more gum. Higher girth class trees yield more. And the size of the blaze should be 10 cms (horizontal) X 4 cms (vertical) in a matured tree and the period of gum collection is November to June.

Mr. Radha Krishna of D.K. Enterprises, Hyderabad wanted to know about the use of stone powder, which is mainly used by the collectors while processing gums. Dr Rakhi explained that the use of powder is for convenience only. Dr M.V. Rao explained how using powder might create health problems for people as it has various negative features.

Dr A. K. Pandey of Tropical Forest Research Institute, Jabalpur, Madhya pradesh



presented on the livelihood aspect of Gums and resins and how it provides sustenance to millions, he also elaborated about the sustainable harvesting aspect of gums and resins, the policies guiding gums and resins management in Madhya pradesh and its impact, the production trend analysis of various gums in Madhya pradesh. Finally, he provided a detailed description of the *Sterculia Urens* and *Boswellia serrata* tree and the sustainable harvest procedure including their production patterns of the state of Madhya pradesh.



Mr. K. Sriram Murthy of Kovel Foundation talked about scientific methods of gum tapping, incision techniques and gradation of gums. He also emphasized on immediate research needs and establishment of an MIS (Marketing Information system) covering resource inventorisation, production, processing and marketing. After which other strategies can be developed on value addition, market imperfections and better products through quality control and certification procedures.

Dr M.V Rao suggested a systematic research is needed to ascertain gum yield per tree and the regeneration period.

On the issue of scientific method of tapping of gum, **Dr Soham Pandya from Centre for Science For Villages (CSV)**, spoke about scientific method of tapping and processing of gums, its composition, characteristics and the tribals response to the scientific methods of tapping. He elaborated the physiology of gummosis, hormonal impacts on the tree, by giving example of Ethephon's use. While giving details about Ethephon, he mentioned about its chemical composition, characteristics, effect, administration methods, quantity to be administered and how its use results in the increased gum yield by several times and the collectors save their precious time. This feature makes tapping of gum yielding trees and collection of gum more remunerative.



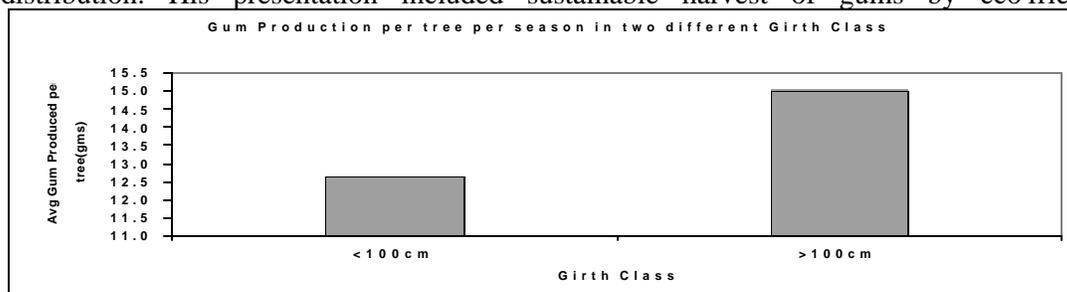
He also talked about how over the years CSV has been successful in imparting trainings to self-help groups on developing several value added products out of gums and resins like Gum Ladoo, Gum mint, bread spread, gum papad etc between a price tag of 75 to 750 per kg. *The details of the product with price per kg given in the table.*

After the presentation, MR. Jenne De Beer of NTFP-EP raised the issue of using ethephon in gum trees. Dr, Rao of Vijajwada added that the use of ethophon is banned in Europe following its adverse effect on trees. According to Dr Rao, ethphone used trees produce low quality gums as compared to natural ones.

Name of Value added product & its cost		
▶ Gum		Rs 60/- / Kg
▶ Gum Ladoo		Rs 200/-
▶ Gum Mint		Rs 100/-
▶ Bread Spread		Rs 75/-
▶ Salad Spread		Rs 75/-
▶ Gum Tabs		Rs.750/-
▶ Gum Pops		Rs.100/-
▶ Gum Papad		Rs.100/-
▶ Gum Barfi		Rs.100/-
▶ Sticking gum		Rs. 75/-

Answering to the question of marketing of the value added products, Dr Pandya said that the marketing takes place keeping in view the near by locality and is done in small scale.

