

SHARING WITH THE KANIS

A case study from Kerala, India

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1. INTRODUCTION

The *Kani* tribals are a traditionally nomadic community, who now lead a primarily settled life in the forests of the Agasthyamalai hills of the Western Ghats (a mountain range along south-western India), in the Thiruvananthapuram district of Kerala. The *Tropical Botanical Garden and Research Institute (TBGRI)* is a centre for plant research situated in the state of Kerala in southern India. It is an autonomous institution for research and development set up by the Government of Kerala. One of the major aims of the institute is to carry out botanical, chemical and pharmacological research for the development of scientifically validated and standardised herbal drugs.

The Kanis' use of the fruit of a plant, identified as *Trichopus zeylanicus travancoricus*, found in the forests where they live, provided the scientists of TBGRI the lead to investigate on the same and identify its active ingredients. Thereafter TBGRI developed a drug called *Jeevani* from the same. They then resolved to share fifty percent of any commercial returns that they get from the drug with the Kanis.

In principle the idea of benefit sharing is a step forward in recognising the contribution of the tribal community which is the custodian of the knowledge regarding use of the plant. However, as the TBGRI-Kani arrangement reveals, the dimensions to any practical implications of such principle are varied, each of which will then need to be addressed for good ideas to result in good practise.

The mandate of Article 8(j) of the Convention on Biological Diversity (CBD) is the touchstone on which the case study will be analysed. This provision mandates that contracting parties shall:

- ♣ *respect, preserve and maintain* knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity;
- ♣ promote their wider application *with the approval and involvement* of the holders of such knowledge, innovations and practices;
- ♣ encourage the *equitable sharing of the benefits* arising from the utilisation of such knowledge, innovations and practices. (Italics supplied).

The issues that arise while attempting to implement these concepts will be examined in the following analysis of the TBGRI-Kani benefit sharing experience. At the outset I would like to emphasise that this arrangement evolved before the signing of the CBD. Also there was no legal requirement for TBGRI to share the commercial benefits with the Kanis. It can therefore be said that the scheme for sharing benefits with the Kanis evolved in a situation of legal and policy vacuum. This may not therefore be an ideal case to test the provisions of the CBD. Nevertheless, it does hold significant lessons on the practical implications of some of the principles enshrined in the same, and therefore could assist in the development of law and policy in this regard.

2. THE KANIS

The Kanis live in the forests of Thiruvananthapuram district of Kerala, south-western India. Their population size is 16,181,¹ which is approximately 1.8 per cent of the total population of the district. The Kanis are traditionally a nomadic community. The traditional occupation of the Kanis, which they continue to follow to some extent, includes handicrafts such as basket making, mat making and cane works. They are also engaged in seasonal collection of minor forest produces such as honey and bee wax. They cultivate edible plants such as tapioca, banana, millets and cash crops such as pepper, coconut, rubber, arecanut and cashewnut.²

The traditional structure of the community was that of a highly co-ordinated unit under the control of a tribal chief, called the *Moottukani*. Traditionally the *Moottukani* combined the roles of the law giver, protector and dispenser of justice, physician and priest. However with time the traditional system of governance among the Kanis has been eroded to a large extent and the role of the tribal chief is only a token one. The Kanis today live in several tribal hamlets, each consisting of 10 to 20 families disbursed in and around the forest areas of Thiruvananthapuram district. The Kanis in these different hamlets do not constitute a cohesive unit; although they do share certain common characteristics and practices.³

Their day to day activities and system of governance today is linked to that of the non-tribals who live in and around the areas they live in. This system of governance, referred to as the *Panchayati Raj* system, is based on the principle of devolution of administrative powers to the local village level and has been institutionalised under the Constitution of India. Each *Panchayat* area consists of a number of wards under it. Each ward has an assembly of all the adult members called the *Gram Sabha* (village council). There are 1000 to 2000 members in each Gram Sabha, inclusive of both non-tribal and tribal members, but pre-dominantly non-tribal. Members of the Panchayat's decision-making body are elected by the members of all the Gram Sabhas constituting the Panchayat. A greater role for the Panchayat in ecosystem management has been envisaged by the 73rd Amendment Act to the Constitution of India by placing new matters under its jurisdiction, including land improvement, land consolidation and soil conservation, social forestry and minor forest produce.

