

**Vineetha Menon**

## **WHEN TRIBAL HEALTH CULTURE MEETS THE MARKET: QUESTIONS FOR POLICY IMPERATIVES**

In this paper, I shall present some reflections on the now well-known benefit-sharing of a drug produced from a tribal knowledge related to a food/medicinal plant used by the Kani or Kanikkaran tribe in Kerala in India. In relation to this, I shall discuss certain efforts made by KIRTADS, a government institute for research, training and development studies of scheduled castes and scheduled tribes in Kerala for protecting tribal medicine and ensuring livelihoods for tribal healers. I shall also draw on the principle behind some of the government policies that get reflected in practices like the setting up of the national Facility for Tribal and Herbal Medicine, established by the Dept. of Science and Technology, Govt. of India in Benares Hindu University. The context of plural medicine in India with biomedicine occupying the privileged position, and the setting up of Department of AYUSH by the Govt. of India provide the backdrop for the discussion of these three seemingly unrelated instances. I would move beyond the micro situation to draw some generalisations applicable to health cultures of most tribal populations in India irrespective of their cultural specificities as they are set within the larger framework of a world system. Perhaps these insights may well hold good for indigenous populations elsewhere in the developed world also. Nevertheless, for the sake of clarity, I would keep this presentation very specific, and would refer to issues pertaining to tribal communities in India.

I have titled the paper : “When Tribal Health Culture Meets the Market: Questions for Policy Imperatives”. The prefix “tribal” to health culture refers to the “scheduled tribe” as defined in the Indian Constitution although the culture of scheduled tribes varies across India. Despite this variation, one can speak of a tribal health culture because of the intricate relationships one finds between tribal cosmology, environment and the people and their health; these linkages we find among almost all tribal populations with differing degrees of intensity. First I shall discuss the Kani case study, drawing out the implications and then describe the KIRTADS effort at protecting tribal medicine before moving to the state policy issues.

### **The case of “AROGYAPACHA” becoming the patented “Jeevani”**

This section refers to Kerala's Kani tribe's experience with regard to their medicinal herb/food called arogyapacha being brought under scientific research and later becoming the raw material for a patented drug called “jeevani”.

The vast majority of issues involved in intellectual property, marketing, traditional knowledge, benefit sharing, resource alienation, and related concerns are troubling and have implications for science, state, policy and practice as well as human rights and indigenous survival and the case of arogyapacha is one such.

Kanikkar or the Kani are a predominant scheduled tribal population in Kerala, the south-Indian state known for its social reform movements and high level of political consciousness. The Kanikkar themselves are also relatively more educated and socio-politically more advanced than other scheduled tribes in the state. They are also numerically more predominant than other tribes in the state. Therefore, the Kanikkar's experience is the experience of a population that is far from disempowered and is indicative of the great vulnerability of any tribal or indigenous population to exploitations of this kind when the state becomes a mute spectator or even an implicated party in the connivance to take away indigenous resources. The Kanikkar or the Kani have been slow to wake up to the reality of the situation but now some among them are protesting and looking for a way out of the situation.

### **A Brief Historical Sketch of Kani-TBGRI “Benefit-Sharing”**

The Tropical Botanic Garden and Research Institute (TBGRI) was established by the Government of Kerala in 1979 as an autonomous body which in two decades gained the status of grant-in-aid Centre of Excellence in Conservation and Sustainable Utilisation of Tropical Plant Diversity from the Ministry of Environment and Forests, Government of India. In 1982 under the Man and Biosphere Programme (MAB), the Department of Science and Technology of the Government of India launched an All India multi-institutional and multidisciplinary project that operated from 27 centres across the country. Dr P. Pushpangadan, a scientist at the Regional Research Laboratory (RRL), Jammu, was made its Chief Coordinator and Dr S. Rajasekharan, the head of the unit based at Thiruvananthapuram, Kerala. In 1983, with the creation of Ministry of Environment and Forests (MoEF) by the Government, the MAB programme was transferred to it, and along with it, the all-India multi-institutional, multi-disciplinary programme, a unit of which was at the Government Ayurveda College, Thiruvananthapuram, headed by Dr S. Rajasekharan and another, at the Foundation promoted by Arya Vaidya Pharmacy (AVP) at Coimbatore. In 1987, a group of TBGRI scientists began enquiry into the traditional ethnobotanical knowledge of the Kanikkar/Kani community in the Thiruvananthapuram forest division which falls in the southern part of the Western Ghat region. It is now almost legendary

