

Indigenous Knowledge Newsletter

For Community Rights and Sustainable Development

E newsletter by Gene Campaign

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Lead Article

The Battle Against Biopiracy - Suman Sahai

Biopiracy is understood as the unauthorized use of the genetic resources and the indigenous knowledge of communities by others who have neither taken permission from the communities nor entered into any kind of contract with them. Biopiracy is not a new phenomenon. The plunder of biological wealth from the biodiversity rich southern countries was a hallmark of colonial time. The British for instance, facilitated the theft of rubber out of Brazil, where it was closely guarded, so that they could cultivate it in their colonies in Asia, India included, and control the global rubber trade. So biopiracy has been around for a long time but its contours have changed. In the early days, plants and animals formed part of the booty of conquering armies or were acquired through stealth, as in the case of rubber. Today, the plunder of biological wealth is done rather more blatantly, using technical and legal instruments legitimised on international platforms.

The renewed thrust to biopiracy today comes from the developments in biotechnology and the international pharmaceutical industry. The pharma industry is facing a crisis of sorts. The cost of drug development has become astronomical. The figures put out by the drug industry say that it costs them about one billion US dollars to put a new product on the market. Together with that is the growing incidence of side effects, often of a dangerous kind, as seen in the recent case of *Vioxx*, a drug produced by Merck forwhich triggered heart problems in users. The search for new molecules is therefore expensive, uncertain and runs the risk of huge payments in liability when things go wrong.

Hence the pharma industry is looking increasingly at medicines and products that have been developed by local communities in older cultures like India, Africa and China where the centuries old traditions of indigenous healing are still viable and in use. These healing practices and cures are rich hunting grounds for biopirates. The patent is the instrument of pirating the product from its legitimate owners. Therefore we have had the famous cases of biopiracy involving the Hoodia plant of the San tribe, the turmeric from India and the Ayahuasca from MexicoFortunately all these patents have been successfully challenged but there is enough evidence that this has not halted the process of

biopiracy which continues unabated. In fact, we make a fuss only about what we discover. Most of the time we do not know what has already been patented.

In the case of biotechnology, we have a technology which uses genetic resources to make products that were earlier made by chemical processes. Drugs like insulin and products for bioremediation and cleaning up the environment are some of the potential products offered by biotechnology. The dilemma with biotechnology and its application is the fact that the technology of cutting and pasting genes from one organism into the other (recombinant DNA technology) has been developed in the laboratories of the industrialized nations, chiefly the US but the raw material, the genes, are available in the genetic resources of the tropical countries of the South. So we have a situation where the countries that have the technology, do not have the raw materials. The answer that the western companies have found to this problem is biopiracy. Rather than follow a just and equitable path and enter into an agreement with the owners of the genetic resources to use their materials and agree to share the profits made from the commercialisation of the products made, they choose simply to steal their materials and patent them in their home countries. The USPTO (The US Patent and Trademarks Office) is the single largest offender in granting illegitimate patents of this kind, followed by the European Patent Office, Japan is in third place.

Biopiracy today is facilitated by international organizations like the WTO, the TRIPS chapter of which allows anybody to patent anything, regardless of whether the subject of the patent claim has been acquired legitimately or otherwise. The other international convention, the Convention on Biological Diversity (CBD), which deals with biological resources, is a pro – community convention which recognizes that local communities are the owners of the biological resources and the indigenous knowledge developed by them. It also requires that when biological resources and IK are to be used, this can only happen with the prior consent of the communities and after making an agreement to share the profits of commercialisation with them. Needless to say, the greatest biopirate, the US, has refused to become a member of the CBD and does not acknowledge that local communities have any rights!

The battle against biopiracy cannot be won with struggling to challenge every patent that is granted. That is an expensive and in the end, ineffective exercise. The only response to rampant biopiracy is to negotiate aggressively at the international level for a formal linkage between the WTO and the CBD so that patents under TRIPS cannot be granted unless the conditions of the CBD are complied with by the party seeking the patent on any biological material. The Doha Declaration includes this provision but predictably, the US is not allowing any movement on it. India is promoting this line in the WTO along with countries like Brazil, China, Ecuador, Malaysia and others. This position must be held and strengthened at every WTO meeting, starting with the next Ministerial meeting in Hong Kong in December.