Mr Venu Rao of Laya, Visakhapatnam presented about the conservation and scientific tapping of *Sterculia urens* for better quality products and its role in the improvement in the livelihood of tribals. He gave a detailed description of gums, its morphology, phenology and distribution. His presentation included sustainable harvest of gums by eco-friendly



technologies as well as traditional methods. He cited some of the examples of eco-friendly technologies practiced else where, and told that NaOH and ethephon is used in many parts of the world for various treatments. He also talked about correlation between the gum yield and the diameter of the tree, seasonal effects of gum yield by applying fertilizer and moisture conservation practices and optimum storage methods of the gum to maintain its properties. He also elaborated about the production differences in gums in two girth classes *as shown in the figure*.

Mr Narasingha Hegde, Prakriti, Sirsi, Karnataka appraised about the harvesting, processing and marketing of Gums and Resins in the Western Ghat mountain ranges. The major problem he identified in the Western Ghats are bad marketing practices and poor harvesting quality. Later he briefed about NTFP scenario of Uttar Kanada district. Where around 400 NTFP species are found, out of which 22 are gums and resin yielding species. 33% of total income is from NTFPs and 1% income from gums and resins.

Mr Hegde gave a detailed picture of the gum species available in Uttar Kannada district and its application in various fields. Some of the important species available and value added are *Pterocarpus marsupium*,

- *Aegle marmelos* *Garcinia morella*, *Butea monosperma* and *Boswellia serrata*

Though the gums and resins have various applications, it is still a minor NTFP in the district. No processing and value addition is involved at the harvester's level. Alternate market channels are yet to be developed. Moreover the policies relating to gums and resins are not very clear. Mr Hegede summarised the above-mentioned issues saying more research is needed on better harvesting practices and market analysis.



Mr. A.K. Singh of Chattisgarh MFP Federation, asked about the contribution of Prakriti towards sustainable harvesting practices. Mr Hegede supplemented that empowerment of the community is done by Prakriti by organizing training programmes. But research and market linkages needs more systematic approach. Mr Jenne de Beer also added that market linkage and value addition could change the whole scenario.

DAY TWO: 12th April 2006

The day began with a trek for bird watching in the nearby forests around the resort. It was quite a good experience for most of the members! However Not for bird watching rather for trekking, as no bird was in the scene.

Business Session III: Management and trade of gus and resins

Mr Jenne De Beer, Coordinator, NTFP Exchange Programme presented the developments and key findings of the world Market Survey on Resins and Gums. In the presentation he elaborated about the demand and supply situation of gums and resins all over the world along with the various uses by the industries. The major industries that are



consuming resins and gums are Pharmaceuticals, food and paint. He also mentioned about the problems faced by the resins and gum industry like irregular supplies, absence of quality control mechanism, inconsistent policies and rules

While describing about the Indian scene he told that the major problems in India is that product development is extremely poor and government is not providing adequate support for the promotion of the sub sector.

A long discussion followed his presentation relating to establishment of link between the primary collectors at the lowest level to the traders at the top. Mr Radha Krishna of D. K. Enterprises supplemented that various actors' play the middle role; therefore a controlling mechanism needs to be developed for linking both the layers. Mr Jenne De Beer added that new organizations are bound to learn at each and every step.

Mr. Lai Tung Quan of Institute of tropical biology, Vietnam presented about Policies, institutions and market dealing with Gums and Resins in Viet Nam. In the presentation he described the classification and definitions of forests products in Vietnam and the position of gums and resins. Furthermore, Mr. Quan focused more on tenure rights of the forest dependant



Boats in Vietnam are caulked with **Dipterocarp resin**

people. Mr. Quan's recommendations for the improvement of gums and resins sub sector in the country are surveys on assessing the stock and market values of gums and resins, listing all plants species and research studies on sustainable tapping techniques.