that when the Kani guides to the scientists' team showed no signs of fatigue even when the scientists' team was totally worn out of exhaustion, the scientific curiosity was aroused and that this ultimately led to the scientists researching for the wonder drug. These scientists had observed that the Kanikkar had been consuming some fruits and suspected that it might be the fruits that are keeping the tribal people away from exhaustion. Upon enquiring about it, the Kanikkar showed reluctance saying that the fruits were sacred and forbidden to be revealed to strangers. However, persuasions and promise to share the monetary benefits in case any marketable product comes out of the research that TBGRI would initiate broke the resolve of the two Kani guides— Mallan Kani and Kuttimathan Kani— who revealed the fruit and the plant which later came to be popularly known as "*Arogyapacha*" meaning the health green or herb. TBGRI promptly began their scientific researches on the plant which then grew widely in the Agastyar mountains. Later, following tests carried out at the Regional Research Laboratory (RRL) in Jammu, the anti-fatigue property of *arogyapacha* was scientifically confirmed. As the fruits in one plant were limited in numbers, from 1990, research on its leaves began with intention of mass production of the drug. Finally from these leaves, the Ethnopharmacology division of TBGRI developed a standardised marketable herbal product named '*Jeevani*' towards the end of 1994, after all mandatory clinical trials. *Jeevani* came out of not just *arogyapacha*; it was a poly-herbal drug using two other medicinal plants, but it is reported that there is scientific agreement that the anti-fatigue property of *jeevani* came mainly from *arogyapacha*. Further investigations validated the scientific claims of TBGRI that *Jeevani* had invigorating properties. Obtaining license under the Drug Control Act was the next stumbling block in marketing the product. As per rules, a pharmaceutical product could obtain license, either through testing in the modern pharmacological framework or through the codified formulary of Indian Systems of Medicine (Ayurveda, Siddha or Unani). The former being time consuming and expensive, TBGRI did not prefer it. The other choice, testing under the codified formulary of the Indian Systems of Medicine also had difficulties as it does not recognise local knowledge. Therefore, *Jeevani* was scientifically legitimised under the codified Ayurvedic formulary, *Arogyapacha* (referred to as *Penthadukki* in Kani language, which means quelling hunger), being referred to as the Ayurvedic *Diwya Varahi*. Thus, when TBGRI obtained license for the production of *Jeevani* from the Drug Control Department of the Government of Kerala and was legally able to transfer technology for production and marketing, *arogyapacha* was not in the picture. As a corollary, when the process patent application of the new immuno-enhancing anti-fatigue, anti-stress and hepato-protective herbal drug *Jeevani* was filed in 1994, the Kani informants and the Kani tribe were also out of the picture (Bijoy 2007). Subsequently, TBGRI transferred the technology for production of *Jeevani* to Arya Vaidya Pharmacy (Coimbatore) Limited (AVP), an Ayurvedic drug manufacturing company in the neighbouring state