The Kerala State Planning Board recently launched a Peoples' Campaign for Decentralised Planning to give greater effect to the Panchayati form of governance. It has been increasingly felt that a Gram Sabha is a big and diffuse body through which true decentralised planning cannot be achieved. Hence the State Planning Board in consultation with the Panchayats has suggested the formation of neighbouring units of around fifty families in each ward. Some Panchayats have proposed further decentralisation to smaller units of 10 families. For the Kanis, these smaller units, referred to by the tribe as *Oorukootam*, may enable their voices to be heard more effectively in the decision-making process.

¹ Director of Census Operations, Kerala, *Final Population Totals*, Census of India, Paper 3 of 1991.

² Report of the All India Co-ordinated Project on Ethnobiology, Undated.

³ *Ibid.*

This is however yet to be translated into law or practise. The functioning of such individual tribal units within the Gram Sabha will have significant implications in facilitating the involvement and participation of the tribe in any benefit sharing arrangement as the one under discussion in the present case study.⁴

Most of the areas in and around which the Kanis live have been declared as Reserved Forest under the Indian Forest Act, 1927. There is also a proposal to designate these areas as a biological park (the Agasthyavanam Biological Park). The implications of an area being a reserved forest are that in such area acts not permitted by the Forest Officer or the State Government are prohibited. The Forest Department periodically issues a list of minor forest produce which can be extracted by the tribals. For the purposes of this study, it is significant to note that the list of minor forest produce issued by the Forest Department does not include any part of *Trichopus zeylanicus travancoricus*.

3. TBGRI

The Tropical Botanic Garden and Research Institute was registered as an autonomous institution under the Travancore-Cochin Literary, Scientific and Charitable Societies Registration Act, 1955. It is the largest botanical garden in Asia. It maintains a conservatory garden spread over 300 acres that is home to 50,000 accessions belonging to 12,000 genetic variants of 7,000 tropical plant species. It's R&D wing is geared towards achieving the goals of conservation and sustainable utilisation of plant diversity in tropical India. The chairman of its Governing Body is the Chief Minister of Kerala; the secretary of this body is the Director, TBGRI, in addition to whom there are 14 members. The Executive Committee of TBGRI is chaired by the Chairman of the Science, Technology and Environment Committee, Government of Kerala. The Secretary of the Executive Committee is the Director, TBGRI, and it has 4 members. Both bodies have representation from other state departments such as the Forest Department and the Planning Board.⁵

4. THE PLANT

Trichopus zeylanicus is a small, rhizomatous, perennial herb distributed in Sri Lanka, southern India and Malaysia. In Sri Lanka, it grows in lowland sandy forests near streams. In the Malay peninsula, it is found in low-lying forests. In India, it is found at an altitude of around 1,000 metres. The sub-species found in India is called *Trichopus zeylanicus travancoricus*.⁶

⁴ Information in this para has been obtained in the course of personal communication with Dr. Thomas Isaac, Member, Planning Board, Kerala.

⁵ Information in this para is from TBGRI, *Research and Development Highlights, 1997-98*, and from personal communication with Dr. P. Pushpangadan, Director, TBGRI.

⁶ I.H. Burkill, *Dioscoreaceae*, in C.G.G.J. Van Steenis, *Flora Malesiana*, Ser 1.4 (3). (Nordoff Ltd., Jakarta, 1951); V.V. Sivarajan, et. al., "A revision of *Trichopus*", *Kew Bulletin*, Vol.45 (2), 1990, 357.

It is yet to be confirmed, however, whether the sub-species of *Trichopus zeylanicus* occurring in Sri Lanka and the Malay peninsula have the same medicinal properties as *Trichopus zeylanicus travancoricus*. Within India the plant is endemic to the region of the Western Ghats that falls in the Thiruvananthapuram district of the state of Kerala, and Tirunelveli district of the state of Tamil Nadu.⁷ The scientists at TBGRI believe that the medicinal properties of the leaves of the plant are most pronounced in the plants occurring in the wild, or which are cultivated in the forest area.