Mr. Nerto Colili of NATRIPAL, Philippines presented about the Almaciga resins trade situation in Palawan province of Philippines. He started with a brief introduction of NATRIPAL, which is the largest indigenous peoples federation in Palawan, having 70 local associations. It was organized in 1989 with an objective of advocating for the recognition of ancestral land and access to natural resources.

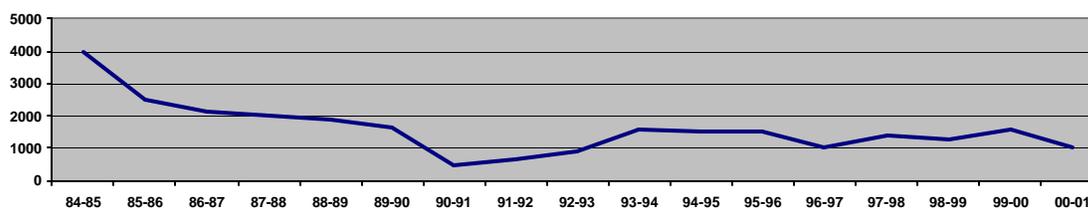


Then he mentioned about the trade situation of Almaciga (*Agathis Philippinensis*) resin in the Philippines. It is one of the most valuable NTFPs in the country, which is famous for resin harvesting. The indigenous people mostly collect it for cash income. He highlighted on the system of collection of Almaciga in the country. He also mentioned about the problems in trade and management like cumbersome procedure, indebtedness of the indigenous communities and migrants, High forest taxes and lack of value addition and unsustainable harvesting practices.

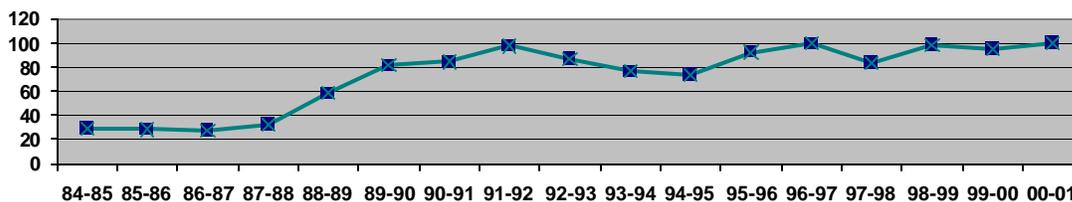
He as well advocated some of the remedial measures for the development of resin trade in Palawan like the indigenous community in Palawan needs clearly defined rights, which would bring about a change in their economy. Capacity building for sustainable harvesting and value addition depending on the market situation would also add to the required change.

Mr. Avinash Upadhaya, RCDC- Centre For Forestry and Governance, Bhubaneswar presented the Indian part of the resins and gums study, in which he elaborated on current trends in the markets for gums and resins in India. Where he mentioned about the important gums and resins available in the country, the classification of gums and resins as per the definitions, production and consumption figures of various gums and resins. He mentioned that more than 85% of the total gums and resins produced in the country are exported. The local use of gums is mostly for medicinal purposes. He also told about the various laws and rules governing gums and resins in the country, pricing trend analysis for 10-15 years (as given in the graphs) as well as value chain analysis.

Gum karaya export figures (Quantity in MTs)



Increase in average price per kg of Gum karaya



Ms. Snehlata of Keystone Foundation wanted to know about the domestic market in detail. Mr. Avinash supplemented that still we are wondering on the uses, once the study completes, which will be completed within three months we will be able to figure out the exact information of domestic use. Mr. Biswadeep Ghose of HIVOS asked about transparency in price gradation. Mr. Avinash answered that getting information on gums other than gum Karaya is very difficult. Mr. Biswadeep added that the information on price gradation would determine identifying strategies for community-based organizations.