Article

Benefit sharing restraints for conservation of biodiversity & traditional knowledge

- Utkarsh Ghate

Golden goose dilemma

Access & benefit Sharing (ABS) has been proposed on the assumption that monetary incentives would motivate communities to conserve their biological diversity (BD) and traditional knowledge and practices (TKP). On the contrary ABS attempts in Latin America such as the InBIO- Merck contract have not reached communities properly. The youth are drifting to cities for urban labour & drudgery rather than using bioresources based traditions. This shift from local savings to cash economy is promoted by external interventions and cultural values of expenditure based education, transport etc.

Thus, the proposed solution- ABS by external resource seekers will kill the golden goose- TKP, unless local cultural values and faith in traditional practices are revived to conserve local use and savings thereof. For, protection from unfair cornering of commercial profits cannot guarantee protection of erosion of its relevance and use. Emerging economic needs must be met by building their manufacturing capacity to trade value added products, than supplying cheap raw material.

In fact, ABS was also sought to be a “compensation” for the inability of the communities to develop and commercialise the TKP based products themselves, and thereby providing external agencies the opportunity to do so. ABS must instead be looked as “recognition” of new-found value of TKP and “reward” for its conservation & promotion as emphasised by the National Innovations Foundation (www.nifindia.org).

ABS lessons: Ecological & social unsustainability

Ecological sustainability must be honoured more than money even in the few cases where one (buyer) to one (provider) ABS can work, with narrowly distributed species known only to discrete community. This is best illustrated by plant Arogya Pacchha (*Trichopus zeylanicus*) known to Kani tribes from Agasthyamalai hills of the Western Ghats. A state government institution Tropical Botanical Gardens & Research Institute (TBGRI) tried ABS system to reward Kani tribals for the TKP they provided about the plant. TBGRI developed it into a tonic and sold the manufacturing licence rights to an industry.

TBGRI tried to share half the licence fee with Kani tribals from the hamlet that provided TKP, in good faith. Soon many neighbouring Kani hamlets opposed such transfer and claimed to possess similar TK. Absence of prior documentation made it difficult to ascertain claims if TKP providers were unique. The plant is largely confined to Agasthyamalay hills covering hardly 2,000 sq. km of forests and is being threatened with extinction, due to over harvest and habitat destruction. Production from its cultivation is difficult, so wild harvest is the only option. Forest department thus did not permit its commercial extraction by the Kanis, as monitoring sustainability is not feasible. Yet, there is thriving illegal trade in the plant, threatening it further. The Lessons here include: (a) discretionary ABS may fail, and (b) narrowly endemic local resources should not be commercialised, as ecologically unsustainable & scientifically undesirable.

For widespread biodiversity resources & TKP, above public fund-incentive route may be tried. Industry seems to have learnt its lessons, with current shift to develop simple herbal medicines and marine medicines where TKP is insignificant, rather than TKP based drugs, to avoid getting entangled with ABS. Hence, future may not offer much external benefits of TKP to be shared back with the local people, leaving ABS dry, and underscoring the need for promoting local TKP for local needs, not global greed. Otherwise, we may get trapped as with Central India, where Rice Germplasm Collection is being handed over to industry but not to the agitating farmers for its re-cultivation, as farmers have lost these landraces due to recent promotion of industrial varieties.