5. THE BENEFIT SHARING ARRANGEMENT

A team of scientists, led by the present director of TBGRI (who at that time was with the Regional Research Laboratory, Jammu, India) was part of a botanical expedition into the forests of the Western Ghats in December 1987. They were accompanied by a few men of the *Kani* tribe as guides. During the arduous treks across the forests the scientists noticed that the tribals constantly ate some fruits which kept them energetic and agile. When the exhausted scientists were offered these, they also felt a “sudden flush of energy and strength.”⁸ When asked about the source of the fruit however the *Kani* tribals were reluctant to reveal the same, saying that it was sacred information and a tribal secret, and not to be revealed to outsiders.⁹ It was after much persuasion that they showed the plant from which the fruit (which they called *Aarogyappacha*¹⁰) was obtained.¹¹ They then collected some specimens of the plant to study its properties.

A detailed scientific investigation of the plant was conducted, including chemical screening to isolate the active principles, and pharmacological screening. It was also realised that the classical pharmacological approach to the study of herbal drugs by isolation of active principles in the form of single compounds, is far from satisfactory for the understanding of the traditional practise. Hence an ethno-pharmacological approach was adopted to evaluate the plant from the point of view of the theoretical foundation of a well organised system of traditional medicine, viz., *Ayurveda*. The findings of the research can be summarised as follows: the fruit belonged to the plant taxonomically characterised as *Trichopus zeylanicus travancoricus*, which had been documented before, but its traditional use and special properties were not known. The fruit of the plant showed anti-fatigue properties that the Kanis had identified. Study of the leaves revealed the presence of certain glycolipids and non-steroidal compounds which had anti-stress,

⁷ P.Pushpangadan, “ ‘Arogyappacha’ (*Trichopus zeylanicus*): The ‘Ginseng’ of Kani tribes of Agasthyar Hills (Kerala) for evergreen health and vitality”, *Ancient Science of Life*, Vol.VIII, No.1, July 1988, 13-16.

⁸ P.Pushpangadan, “Arogyappacha: The Gensing of Kani Tribes of Agasthyar Hills (Kerala) for Evergreen Health and Vitality”, *Ancient Science of Life*, Vol. VII, No.1, (July 1988), 13-16 at 13.

⁹ *Id.* at 14.

¹⁰ The term means “the greener of health, that is the one that gives very good health and vitality”. It is claimed by the *Kani* tribals that one can live for days together without food, and still be able to perform rigorous physical work by eating a few fruits of *arogyappacha* everyday. *Ibid.* at 13.

¹¹ *Id.*

anti-hepatotoxic and immunodulatory/ immunorestorative properties.¹² The last phase of the research was shifted to the TBGRI, where the drug *Jeevani* was formulated with *Trichopus zeylanicus* and three other medicinal plants¹³ as ingredients. Toxicity, shelf life and clinical studies were carried out by the institute. The drug was then ready for being marketed.

The internal functioning at TBGRI is largely autonomous. However decisions which have larger implications have to be approved and ratified by its governing body and the executive committee. The governing body of TBGRI authorised the director of TBGRI to transfer the technology for manufacturing *Jeevani* to interested parties on payment of adequate license fee. Negotiations for the same were conducted by a committee constituted for this purpose headed by the Chairman of the executive committee of TBGRI, who is also Chairman for the state committee on Science, Technology and Environment, Government of Kerala. The committee recommended transfer of the right to manufacture *Jeevani* to Arya Vaidya Pharmacy (Coimbatore) Ltd¹⁴ for a period of seven years for a license fee of Rs. Ten lakhs (one million rupees, approximately \$25,000). This company has been a manufacturer of Ayurvedic drugs since 1948.

In a separate resolution approved by both the governing body and the executive committee of TBGRI, it was decided that the Kani tribals will receive fifty percent of the license fee, as well as fifty percent of the royalty obtained by TBGRI on sale of the drug.¹⁵

At this stage fears and concerns were expressed by some members of the Legislative Assembly at Kerala.¹⁶ The leader of the Opposition at the Assembly raised objections that the amount of license fees agreed upon was dismally low, and that given the huge economic potential of *Jeevani*, the amount should have been much higher. Also, it was felt that the contribution of the Kanis was being under-valued. Another objection raised was that the licensing of know how ought to have been made to a public sector concern, i.e., in which the Government has a majority shareholding and management control,¹⁷ and not to AVP which is a privately owned company.