Mr Radha Krishna, D.K. Enterprises, Hyderabad in his short but powerful deliberation said that research is needed to cultivate various species of gums in degraded lands. Instead of depending only on one species, Gum Karaya (*sterculia Urens*) options should be opened for other species in a wider area. He also suggested that, as traders are dependent on good suppliers like GCC. Therefore other state agencies/ federations/ corporations should be competitive enough to be there in the market by producing good quality raw material.

Answering to the question of Mr. Biswadeep Ghose as to how the poor tribals would be benefited Mr. R.K. said that better harvesting practices would give them increased benefit. Mr. Manoj Pattnaik of RCDC wanted to know if the amount exported could be used in the domestic market. Mr. R.K. supplemented that the use of gums and resins in the domestic market is very minimal, extensive research might help in finding other avenues.

Mr A.K. Singh, M.D. Chattisgarh MFP Federation supplemented that research undertaken by private business houses remains confined to them only. This research would give us a strong base to compete in the international market.

In the **last session** of the day, there was a debate on various aspects of the sub sector. Prominent among them are Importance of institutions, its role, profit sharing and research needs. In the institution's role lots of discussion was made on GCC, as a role model for other states.

However members urge that GCC should share the profit with the gum pickers on regular basis with low procurement price, inspite of the current mechanism in which it gives high procurement price and not distributing any profit.

Similarly lot of deliberations were made on the research needs on the gums available in other states of India like Andhra pradesh, Chattisgarh, Madhya pradesh and Orissa. Dr. Pandey of TFRI mentioned that, they can help the states or organizations interested on technical research. Similarly on value addition Dr. Pandya of CSV offered to help.

DAY THREE: 13th April 2006

In the morning all the participants went out for an exposure trip to the nearby forests, where they saw blaze making and gum collection directly from the GCC field staffs and the gum pickers. The team visited 2 sites divided in 2 teams in and around the Anantpur area. The major thing that the team discussed with the gum pickers are about the **tenurial arrangements**, and they found out that there is no fixed ownership rights among the pickers, if someone has already made a blaze on a tree, no one else will collect/ harvest the gum. However, if within 7-8 days if no body collects, then others can collect. Mostly the collection arrangements are done through the mutually agreed objectives.

There was also discussion on the **sustainability** and the size of trees harvested, the team found out that most of trees that are harvested are only 6-7 years old. When asked the pickers they explained that due to the steep hills, less number of trees and large amount of gum collectors, they collect whatever comes on their way for economic viability.

During the field visit the team identified certain key issues, which are affecting the gums, and resins sub sector very much. The important among them are that market extension education is limited, poor monitoring mechanism by the villagers, GCC and other training providers. There is no effort either on production enhancement or more plantation inspite of good income for the community as well as heavy demand in the market. Other gums are also

available in the area, but there is not adequate effort on those. Focus is more on gum karaya only.

After the field visit the participants sat down for developing a common agenda for future days to help the sub sector gaining momentum.

4. Conclusion and Recommendations

In general majority of the participants expressed the need for greater in-depth understanding of the policy and trade environment on gums and resins. The workshop could not give adequate emphasis on the different resins and market situation dealing with resins. There are also a variety of gums available in the country and the discussions in the workshop were too much focused on 3-4 gums and within them Gum Karaya got the predominant point of focus. It has been suggested by the participants to generate information on other gums and resins and create a mechanism for wider dissemination among different stakeholders and NTFP Exchange Programme needs to take a lead role in it. The following are the specific line of action for the NTFP EP recommended by the workshop participants.