ABS for cultural & economic incentives

ABS system must plan for cross-cultural, multi-dimensional assessment of local traditions and their promotion through formal and informal training and increased self-use, as well as micro-enterprises for trade. Rules under the Indian Biodiversity law neither promote nor prevent these actions, but the legislation itself suggests these actions. Its implementation is left to the local biodiversity management committees (BMC), to be established eventually. BMCs would be endowed with Local Biodiversity Fund (LBF), through grants or allocations from the state & the central governments. Thus ABS must involve:

- (a) Prior Informed Consent (PIC) to be signed between the National Biodiversity Authority (NBA). BD/TKP providers and the accessing agency (plant breeders and biotechnologists)
- (b) Transfer of funds received such commercial users to state biodiversity boards (SBB) & later to appropriate LBF under the Biodiversity Act, or similar Community Gene Fund (CGF). Protection of Plant Variety and Farmer's Rights (PPVFR) Act, 2001, provides similar authority.
- (c) Use of LBF for (a) assessment, (b) recognition, (c) publicity & (d) value addition.

Numerous stakeholders in ABS

ABS must reach actual conservers (traditional farmers, healers etc.) and not just database managers or government staff. ABS must also be ecologically sustainable, in not leading to overexploitation of the resource. ABS in Latin America & elsewhere has promoted compensation agreements or contracts between the bioresources and/ or TKP provider and the buyer. Much of the TKP is yet undocumented and communities are illiterate and disconnected, and biodiversity varies greatly from one place to other. Thus, providers can be presumed to be unique custodian of the biodiversity and/or TKP. Thus, contracts may be fair and equitable there. This cannot apply to India where numerous communities countrywide share biodiversity & TKP, making exclusivity difficult.

Identification of beneficiaries

Value of commercial benefits could be too small for distribution across numerous claimants recorded to share same biodiversity or TKP based on literature or passport data or biodiversity registers. All these may not be involved in signing PIC. Thus when benefits from all PICs get pooled into the national Biodiversity or PPVFR fund, it must be distributed to not all the SBBs/ BMCs recorded to possess the said biodiversity or TKP but those actively engaged in conservation.

Extent of their activities for conservation, cultural assessment & sustainable use of BD & TKP of each BMC/ SBB can be judged based on TKP chronicling (or registering) process and Biodiversity Information System (BIS) underway, through BD Act provisions. Benefits need to be shared annually as continuing incentive to promote BD & TKP; and not single compensation. BIS can incorporate databases such as: (a) Traditional Knowledge Digital Library (TKDL) that has compiled much of the classical published knowledge, (b) National Register of Innovations & Unique Traditional Knowledge (NRIUTK) that is covering oral knowledge outside TKDL (c) Wealth of India (d) All India Co-ordinated Research on Ethnobotany (e) Documentation & Assessment of Local health Traditions (DALHT) (f) Biodiversity Registers.

ABS operationalised

For restoring local faith in TKP and to enhance village savings & self reliance, cross cultural assessment of local health traditions is happening in South India since 1998 (www.frlht.org.in), leading to promotion of best remedies, recognised on several socio-cultural & clinical criteria, & not just active ingredient unlike modern medicine. Resultant Kitchen Herbal Gardens (KHG), saved up to 70% of health expenditure. To promote economy, villagers' co-operative enterprise (Gram Mooligai Company Limited- GMCL) is marketing medicinal plants and products. Savings and earnings have helped *in situ* conservation of biodiversity & TKP through sustainable use.

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Interview

Launch meeting of Gene Campaign's IK protection project was conducted on 7 July 2004. Prof. Anil K. Gupta shared his views on IK protection in of one of the panel discussions of the launch meeting. His comments as a panelist are presented here.

On IK in contemporary context

In case of IK protection two pertinent questions are "Why are the local communities who are rich in knowledge economically poor?" and "How is it possible that the rights of local communities over their knowledge are taken away without any reciprocity, reward, recognition and respect?" 4Rs - Reward, Recognition, Respect and Reciprocity - constitute the very basic elements of our (society's) relationships with the informal knowledge systems.