of Tamil Nadu, with manufacturing facilities in Kerala, through an agreement for a period of seven years. The agreement was that AVP would pay TBGRI a license fee of Rs 1,000,000 of which half was to be transferred to TBGRI upon signing the contract and the remaining half, upon transfer of the knowhow by TBGRI. A royalty for a period of ten years at the rate of two per cent of the ex-factory sale price of the product made by AVP from the date of commercial production was also agreed upon. TBGRI evaluated that by the then existing standards, this was a handsome license fee and royalty. The patent was received only in 2002. When the seven-year license period ended, TBGRI did not renew it with AVP or sign any new contract with any other company. By then there was plenty of criticism from the opposition parties about the contract with a private firm and the terms of agreement. However, the Kani-TBGRI benefit sharing was internationally acclaimed for the reason that as against the usual technology transfer practice of the Council of Scientific & Industrial Research (CSIR) wherein 60 per cent of the license fee and royalty received from such technology transfer goes to the institute and the remaining 40 per cent is shared between the researchers and the supporting staff, the TBGRI scientists and staff waived their eligible claim on the license and royalty in favour of giving that share to the Kani. This benefit sharing was also hailed as being in line with Article 8(j) and Article 15.7 of the Convention on Biodiversity (CBD) which required equitable sharing of benefits from the biodiversity and associated knowledge system. The TBGRI-Kani 'model' won the UNDP (United Nations Development Programmes) 'Equator Initiative Prize' 2002 for innovation in poverty eradication and sustainable development. Although the first attempt at benefit sharing with no prior model to follow, even before CBD, more than approval, TBGRI and the involved scientists came under severe criticism for failings of different kinds like not obtaining written informed consent, as well as the future trajectory of the patent which ended after 2008 following which the product came under public domain, and ultimately ended up outside the country. Dutfield (2004) has highlighted that prior informed consent is not the issue. According to him, in many cases it may not be a requirement because a great deal of knowledge and resources are already in free circulation and can no longer be attributed to a single originator community or country, but he also cautions that this should not lead to the conclusion that there can be no moral obligation even in the absence of legal ones (Dutfield 2009). Dr Rajasekharan, in a personal telephonic conversation, points out that oral informed consent had been obtained and that even today, standard informed consent form has not been formulated by any institute in India and that perhaps the form they have now developed in TBGRI would be the first of its kind.

*Kerala Kani Samudaya Kshema Trust (KKSS)*, a registered society that was established in 1997 for receiving the share in license fee and royalty received by TBGRI from AVP, initially had only nine members, but its membership grew since. According to Pushpangadan and Nair (2005) about

60% of the Kanikkar are members of the trust now. The Trust invested the first instalment of Rs 5 lakhs in a fixed deposit and decided to give monetary award to the three Kani informers from the interest money of the first year. *Jeevani* had market success not only in India, but also in countries such as USA and Japan. It was sold at Rs 160 for a 75-gram jar. Rewarding those tribal members who alienated the secret of the community's sacred herb and the lack of community's involvement in decisions were subjected to severe criticism and protest from tribal elders. Besides, as the commercialisation resulted in overexploitation of *arogyapacha* from the forest by traders, the Forest Department intervened as *arogyapacha* was not listed under the 'minor forest produce' that could be collected and transported from the reserve forest for sales. Although attempts at tissue culture were made, it was discovered that the medicinal qualities of the plant were tied to its natural forest habitat, the terrain, the climatic conditions and the forest canopy. To overcome this problem, TBGRI organised 50 Kani families living inside the forest to cultivate the plant but the forest officials prohibited this venture as such commercial enterprises within a reserve forest was not permitted as per existing forest laws. However, the State Forest Department demanded a share of the license fee and royalties from the commercialised product. In the meantime, a US company— NutriScience Innovation LLC Ltd. — the US distributor for AVP, registered *Jeevani* as a trademark at the United States Patent and Trademark Office, and this was not challenged by AVP. Any challenge to the patent can be filed only by a resident of the US. Naturally, this procedure is beyond the capability of a tribal community. As for TBGRI, they were learning their own lessons from an innovative experiment prior to CBD.

### **Institutionalising tribal medicinal knowledge: Efforts of KIRTADS**

Since 1992, KIRTADS, a state institution, has been undertaking programmes for conservation and revitalisation of tribal medicinal knowledge by organising a certificate course in Tribal Medicine and organising annual state-level workshops of tribal healers. Besides, in 1995, a MOU was signed between KIRTADS and Regional Research Laboratory, Thiruvananthapuram, for bio-assay researches on medicinal plants in tribal health cultures. In 1996 two patent applications are said to have been filed, of which one was found to have been prior patented to a Japanese company. Following this, in 1998, a state-level seminar and in 2002, a National-level seminar on Tribal Intellectual Property Rights were organised by KIRTADS and in 2002, a registered society of tribal healers known as Indian Indigenous Peoples' Service Society was formed. It established Centres for Tribal Medicine in 4 different tribal regions of Kerala and organised 3 year certificate course in tribal medicine. It is interesting that the Director of KIRTADS during whose tenure the certificate course was started in KIRTADS had upon retirement become the President of the newly formed Indian Indigenous Peoples' Service Society and IIPS organised the second certificate course on Tribal Medicine. At each of the 4