1. PRAKRUTI from Sirsi presented the market scenario for *Bowsellia serrata* and there was huge gap in procurement prices in different places within a radius of 25 kms. The reasons for such price variation and detailed value chain analysis need to be undertaken by PRAKRUTI and then NTFP EP would discuss the possible intervention strategies for the area.
2. There is a need for compilation of different technologies involved in harvesting of gums and resins, and their value addition. Harvesting technologies have already been developed by GCC and Kovel Foundation for Gum Karaya and Kovel Foundation has already developed a training module/manual in Telugu language. This has to be translated into English and NTFP EP would discuss with Kovel Foundation for necessary action. Once it is translated into English the NTFP EP partners may further translate into different local languages. Similarly NTFP EP partners would explore possibilities for establishing linkages with different technical institutions and business promotion agencies for compilation of different technologies promoted by them. Once these are compiled dissemination strategies would be discussed.
3. Domestic market survey done by RCDC needs to be furthered in order to find information on the domestic consumption; market segments, pricing structure etc. of different gums and resins. This would provide a direction for interventions in local enterprise development.
4. NTFP EP needs to expand its linkages with people and institutions involving in trading of gums and resins. The presence of Mr. Radha Krishna from D. K. Enterprises from Hyderabad provided a different flavor to the workshop and his contribution to the workshop proceedings was enormous. The participants requested Mr. Radha Krishna to provide continued support to NTFP EP and other organizations involved in the processing and trading of gums and he was also requested to facilitate participation of more people

from the trade in the activities of NTFP EP. All the available literature produced by NTFP EP would be made available to him so that he could circulate it to other exporters, traders etc.

5. The participants suggested to Mr. Nerto Colili, participant from Natripal, Philippines to look into the possibility of interventions by Natripal in establishing market linkages for Almaciga resin in Palwan as the price offered by the traders to the primary collectors of Almaciga is very low. The organization needs to undertake value chain analysis and find out the scope for intervention. Other members of NTFP EP need to help Natripal in establishing effective market linkages.
6. For the participant from Vietnam – Mr. Lai Tung Quan the participants of the workshop suggested that quite a lot of issues have been presented by Mr. Lai in the context of sustainable harvesting of resins and gums and the organization needs to focus on identifying various strategies for addressing these issues and evolve collective interventions for it.
7. The world market survey need to provide information on enterprise development and different quality parameters to the organizations in India for further interventions in enterprise development in gums and resins.
8. During the workshop, lots of discussion were held particularly on gums and that to gum karaya and one or two more gums, very little has been discussed on other gums as well as resins.

The three day gums and resins workshop ended with vote of thanks by Mr. Manoj Pattnaik, to one and all, with specific mention of the contribution made by the GCC's field staffs, who had taken extra care to show the participants harvesting of karaya gum.

Annexure 1: List of participants

Sl.NO	NAME	COMMUNICATION REFERENCE
1	Jenne de Beer	Director, NTFP-Exchange Programme Philippines ntfp7@yahoo.co.uk
2	Lai Tung Quan	Lai Tung Quan Institute of Tropical Biology 85 Tran Quac Toan, District 3 Hochimin City, Vietnam laitungquan@yahoo.com
3	Nerto Colili	Area Coordinator, NATRIPAL Macawili Rd, Byg.Bancao-bancao Puerto Princesa, Palawan, Philippines natripal@yahoo.com dioningbanua@yahoo.com.ph
4	Biswadeep Ghose	HIVOS Regional Office Flat- no.402, Eden Park, No-20, Vittal Mallya Road, Bangalore b.ghose@hivos-india.org
5	Snehalata Nath	Keystone Foundation, Groves Hill Road Po.Box-35, Kotagiri-643217 Nilgiris, Ph-04266272277 sneh@keystone-foundation.org
6	Arjun Singh Nag,	LEAF At Jagdalpur, Rajendranagar Ward, near old Geedam naka, Dist-Baster-01, Chhatishgarh, Ph-07782-223541
7	Basant Yadav,	
8	Manoj Raju,	
9	Harendra Nag	
10	Sukhmanman Ram	
11	Narasingha Hegde,	Prakriti Basavraj Nilaya, Chowkimath, Sirsi, Karnataka-581401 Tel: 08384-225139 appiko@sancharnet.in Prakriti hegdenrm@yahoo.com
12	Narasingha S.Bhat	
13	Krishna Srinivasan	ECONET 2 & 3 Silver Homes Opposite Sagar Bungalow, Fatima nagar Pune-13, Maharashtra Ph:020-32907154 econetpune@eth.net , anujakrishna@gmail.com
14	K. Sriram Murthy	Kovel Foundation, HIG- 1-9, Sagarnagar Visakhapatnam, Andhra Pradesh Ph-0891-0794026, 0891-2542283 (F) Cell: 9440106554 kovel@rediffmail.com
15	M. Bijibabu,	
16	J. Rajeyiah	
17	Murla Yendaiyah,	