Three dimensions of the IK

There are three dimensions of IK based on biodiversity. It is necessary to understand them in order to grant rights over such knowledge base. The first dimension is in the context of putting IK in public domain without the consent of the community. There are three knowledge domains - private or proprietary, community and public. Over the years ethno-botanists and other scholars have been visiting indigenous communities in order to record their IK. These scholars have been publishing their findings (as authors, without any recognition of contribution from the communities) thereby taking away IK from the private and community domain and putting it in the public domain. They have been doing this without any consent from such communities. So, historically, the first usurpation of rights over IK happened when knowledge was brought into public domain (by way of publishing the research findings) without the consent and involvement of the people whose knowledge it was. However, there is a paradox. Had indigenous communities been asked for their consent to publish their knowledge base, they would not have refused it, This is because a large number of these people are guided by superior ethics and are generous enough to freely share their knowledge. It is this spirit of generosity, which has unfortunately led to their exploitation, and the usurpation of their knowledge. Over the years, fortunately, consensus is emerging among the people all over the globe that this is grossly unfair to the community.

Second dimension is that there exists an asymmetry amongst the community members with respect to having knowledge and practicing such knowledge. This asymmetry lies not only in the amount of knowledge that each individual in a community has, but also in its practice. Not everyone practices

with equal expertise and rigour. In every community, there are specialists or experts who are the only ones having the expertise to put the knowledge into practice. This is especially pertinent in the context of healing knowledge. An issue arises here, i.e. whether this asymmetry should exist in the rights of individuals over IK? The community's contribution to the evolution of such knowledge, its refinement over time and conservation of resources (biodiversity) cannot be ignored. The community has been contributing in maintaining the background condition necessary for the IK to flourish and evolve. However, we must recognise that theoretically there is a case for asymmetry in the knowledge itself and rights on this knowledge amongst individuals and the community members.

Third dimension is on what basis should the asymmetry be recognised. Based on the matrix of knowledge and practice four kinds of incentives can be developed. These incentives are discussed in the following paragraph.

On IK recognition

Based on the matrix of knowledge and practice, there are four kinds of incentives, viz:

- a. Material-Individual which may be in the form of money, reward, compensation, royalty, equipment, IPRs (which can be licensed) etc.
- b. Material-Collective which may be through the creation of venture funds, trust funds, insurance funds and the like (e.g. Kani tribe case).
- c. Non-material-Individual for example public recognition.
- d. Non-material-Collective, for instance, a chapter in a book recognizing the contribution of an indigenous community.

Law/policy suggestions for the protection of IK

- (1) Emphasis on Prior Informed Consent (PIC), which apart from ensuring fairness, should be strictly according to the conditions imposed by the community. PIC is a form of contract between knowledge provider and knowledge receiver and is enforceable in a court of law.
- (2) Modification of the relevant provisions of the Patents (Amendment) Act, 2002 which accords no compensation to the IK holder. It regards all IK to be already existent in the public domain thus constituting prior art. Setting up of a system of National Registry of Innovations and Inventions on IK, giving to the community their rightful due as well as enhancing competitiveness of small enterprises.
- (3) Article 24.2 of TRIPS that provides for the setting up of an International Registry of Geographical Indication for Wines and Spirit, could be extended to IK as well in the form of an International Registry for Indigenous Knowledge. Geographical Indication is the only provision in TRIPS that is meant to protect IK.
- (4) Every applicant must be obliged to declare that knowledge and/or the material used in developing the claims, which are filed before the patent office, have been obtained lawfully and rightfully. For instance, PIC must be required both lawfully (CBD provisions) and rightfully (morality says so). Disclosure standards under TRIPS can be amended accordingly.
- (5) A lot of research is going on in the country and products are made (and commercialized) based on IK, but communities are not getting even a penny out of it. For instance, 75% of raw material needed for the Ayurvedic industry operating in Gujarat is taken from one district i.e. Dang. Despite that the people of Dang are the poorest in the State. Companies take raw materials for Ayurveda products and do not contribute to the community and people. In India, 90% of raw material used by herbal sector is collected from the wild, which indigenous people have conserved. Not a single penny has been paid by the industry for the conservation of biodiversity or towards the contribution of the local communities. Biodiversity is seen to be best preserved in areas untouched by civilization where tribal people lead a pre-modern existence. The attitude of trying to conserve biodiversity by keeping these people poor and marginalised is unethical. This is correct neither ethically/morally nor from the human rights perspective.
- (6) Sensitize young generation of communities to take interest in practicing/applying IK. We do not find young healers in indigenous communities. The young generation has given a no-confidence vote on indigenous healing system. This is most alarming from the perspective of the protection of IK. There are several reasons for this, for instance, weakening link between grandfathers and grandchildren, lack of incentive for the young people to seek honourable occupation. The dilemma, however, is that often traditional healers do not ask for money for their services. For them nothing comes free of cost. They have to pay for their food, their clothes, on education etc. And they have virtually nothing to sell. The only thing they are rich in is their knowledge, which should be made use of to earn their livelihood. If they are not compensated for the use of their knowledge, then how will they be able to earn their livelihood? He requested all participants to make use of this project in order to make IK work in the benefit of the local community.