centres for Tribal Medicine, 5 tribal youth enrolled for the course. They were trained by healers of different tribal communities. The students were sent to different tribal areas to learn under respective healers and had tours for medicinal plant identification.. Those who obtained these certificates are “professionalised” tribal healers; some have printed visiting cards with their photographs and cell phone numbers, advertising their skills in tribal medicine. In an evaluation study conducted by a KIRTADS researcher (Bindu 2008), it is recorded that within a short time, they took up the practice of tribal medicine and four became reputed healers with a “steady stream of outpatients” . “These trained Tribal Medicine Practitioners (TMPs) could treat almost all illnesses commonly found in Wayanad whereas the traditional healers could treat only a limited number of illnesses. This shows the cumulative effect of therapeutic knowledge imparted to them by tribal healers of various tribal communities of Wayanad. Two of these students have started mechanised production of tribal medicines. There are scores of workers and number of tribal youths to help them in the collection, preparation and dispensing of medicines and thus they are gainfully employed in this vocation” (Bindu 2008: 111). From 1996 onwards, KIRTADS had been awarding Rs 7500 as annual grant to selected tribal healers for raising homestead medicinal plant gardens but they used this amount to buy furniture and utensils instead.

### **National Facility for Tribal and Herbal Medicine at Benares Hindu University**

This was established by Dept. of Science and Technology, Govt. of India for research and development of herbal drugs by taking the leads from ancient concept of Indian System of Medicine and from the indigenous tribal medical knowledge, in 2008 with DST funds for establishment of facilities for identification, chemical characterisation, standardization and quality control of medicinal plants found in tribal area in Central India, as per the website. It reads further: “The present national facility at BHU has been developed on the very unique principle for global promotion of herbal and tribal formulations”. Among the objectives, it notes the following: (i) “To develop new investigational drug for clinical conditions taking leads from tribal medical knowledge system”, and (ii) To protect intellectual property rights generated out of tribal leads”; and (iii) Promotion of IPRs generated out of research outcomes and (iv) Global promotion of Tribal Medicine by regulatory acceptance. I am being selective in highlighting these objectives due to the possible implications for tribal communities.

### **Some Issues in Patenting Tribal Medicine and the Tribal Survival Dilemma**

While advocating protection of tribal medical systems and their healers, this section tries to highlight some fundamental issues in the patenting of

tribal medicine. Without addressing these issues and finding solutions, protection of tribal medicine will not happen in India's plural medical system context with biomedicine's supremacy and in contemporary world system's ways of functioning.

Tribal medicine is not merely a product; it is a combination of mythology, sacred and the mundane. Its healing efficacy comes from faith as much as from the medicinal property of the herb. Isolating out the sacred character and reducing it to a commodified product that is marketable apart from the healer and the sacred and communal context of healing reduces tribal medicine to a mere object or commodity. Such reduction erodes the element of faith and takes away the fundamental ingredient of efficacy in tribal medicine or tribal healer. Attempts at professionalization notwithstanding, a tribal healer may not match the professionalism of other healers of even other alternate systems of medicine.

A further difficulty is that in a habitat, more than one tribal community may have healing practices using the same herb/s. These herbs may also be in use in indigenous or folk medicine also. One may recall that it is this aspect of tribal medicine that allowed TBGRI to apply for patent under Indigenous Medicine formulary, presenting the herb *arogyapacha* as the Ayurvedic *Diwya Varahi*. This difficulty makes one question if the Biodiversity Act is sufficient to protect tribal medical knowledge. Will the tribal health culture or tribal medicine of Central India get protected when the National Facility in BHU or the scientists there get patents? The *Avikkuli* (medicinal steam bath) of Kani tribes is now practised by Kurichiyen healers and indigenous healers too, each using different combination of herbs. When tribal habitats are invaded by settler populations and tribal populations are displaced from their habitats, conflicts over intellectual property and patent rights are likely to surface at the local and state levels. Many tribal healers are aware that they have to get their knowledge recorded in the biodiversity register, but cannot be sure if that registry would in fact protect their ownership or lead to their alienation.