Objections were also raised by KIRTADS (Kerala Institute for Research, Training and Development of Scheduled Castes and Scheduled Tribes). This is a research institute under the Government of Kerala which was set up under directions of the Central Government. It was established with the purpose of promoting integrated development of research and training pertaining to scheduled castes and scheduled

¹² P.Pushpangadan, "Tropical Botanical Garden Research Institute: People Oriented Sustainable Development Programme", Paper presented at the UNEP/ GEF Indigenous Peoples' Consultation Meeting, Geneva, 29-31 May, 1996.

¹³ These three plants are *Withania somnifera*, *Piper logum* and *Evolvulus alsonoides*, which were identified by applying the principles of the traditional medicinal system of *Ayurveda*, by the experts working for the TBGRI.

¹⁴ Hereinafter referred to as AVP.

¹⁵ Personal Communication with Dr.P.Pushpangadan

¹⁶ The Legislative Assembly is the body of elected representatives of the people of Kerala.

¹⁷ Reported in *The Hindu*, Thiruvananthapuram, 25 August, 1995.

tribes in Kerala. KIRTADS has been of the opinion that the Kanis have got an unfair deal. It had earlier written to the state Government seeking powers to screen all those who approach Kerala's tribal healers in connection with ethno-botany, ethno-medicine and other research in which the knowledge of the tribals is at stake.¹⁸ It is also of the opinion that TBGRI has not involved the Kanis in the negotiating process. It feels that the Kanis should be encouraged to directly interact with wider society, and administer their medical knowledge according to terms set forth by them. It feels that the only way tribal medicine can survive is by preserving its original form and premises, otherwise it is liable to be misused as a convenient resource base for other systems of medicine.¹⁹ As far as production of *Jeevani* is concerned, it feels that TBGRI should consider ways and means to impart technical know-how to the Kanis to manufacture the drug, and thereby involve them further in the process.²⁰

There is no uniformity in the Kanis' perception of the benefit sharing proposed by TBGRI. As mentioned earlier, the Kanis are no longer one cohesive unit or community. Kanis in different areas of Thiruvananthapuram district, even at a distance of around 15 to 20 km from each other have differing opinions and reactions about TBGRI's role and motive. TBGRI has primarily been interacting with Kanis from the Kuttichal Gram Panchayat area. The two Kanis who imparted to them the knowledge of *Aarogyappacha*, who also belong to this area, have been retained by TBGRI as consultants. It is through them that TBGRI has been interacting with the Kanis in their area. This section of Kanis has been supportive of and appreciative of TBGRI's role.²¹ The entire relationship between the institute and the Kanis seems to be one of trust and faith. The scientists at the institute relate protectively towards the tribals, realising the drawbacks arising from factors such as lack of access to formal education and poverty.²² TBGRI has been providing assistance in the form of access to legal advice to the Kanis in this area. It is with their help that the deed for the Trust that is being proposed as the mechanism for utilising the funds from the benefit sharing exercise has been formulated. (The Trust will be discussed in greater detail later).

However, Kanis in the Vithura and Peringamala Panchayat areas have a different opinion. The Vithura Panchayat is the only Panchayat in Kerala with a Kani President. He expressed offence at the fact that TBGRI has not made the effort to reach out to the Kanis in his Panchayat area. He also claimed that he and others in that area got to know about the proposal for benefit sharing through newspaper reports. He feels that this is an instance when a scientific institution has pirated

¹⁸ Reported in *Indian Express*, Thiruvananthapuram, 19 November, 1994.

¹⁹ Reported in *Indian Express*, Thiruvananthapuram, 12 August, 1995.

²⁰ KIRTADS has entered into a Memorandum of Understanding with the Centre for Scientific and Industrial Research (CSIR), an autonomous institution under the Government of India, for the scientific analysis of tribal medicinal formulae and their therapeutic properties. According to the MOU, once CSIR identifies the properties, KIRTADS would explore possibilities for their commercial production. All profits are to go exclusively to the respective tribes in the form of development programmes and facilities. Personal Communication with Dr. Viswanathan Nair, Director, KIRTADS, and news item in *Indian Express*, Thiruvananthapuram, 19 November, 1994.

²¹ Personal communication with Mallan Kani and Mathan Kani.