18	M.V.Rao, Scientist	Dr Rao's Laboratory 2-102,P&T Colony Ramavaramyadu, Vijaywada, Andhra pradesh Ph: 9848125175 drmvrao@sify.com
19	P. Pattabhi Ramayya	Manager, GPCM Society, Kashipatnam, Andhra Pradesh.
20	K. Rajeswar Rao GCC-AP	GCC-Vsakhapatnam Andhra Pradesh, Pin-530017 Ph:0891-2796461 apgirijan@yahoo.co.in
21	Padmanava Choudhury, Manager (F&A)	Tribal Development Cooperative Corporation of Orissa Limited Rupali Sqare, Bhoi nagar Bhubaneswar Ph: 0674-2542617
22	Satyabadi Sasmal O.F.D.C	Divisional Manager, OFDC, Baripada, Mayurbhanj, Orissa.
23	A.K Singh G.M.-Chattishgarh MFP Federation	Chattisgarh MFP Federation, VIP Estate, Near VIP Club Vidhan Sabha Road, Sankar nagar, Raipur, Chhattisgarh Ph;0771-2283593, 2283594 (F) Cgmfpfederation@yahoo.co.in cgmfpfederation@sancharnet.in
24	Siddappa Setty	ATREE 64,A1 Block, 2 nd Main, 3 rd Stage Vijaynagar-Mysore -570017 siddappa@atree.org
25	R. Venu Gopal Rao LAYA,	LAYA, Flat no-501, Kurupur Custle, E. P. Colony Vishakhapatnam, Andhra Pradesh Ph- 0891-2530071, Fax-2784341 Cell- 9848195992 laya@sancharnet.in
26	Dr. Soham Pandya.	Centre for Science for Villages Executive Direcor, CSV, Dattapur Po.Box-21, Wardha, Maharastra Ph:07152- 243801, Res: 07152-249172 Fax-07152-247561 sohamcsv@rediffmail.com csvhousing@rediffmail.com
27	Rakhi Yadav, Research Fellow	State Forest Research Institute (SFRI) Polipathar, Jabalpur, Madhya Pradesh - 482008 Fax-0761-2661304

28	V. Balraj Gupta	Centre for Peoples Forestry, H.N.12-13-445, Street no.- 1 Tarnaka, Secunderabad-500017 info@cpf.in , cpf@cpf-india.org
29	A.K. Pandey Scientist	Tropical Forest Research Institute (TFRI) Po. R.F.RC., Madla Road Jabalpur, Madhya Pradesh Ph:0671-2840751/ 4044251 Akpandey10@rediffmail.com
30	D. Radha Krishna M/S D.K. Enterprises	D.K. Enterprises 109, Srikrupa Market, Malakpeta, Hyderabad-36 Ph: 040-24549232 Fax: 040-24651543 Dkegums@yahoo.com
31	Manoj Patnaik	R.C.D.C. CFG, N/4-342,Nayapalli, IRC Village, Bhubaneswar-751015 Ph: 0674-2552494 rdcccfg@sancharnet.in
32	Avinash Upadhyay	
33	Sukant Jena	
34	G.S. Rao	
35	Shyamasri Mohanty	
36	K.C. Pattanaik	Branch Manager, TDCC Limited Bhawanipatna, Dist- Kalahandi, Orissa. 06670-230792, 230378 (R),