Entry in a registry that brings the knowledge into the public domain will work against obtaining patent for it. However, scientists like Dr. Rajasekharan point out that only about 5% of the medicines in the tribal habitats are unknown to science. He rightly notes that patent cannot be obtained without scientific intervention. But should there be knowledge and resources that should be beyond patents? The arguments of Geroski (1995) regarding knowledge as public good illuminates some issues in this connection worth further examination in different indigenous and tribal contexts for greater clarity on policy implications.

All tribal populations are not at the same level of understanding regarding patent laws or intellectual property rights issues even within a nation. Also, within a tribal population, there are different valuations and

understandings of the traditional tribal knowledge. Moreover, tribal healers who are acculturated and having contacts with other healers and healing practices have been borrowing from other healing systems compatible practices and effective medicines. Even efforts at revival of some of the losing healing traditions and knowledge with support of external agencies result in such inter-mixing for reasons of marketability. Such borrowings in fact, reduce the healing tradition and knowledge to a mere product that is easier to be alienated and cannot withstand the professional standards maintained by other systems of medicines, including the indigenous Ayurveda.

As is well known, Ayurveda and other indigenous systems of medicines have professionalised their systems of knowledge in competition with the hegemonic biomedical system in the plural medical system context of Kerala. For the Kanikkar, the affinity of their tribal medicine to Sidha system of medicine that is professionalised to much less degree than Ayurveda or Homeopathy is also a disadvantage in competing with other systems in their terms, using the language of scientific character and pharmaceutical safety standards. The cumulative effect of all these practices is that “evidence” required for legitimising a tradition and proving it as one’s own rather than that of any other is often difficult, if not impossible. The safety standards in the manufacturing of a pharmaceutical product to be licensed also cannot be fulfilled by the most “traditional” tribal healer who sticks to customary practices. Combined with this is the fact that laboratory testing to isolate out ingredients itself is a process fraught with possibility of alienation. Those tribal populations that are now made conscious of the dangers suspect all researchers and laboratories, but do not have their own infrastructure or skills to fulfil requirements to prove ownership. Given these factors, attempts at revival by professionalising tribal healers (Like in the KIRTADS efforts) have been counter-productive in the context of having to prove intellectual property rights although these are laudable in terms of obtaining markets for tribal medicine. Undoubtedly, some of these young healers are doing exceptionally well in marketing their healing knowledge, catering to non-tribals and having dispensaries outside their tribal habitat, creating greater demand for such state-legitimised courses. Some of these certified healers have printed visiting cards with their photographs and have letterheads on which they write prescriptions. They have also learned to communicate to non-tribals about diseases using scientific diagnostic terms. Their understanding of the ethnic diagnostic categories is inter-mixed with allopathic diagnostic categories and delivered in an idiom that the patients can relate to. At a tribal and ethnic healers’ camp in Kozhikode held in January 2012, where I could observe interactions of tribal healers from various parts of India with mainstream populations in Kerala, I heard some healers using terms like “psoriasis”, “arthritis”, “kidney stone”, etc., indicating their move into a competitive market place of medical systems and healing while trying to hold on to the advertising benefits of “tradition”, intrinsic understanding of the forest ecology from



proximity of their habitat, and the “un-adulterated” and “pure” medicines that have very little side effects, if at all. Some of these healers had attended such workshops organised by state agencies in other parts of India even earlier. It is learnt that they have also undergone training programmes in which they were taught not just tribal medicine but also informed of public health issues. It is to be noted that one such healer practising in multiple locations in the region has his own multi-utility vehicle and driver, and several employees working for him, indicating his success in the new market. Although in a limited way, this also denotes a process similar to medical tourism in which medical practitioners and hospitals begin to specialise for the tourist demands and leave out the less lucrative, more common, public health problems of the local masses of people. In brief, the coping attempts of tribal communities with support from state’s development interventions, at times result in some tribal populations becoming more deprived even as some individual healers may emerge more powerful and elitist. Unintentionally, the state’s development interventions become instrumental in creating strata within tribal communities, deepening of divides within them and depriving them of a unified voice in issues that threaten their survival, loss of their resources or challenges to habitat’s ecology. As the new system into which they struggle to be part of insists on proving their “ownership”, ironically, they are also compelled to change the very core and character of their being, driving them into situations where traditions have to be “invented”. At the same time what is invented has to be proved as their “own” tradition or custom. The legitimacy of such practices and practitioners can come only from customary law unless a state recognised tribal medical system is established. In Kerala, customary law has been left to die and the traditional social organisation which could bestow such legitimacy lies eroded. State’s development interventions, an instance of which is the certificate course to tribal healers already referred to, has only complicated matters in any effort to obtain patents. This in a nutshell, is the dilemma of many tribal populations in Kerala and perhaps, elsewhere in India.