²² Personal Communication with Dr. Pushpangadan and Dr. Rajasekharan, TBGRI. The tribals were often referred to as "innocent".

tribal knowledge for its own benefit, and that the benefit sharing proposal is a superficial exercise since the Kanis have neither been consulted nor involved in the exercise.²³ In September 1995, a group of nine medicine men (called *Plathis*) of the Kani tribe wrote a letter to the Chief Minister of Kerala, objecting to the sale of their knowledge to “private companies”. They expressed fear that private companies would destroy the available stock of the plant very fast once they start collecting the same with the intention of generating profit.²⁴ As for TBGRI, it acknowledges that it has not reached out or communicated to all the members of the Kani tribe; but feels that once the Trust to administer the benefit sharing arrangement is constituted, the Kanis would feel more involved.²⁵ One of the basic short-comings of the benefit sharing arrangement therefore seems to be its unilateral-ness. However well-meaning TBGRI may be, there have been severe limitations to its approach because of lack of communication and discussion with Kanis in different parts of the district. Perhaps one reason for this is also because there is no legal, policy or other requirement as of today mandating such a participatory approach.

At this stage of the debate, on October 20, 1995, the governing council of TBGRI, under the chairmanship of the Chief Minister of Kerala, approved of the proposal to transfer the technology to manufacture the drug to Arya Vaidya Pharmacy. Pursuant to this, an agreement was signed between TBGRI and Arya Vaidya Pharmacy on the 10th of November 1995. The duration of the license is seven years. TBGRI will also receive two percent royalty on any future drug sales.²⁶

TBGRI has defended its position and actions at various stages during the debate. Regarding the quantum of the license fee, TBGRI has stated that it was the best bargain that could be arrived at by their selection committee. They emphasise that the license period is only for the purpose of a promotional venture, and that once the drug is able to establish a market for itself within the license period of 7 years, the license fee could be suitably enhanced and that it could be licensed to another company if that is more beneficial. The 2 percent royalty that is payable to them by AVP is the amount that is prescribed in the standard format for transfer of technology agreements prescribed by the CSIR (Centre for Scientific and Industrial Research which is an autonomous institution for scientific research established by the Government of India). Regarding appropriation of tribal medical knowledge, it points out that tribal knowledge systems have always influenced other systems; that this particular instance of use of the Kanis’ knowledge to manufacture *Jeevani* does not have the implication of hampering the traditional practices of the tribals. In addition, the institute emphasises that *Aarogyappacha* was never used for medicinal purposes by the tribals; that they consumed only the fruit as an energy-provider, whereas the medicinal properties of the plant have been identified in the leaves of the plant through research conducted by TBGRI.²⁷

²³ Personal Communication with Appukuttan Kani, President , Vithura Panchayat, Thiruvananthapuram.

²⁴ Reported in *Indian Express*, Thiruvananthapuram, 24 September, 1995.

²⁵ Personal Communication with Dr.S.Rajashekharan and Dr.Pushpangadan, TBGRI.

²⁶ Information in this paragraph has been obtained through personal communication with Dr.Pushpangadan and Dr.S.Rajashekharan.

²⁷ Personal Communication with Dr.Pushpangadan, and Dr.S.Rajashekharan, TBGRI.

At a meeting in early 1996, the Government of Kerala recommended close co-ordination between TBGRI and KIRTADS on matters relating to tribal medicine and tribal herbs.²⁸ However, till date the two institutions have not been able to agree on a common platform where the various issues emerging from the benefit sharing arrangement can be resolved.

5.1 *Harvesting of the raw material*

Jeevani being a herbal formulation, it requires regular supply of fresh leaves of *Trichopus zeylanicus travancoricus*. Since the quantum of this plant occurring in the wild may not satisfy this purpose (as indicated by TBGRI scientists), there is a need to cultivate the plant. However, this species requires certain specific conditions for its growth. Tissue culture experiments are being carried out to explore possibilities for the *in vitro* cultivation of the plant. But the scientists at TBGRI believe that the plant would grow best in its natural habitat. They feel that tissue culture would not be suitable for mass production of the plant. Further some preliminary studies have revealed that the specific chemical properties that give the plant its medicinal value are most pronounced only when it grows in its natural habitat. They have suggested to the community techniques for commercial cultivation of the plant. It is believed that there will be no need to clear any part of the forest for the same; what is required to be done is to identify clear patches of land inside the forest with sufficient shade, cultivate the plant and harvest its leaves. The plant being perennial in nature, there could be three or more harvests in a year, and with irrigation the yield could be further increased. The scientists believe that this would also provide the tribals an opportunity to further augment their income by sale of the leaves; further they can deal directly with the pharmaceutical corporation, and bargain on their own terms.²⁹