Annexure 2: Schedule of the workshop

Date and time	Sessions	Facilitation/Presentation
11.04.06 (Tuesday)		
10 am onwards	Registration	
11 – 11.45 am	Inaugural session	
	Introduction to the workshop and participants.	RCDC Centre for Forestry and Governance
	Introduction to NTFP Exchange Programme and sharing of proceedings of previous workshops on resins and gums in 2004.	Ms. Snehlata Nath, Keystone Foundation, Kottagiri, TN.
11. 45 am – 1 pm	Business session I	
	Policies governing management and trade of resins and gums.	Chhatisgarh MFP Federations/ OFDC/ Tribal Development Cooperative Corporations Orissa and Andhra Pradesh/Other participants.
1. 00 pm - 2. 00 pm	Lunch	
2. 00 pm- 5. 30 pm	Business session II	
	Sustainable harvesting of different resins and gums - various technologies and practices.	Dr. Prativa Bhatnagar, SFRI, Jabalpur Dr. M.V. Rao, Scientist, Vijayawada Dr. A.K. Pandey, TFRI, Jabalpur.
3.30 – 4 pm	Tea break	
	Business session II continues - Sustainable harvesting of different resins and gums - various technologies and practices.	Dr. Soham Pandya, CSV, Wardha. Mr. Venu Rao, LAYA, Vishakhapatnam. Kovel Foundation, Vishakhapatnam Other participants.
12. 04. 06 (Wednesday)		
10. 00 am – 1 pm	Business Session III	
	World market survey on resins and gums – current developments and key findings.	Mr. Jenne De Beer, Coordinator, NTFP Exchange Programme, South and South East Asia.
11.30 am – 12 noon	Tea break	
	Management and trade of resins and	Mr. Lai Tung Quan, Institute

	gums in Vietnam.	of Tropical Biology, Vietnam.
	Management and trade of resins and gums in Philippines.	Mr. Nerto Colili, NATRIPAL, Philippines.
1. 00 pm - 2. 00 pm	Lunch	
2 - 3.30 pm	Business Session IV	
	Current trends in the market for resins and gums in India.	RCDC Centre for Forestry and Governance (Avinash and Manoj). Other participants.
3.30 – 4 pm	Tea break	
4 – 5.30 pm	Discussions on enterprise development and market intervention strategies.	
13. 04. 06 (Thursday)		
9 am - 12.30 pm	Discussion with Gum Pickers. Sustainable harvesting practices for resins and gums.	Village Bangarampetta Mandal- Anantapur Dist- Visakhapatnam
12.30 – 1.30 pm	Valedictory session	
	Future strategies	
	Vote of thanks	
1.00 pm - 2.00 pm	Lunch	
2. 00 pm – 6. 00 pm	Visit to Borra Caves and other places in Araku Valley	

Annexure 3: Presentations made by different participants in the workshop

Sl. No	Presentation topic	Presented by
1	Non timber forest products exchange programme- South and south east Asia	Snehlata Nath
2	Presentation on Gum karaya	Dr. M.V.Rao
3	Sustainable harvesting, processing, draige and marketing of some resins and gums in Madhya pradesh.	Dr. Rakhi Yadav
4	Sustainable harvesting of gums and resins	Dr. A.K.Pandey
5	Scientific method of tapping gum yielding trees and processing of gum	Dr. Soham Pandya
6	Conservation and scientific tapping of sterculia Urens for better quantity and quality and improvement in the livelihood of tribals	Mr. Venu Rao
7	Harvesting of gums and resins in the western ghats of Karnataka	Narasingh Hegde
8	Policies, institutions and market dealing with gums and resins in Viet Nam	Lai Tung Quan
9	Almaciga resin in Palawan, Philippines	Nerto Colili
10	Current trends in the market for gums and resins in India	Avinash Upadhyay

Annexure 4: Resource agencies, important traders/exporters/industries on gums and resins/websites

Major gum exporters of India

Sl. No	Name of the company and contact person	Address
1	Jethabhai Hirjee & Co.	Shed no-8, Sion estate, Sion, Mumbai
2	Laxmi enterprise	170/ 72, Samuel Street, Mumbai
3	Morning star industries	212, Samuel street, Rang mahal building, Mumbai
4	D.K. Enterprises	109, Srikrupa Market, Malakpeta, Hyderabad-36