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In the frame

Manav Adhikar Seva Samiti, Sambalpur, Orissa, India

Manav Adhikar Seva Samiti (MASS) was initiated in the year 1988 by a group of Post Graduate Sociology and Anthropology students from the Sambalpur University in Orissa. MASS is working with poor, tribal and underprivileged sections of the society in the resource rich but economically poor state of Orissa. MASS believes that the management or mismanagement of natural resources hold the key to development. Hence, all the interventions of MASS basically pivot around natural resources. MASS is working with the communities in the western region of the state.

Water scarcity has been the most crucial and pertinent challenge for this region. Despite having a rich past of wisdom in harvesting and management of rainwater, this region is now suffering from chronic drought conditions. Realizing this MASS has facilitated a campaign called '**Water Initiatives Orissa**' through which it is trying to promote people's efforts on rainwater harvesting and management. Revival and development of the traditional knowledge and practices is the key to address the water scarcity. **Panira Dagara**, a print newsletter in the local language – Oriya- is published bi-monthly and widely distributed among stakeholders at all levels. A media advocacy campaign is also initiated to sensitise media on water issues.

Promoting and protecting people's knowledge of **biodiversity** is another focus area of MASS. One of the prime activities is to document and promote indigenous knowledge and practices. Village institutions are being promoted and strengthened to document indigenous knowledge on agricultural biodiversity, forest biodiversity and practices of sustainable management of natural resources.

Training to farmers, forest protecting communities and women is a regular component of the grass root level activities. Training programmes on ecological farming is a new addition to the action programmes of MASS. During the last one year, two such trainings have been conducted for farmers. The results of the demonstrations are being observed and recorded. **People To People** communication is important in spreading the message of all these activities and to encourage people to strengthen their innovative initiatives. To fulfil this goal, a farmer's bulletin is published and circulated.

Every year MASS organises **People's Knowledge Fair**. Last year (2004) MASS had organized a Women's Knowledge, Life and Livelihood Fair where in more than 500 village women from 10 Blocks of two Districts participated to show case their knowledge.

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Gene Campaign: IK Update

Consultation with indigenous community

Gene Campaign research team conducted a field visit to village Mendha Lekha and other two villages in Gadchiroli district of Maharashtra State. Mendha Lekha, a *Gond* tribe village is known for its effort in tribal self-rule and implementing the Gandhian concept of village republic. For last ten years Mendha Lekha villagers have been instrumental in establishing rights over their resources, especially forest. The Mendha movement is now spreading. Under the guidance on Mendha Lekha Gram Sabha (village council), some villages in Gadchiroli district have started replicating the Mendha Lekha initiative. Gene Campaign research team visited two such villages. A case study is in preparation on contribution of Mendha Lekha initiative in the IK protection.

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This e-newsletter is part of Gene Campaign's efforts to develop an understanding of how best to provide protection to Indigenous knowledge.

Gene Campaign is a grass root level organization with a presence in 17 states of India. It was launched in December 1993 by Dr. Suman Sahai and a group of people who were alarmed by the impact of international development like WTO/TRIPS on the genetic resources of the developing world and the food and livelihood security of rural and tribal communities that depend on them. It is dedicated to protecting the genetic resources of the Developing Nations, and the rights of farming and tribal communities. It works to strengthen self - reliance in agriculture and the basis of sustainable food security.

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