A pilot phase for cultivation of the plant was initiated in some of the Kani settlements, in areas adjoining the reserved forest during the period 1994-96. This was supported by the Integrated Tribal Development Programme (ITDP) initiated by the Directorate for Tribal Welfare, Government of Kerala. Fifty families were given Rs.1,000 (approx. \$40) each by ITDP to cultivate the plant.³⁰ Under the scheme, TBGRI agreed to buy the leaves harvested from the families. These were then supplied to AVP for the pilot phase production of *Jeevani*.

However after this period, because of misgivings expressed by the Forest Department, there has been no more cultivation of the herb. As mentioned earlier, *Trichopus zeylanicus travancoricus* is not included in the notified list of minor forest produce of the Forest Department. Scientists at TBGRI feel that this should be done since sustainable collection of the leaves of the plant is possible. They emphasise that only the leaves of the plant are required for the production of *Jeevani*. This means that the entire plant need not be uprooted for collection. But

²⁸ Meeting in Chief Secretary's Chamber, Government of Kerala, pursuant to which G.O. 3386/A1/95, STED, of 24.2.1996 was issued.

²⁹ Personal Communication with Dr. Pushpangadan, TBGRI.

³⁰ The tribal settlements covered were Chonumbara and Podium under the Kuttichal Panchayat, Thiruvananthapuram district. Information obtained from personal communication with Dr. Rajasekharan, TBGRI, and Mr. Ramachandran Nair, Project Officer, ITDP, Nedumangad, Thiruvananthapuram.

the Forest Department has been hesitant to grant permission to the tribals to grow and harvest the leaves of *Trichopus zeylanicus*.³¹ Their fear primarily stems from attempts by private concerns to smuggle out the plant from the reserved forest area. In one incident, the Forest Department seized 10,500 plants (loaded in two trucks), that were collected by some tribals for a private nursery near Thiruvananthapuram.³² The Chief Conservator of Forests (Vigilance) feels that though there may be no harm in the Kanis collecting the leaves of the plant for their personal use, the pressure of outside commercial interests may lead to rapid depletion of the plant from the area.

The Arya Vaidya Pharmacy is disappointed that despite there being a good market for *Jeevani*, there is no raw material to manufacture it. It shares TBGRI's view that a scheme for sustainably harvesting the leaves of the plant can be evolved. In October 1996, it had written to the Kerala Forest Department and the Tribal Welfare Department proposing a plan for the cultivation of *Aarogyappacha*, whereby it would pay the Kanis an initial seed money for the cultivation of the plant, and enter into a buy-back arrangement with the Kanis to buy the leaves harvested from the cultivated plants. It is prepared to buy five tonnes of leaves a month. It feels that at least 500 to 1,000 Kani families can be employed in this scheme, and have assured the State departments that no private parties would be involved in the cultivation of the plant. However the Forest Department, in its letter of October 1996, rejected AVP's proposal, explaining that the plant being an endemic one, its collection cannot be permitted. AVP pointed out the irony of the situation in that TBGRI as part of the State Government had licensed AVP to manufacture the drug; whereas the Forest Department which is also part of the State Government is not facilitating the manufacturing process. AVP also feels affronted at the scepticism towards it in certain quarters because of the fact that it is a privately owned corporation. It points out that it is socially responsible as well, and is willing to cooperate with the State in arriving at a mutually beneficial and sustainable mechanism for harvesting the plant.³³

5.2 The Trust

The license fee paid by AVP remains with TBGRI in the absence of any mechanism whereby it can be shared with the tribals. In November 1997, some of the Kanis got together, and with assistance from TBGRI, registered a trust called *Kerala Kani Samudaya Kshema Trust*³⁴. It registered with nine members, all of whom are tribals. The President and Vice-President of the Trust are the two Kanis who imparted knowledge to TBGRI regarding *Aarogyappacha*. The decision to form the trust was decided in a local meeting of around 40 Kanis. The trust deed states the objectives of the Trust to be: welfare and development activities for

³¹ Personal Communication with Mr.Manoharan, Forest Department, Kerala; P.Pushpangadan, et. al., "Tropical Botanical Garden Research Institute: People Oriented Sustainable Development Programme", Paper presented at the UNEP/ GEF Indigenous Peoples' Consultation Meeting, Geneva, Switzerland, 29-31 May, 1996.