## Conclusion

For the tribal people in Kerala, like the non-tribal including legal experts, much about Biodiversity Act, TRIPS, Intellectual Property Rights etc., remains unclear. What little they know comes from discussions around Kani-TBGRI issue of *arogyapacha*. This they understand not in terms of a unique benefit sharing at a time when it was not legally mandatory, but as how the Kani tribals were duped into losing their herb from which foreigners are now minting money. The information they receive are patchy and not at all reassuring. They believe that a law to protect tribal medicine could now be put in place if they are properly mobilised and demand it as a right. The complex aspects of formulating such a law are not discussed by them in any detail. They only ask for rectification of denial of their rights to survival, a demand that would stand justified anywhere, but how this rectification can

be effected needs further enlightened discussion in which gaps in policy are identified not only from local ethnic perspectives but also in terms of the legal frameworks and solutions found to fill them. Good intentions and spirited activism alone will not ensure protection of tribal resources, knowledge and intellectual property when the world system operates on principles far removed from the logic and everyday functioning of tribal world systems especially as tribal self-governance and community life are eroded under a weak decentralisation of state and policy vacuum that disadvantages tribal people. Legitimizing tribal knowledge systems and protecting tribal resources will not materialize unless clarity on issues are brought about through open discussions on areas of policy vacuum and failings in state efforts to bring development to tribal people and gaps in understanding of issues and law are filled with commitment.

### REFERENCES

Bindu, S.

- 2008 "Tribal Medicine Research and Development Activities in Kerala", in *Action Anthropology, Tribal Development Issues*. Wayanad: IIPS. pp.108-116.

Bijoy, CR

- 2007 '*Access and Benefit Sharing from the Indigenous Peoples' Perspective: The TBGRI-Kani 'Model', 3/1 Law, Environment and Development Journal, p. 1, available at <http://www.lead-journal.org/content/07001.pdf>*

Chaturvedi, Sachin

- 2009 'The Role of Scientists and the State in Benefit-sharing Comparing Institutional Support for the San and the Kani', in Wynberg, Rachel et al. (Ed.) *Indigenous Peoples, Consent and Benefit Sharing: Lessons from the San Hoodia Case*. New York: Springer Science+Business Media BV, pp.261-270.

Dutfield, G

- 2009 "Protecting the Rights of Indigenous Peoples: Can Prior Informed Consent Help?", in Wynberg, Rachel et al. (Ed.) *Indigenous Peoples, Consent and Benefit Sharing: Lessons from the San Hoodia Case*. New York: Springer Science+Business Media BV, pp. 53-67.

Geroski, P.

- 1995 "Markets for Technology, knowledge, innovation and appropriability" in P. Stoneman (ed) *Handbook of Economics of Innovation and Technological Change*. Oxford and Malden: Blackwell.

Menon, Vineetha

- 1995 Experiencing Health: An Exploration into the Health Culture of the Forest-Dwelling Kanikkar of Kerala. Unpublished Ph.D. thesis submitted to York University.

Pushpangadan, P. and K. Narayanan Nair

- 2005 'Value Addition and Commercialisation of Biodiversity and Associated Traditional Knowledge in the Context of Intellectual Property Regime', *Journal of Intellectual Property Rights*, 10 (5) pp 441-453.

Schroeder, Doris

- 2009 'Justice and Benefit Sharing', in Wynberg, Rachel et al. (Ed.) *Indigenous Peoples, Consent and Benefit Sharing: Lessons from the San Hoodia Case*. New York: Springer Science+Business Media BV

Shiva, Vandana

- 1997 *Biopiracy. The Plunder of Nature and Knowledge*. South End Press, Boston, MA.

Wynberg, Rachel, Doris Schroeder, Roger Chennells (Ed.)

- 2009 *Indigenous Peoples, Consent and Benefit Sharing: Lessons from the San Hoodia Case*. New York: Springer Science+Business Media BV