³² Reported in Indian Express, 24.10.97; The Week, November 9, 1997, pp.22-24.

³³ Information in this para has been obtained through personal communication with Dr.G.G.Gangadharan, General Manager- Product Development, Arya Vaidya Pharmacy (Coimbatore) Limited.

³⁴ *Samudaya* means "community"; *Kshema* means "welfare".

Kanis in Kerala, preparation of a biodiversity register to document the knowledge base of the Kanis, and evolving and supporting methods to promote sustainable use and conservation of biological resources. The aim of the Trust is to have all adult Kanis in Kerala as its members. A membership drive to encourage other Kanis to join the Trust as members has begun. As of December 1997, the total membership of the Trust was 500. The President of the Trust pointed out that around 40 tribal settlements had been covered by the membership drive as of now, and that there had been no opposition from any of the Kanis in these settlements. However, he has not yet approached Kanis in the Vithura and Peringamala Panchayat areas where they are expected to face resistance. Both the President and Vice-President of the Trust are optimistic that once the Trust becomes functional, they would be able to organise the Kanis better, and also create enough awareness and vigilance to prevent outside interests from pirating their knowledge and resources.³⁵ At the time of writing this report, they were planning to approach the Minister for Tribal Welfare to elicit his support for the functioning of the Trust. The next step would be to transfer their share of money from TBGRI, and then start using it for community development activities.

6. CONCLUSION

The benefit sharing arrangement as it stands today can perhaps be best summarised as chaotic. The irony of the situation is that TBGRI, the Forest Department and KIRTADS are all part of the same State government, among whom there seems to be no co-ordination or even a mechanism for dialogue. The situation is also illustrative of how the confusion exists because the different actors are not very sure of how to react/ what their role should be. There is a vacuum because of absence of law and policy that lays down who should do what. As one of the officials from the Forest Department pointed out, TBGRI's effort is probably a premature one, since there are no safeguards to ensure that there is no exploitation of the tribals, or misuse of the resource under consideration.³⁶ This could be one of the reasons why there were instances of unchecked illegal trafficking of the resource.

The current situation is also illustrative of other inter-linkages between the issues involved. The Kanis do not have adequate and secure tenurial right to the forest resources they live amidst, and are dependent on the Forest Department's

³⁵ Personal Communication with Mallan Kani and Mathan Kani.

³⁶ Personal Communication with Mr. Surendranath Asari, Chief Conservator of Wildlife, World Food Programme, Forest Department, Kerala.

permission for the use of these resources. They also cannot do much about outsiders exploiting these resources. The issue of benefit sharing cannot be resolved unless these rights are assured, and unless the community is provided the legal means and incentives to conserve the resources for long-term sustainable benefit to themselves.

There are two aspects that need to be addressed: What are the steps to be undertaken to resolve the present situation of “suspended animation” of the benefit sharing exercise with the Kanis? Secondly, what kind of benefit sharing arrangements can be envisaged, learning from the Kani-TBGRI experience?

As regards the present situation, the following steps seem to be necessary:

- Create a platform where Kanis (representing the various settlements), TBGRI, the Forest Department, KIRTADS and AVP can discuss the various aspects of the benefit sharing arrangement and arrive at a consensus on how to address the same. Recently, the Government of Kerala constituted a State Biodiversity Board under the administrative control of the Department of Science, Technology and Environment. The purpose of this Board is to advise the Government on all aspects relating to the implementation of the provisions of the CBD. This Board would also have a significant role to play in implementing the benefit sharing arrangement.
- Assess the potential ecological impact and economic feasibility of large scale cultivation and harvesting of the leaves of *Trichopus zeylanicus travancoricus*, examine if and how the harvesting of the leaves can be sustainably done, and how the Kanis could be involved in the same. Such assessment would have to keep in view that the paramount consideration is conservation of the plant.
- Initiate communication with the Kanis from all parts of Thiruvananthapuram district, and understand their response, fears and concerns about the arrangement, as well as explore means by which they could be involved to a larger extent in the planing and implementation phases. The Trust that has been registered with a view to administering the benefits accruing to the Kanis could be a starting point where all the adult members of the Kani community could get together and formulate the roles, functions and activities of the Trust. The formation of *Oorukootams* under the formal Panchayati Raj system (unit consisting of members of tribal families in each hamlet), could perhaps have a significant role to play in identifying the priorities of the Trust, and identify beneficiaries as well.
- Establish mechanisms to prevent piracy of the plant, and exploitation of the tribals by “outside” interests. In this regard, the Kanis could themselves be involved in monitoring the cultivation and trade in the plant, and ensure that members of their tribe do not get swindled into parting with either their knowledge of the plant or the actual physical resource. The Kanis involved in forming the Trust that has been discussed above feel that the members of the Trust can assume the responsibility for ensuring this.
- The Forest Department could therefore consider collaborating with the Kanis for safeguarding the area. This would involve examining issues of land/forest rights and ownership, and providing tenurial security to the tribe. Such steps could also give the Kanis a greater stake in the conservation and sustainable use of the resources.

- Examine schemes such as the one proposed by AVP for buy-back arrangement of the leaves harvested by the tribals at a fair price.
- Explore schemes for involving Kanis in the actual production of *Jeevani* and for imparting the relevant technical training for the same.

Future benefit sharing arrangements can also learn from the Kani-TBGRI experience. Currently, there are efforts by the Ministry of Environment and Forests, India, to draft a national Biodiversity Act. There is a proposal to develop protocols under this Act, to provide guidelines for negotiation for access to biodiversity while safeguarding interests of local and tribal communities, and provide for benefit sharing arrangements. Such a protocol could include information on:³⁷

- The specific material wanted;
- The knowledge of local/indigenous communities that provided the impetus for the research;
- Prior informed consent of such local/indigenous community for access to biological resources on their lands, as well as their traditional knowledge, and the conditions for such consent;
- Nature of benefits that would accrue to the local institutions and communities (e.g. technical support and monetary benefits);
- The use for which the material will be put to immediately, and subsequently;
- Clearly defining the scope of the material so as to cover derivatives obtained from the supplied material. This is with a view to acknowledge that any research on the material or its derivative was inspired by the knowledge and use of the material by the community concerned;
- Monitoring and reporting requirements mandating the 'bio-prospectors' to keep the community/country of origin informed of the developments from the research on the material;
- Provisions can be included to prevent patenting of the transferred material or of certain kinds of derived products³⁸;
- In case patenting is allowed, then ensure protection for knowledge of local/indigenous communities by according them rights to co-ownership of research data, and patents on products derived from their knowledge;
- The receiver of the material can be mandated to give the provider a non-exclusive, royalty free license under any inventions it may patent that derive from the transferred material or improvements or derivatives thereof;
- Reach-through royalties, i.e., a percentage share of sales or profits from any products that might be developed through use of the transferred material;

³⁷ This section primarily draws on from Sarah A.Laird, *Access Control for Genetic Resources: The Assertion of Sovereignty*, (Gland, WWF, October 1995), and John H.Barton & Wolfgang E.Siebeck, "Material Transfer Agreements in Genetic Resources Exchange- The Case of the International Agricultural Research Centres", *Issues in Genetic Resources* No.1, May 1994, 11. See also, UNEP/CBD/COP/2/13, *Access to Genetic Resources and Benefit Sharing: Legislation, Administrative and Policy Information*, November 1995; UNEP/CBD/COP/3/20, *Access to Genetic Resources*, October 1996.

³⁸ John H.Barton & Wolfgang E.Siebeck, Id., p.22. However, the commentators are of the opinion that a patent obtained in violation of such an agreement would not be, for that reason, invalid. The supplier of the material would, however, be able to obtain damages for breach of the promise not to patent, and would also be able to obtain a compulsory royalty-free license to use the material.

- Provisions to prevent access to the material by third parties by the receiver, and to make it mandatory for third parties to approach the provider;
- Compliance mechanisms to ensure that the various stakeholders adhere to the agreement.

The CBD has many good ideas. The practical relevance of these good ideas, however remains to be seen. As the TBGRI-Kani experience has shown, such practical relevance can perhaps only evolve as responses to any specific situation. The law and policy can provide the wider framework for action. The rest would to a large extent depend on political will to achieve equity and fairness in any specific situation.