

BIOPROSPECTING OR BIO-PLUNDER?

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Prospecting for biological material like plants with medicinal or other economically valuable properties like fibre or oil, is becoming a dynamic activity. With growing environmental consciousness, benign biological substitutes are being sought for certain categories of chemical products. Following the German ban on chemical AZO dyes in the textile sector, the search is on for suitable vegetable dyes for leather and textiles. Plant based colouring agents are also being searched for the food processing industry due to the rising incidence of allergies to chemical colours and additives.

Bioprospecting is high on the agenda of the western and transnational corporate biotechnology sector. The legendary success of vinblastine and vincristine, two cancer treating agents derived from Madagascar from the Rosy Periwinkle called Sadabahar in India, shows the way to those engaged in the frustrating search for cancer curing drugs. The recent promise of Taxol derived from the Yew tree as another cancer treating agent has spurred the search for drugs from the plant world.

Reportedly, bioprospecting is such a preferred activity in western nations that not only is the corporate sector investing heavily in it, so are universities and research institutions. Apparently, research proposals for survey of indigenous flora, local healing traditions and study of ancient medicinal texts like those dealing with Ayurveda and Chinese medicine are almost certain to receive support from funding agencies. Universities like the Banaras Hindu University which have a strong tradition of the practice and study of Ayurveda have been overrun by foreign scholars, mostly American and European scholars, in recent times. In several areas of the Garhwal and Kumaon Himalayas, as also in the regions of the Western Ghats, groups of foreigners are silently collecting samples of plants, insects, soil etc. to take back to their countries for study.

Gene Campaign which has set up its Core Groups in various regions has been receiving reports from its local contacts about such illegal collections. Teams of three to four people, mostly under contract to multinational companies, camp in villages in the Himalayan regions and interact with the local community to identify plants and their use by the local community. Mostly this information is sought for healing properties of plants. These groups have been collecting such samples as they can identify themselves, for others, they have been paying local people to collect it for them from the higher reaches.

Since these foreign prospectors are paying two and four times the pittance that the impoverished hill people would otherwise get as daily wages, there is never any dearth of people willing to go out and strip whole hillsides for them.

This precisely is what has happened in the Garhwal and Kumaon areas. Where allegedly Proctor and Gamble has been prominent among many others who have collected samples in this unauthorised way. This kind of activity has led not just to the theft of genetic material worth millions; it has been particularly destructive of the environment. Those collecting samples were not harvesting their chosen plants carefully, they were stripping tracts of flora so as not to miss out anything. This kind of illegal and environmentally devastating bioprospecting can be stopped only if local communities are made aware that such collections are not only illegal but also the theft of what is essentially their property and that this is also very much against the national interest.

The government must designate some local authority like the Block Development Officer or the elected head of the Panchayat where such exist, to receive information about bioprospecting activity so that they can pass it on to the district headquarter for appropriate action. In the absence of permission or authorisation documents from an appropriate agency, the district administration should be authorised to take penal action. Villagers should be informed about who they should contact if they see such activity in their areas. Apart from generating awareness about these issues and creating a local system to deal with these situations, it is also necessary to

arm ourselves with strong national laws to protect our bioresource base and stop the loot and plunder.

The first step is to enact the laws that arise out of the Biodiversity Convention signed in 1992. This has not been done even four years after the signing of the Convention. The inefficiency of the Environment Ministry which is responsible for drafting legislations relating to biodiversity is costing the country dearly. Frequent changes in political leadership and an obtuse, ill informed bureaucracy are the main reasons for the systematic loot of India's genetic resources. Even when there is an international treaty favourable to developing countries being able to protect their resources, the Environment Ministry is unable to get its act together.

The Convention on Biological Diversity (CBD) rectifies a historical wrong. It reverses the principle of Common Heritage of Mankind according to which the genetic resources of the world belonged to everyone and not particularly to the nations where they were found. Now CBD has acknowledged the **principle of ownership** according to which genetic resources are recognised to be the property of those nations in whose sovereign territories they are located. In addition, CBD lays down two other conditions of great importance to countries like India that are owners of bioresources where there is a strong base of indigenous knowledge. These are that of **Prior Informed Consent** and **Material and Information Transfer Agreements** with respect to the transfer of genetic resources from owner countries to countries/ companies / individuals that want to use these resources.

The clause of Prior Informed Consent lays down that parties wanting to use genetic resources must first take the permission of the local community or the relevant authority in the owner country. Material and Information Transfer Agreements are to govern the conditions under which these resources will be transferred to the user party. These conditions could for instance lay down the fee that will be levied for bioprospecting whether or not a product is developed. The basis of profit sharing between the local community or communities and the company making products. Extent of royalties payable to individuals or communities for the use of indigenous knowledge etc.

We must enact the CBD related laws immediately so as to protect our biodiversity and indigenous knowledge from marauding corporate giants who can take advantage of the current legal limbo and transfer out genetic material without proper agreements. Today even when foreign nationals are apprehended at airports carrying genetic material like seeds, soil samples containing micro organisms or butterflies and insects in their suitcases, it is difficult to proceed against them if the samples are not on the endangered or prohibited list. Unless ownership rights are established over genetic resources, they remain the Common Heritage of Mankind and their transfer cannot be considered illegal.

Countries other than India have taken prompt action to protect their bioresources and have secured the rights of their indigenous communities as custodians of the resources and repositories about the knowledge of their uses. This they have done by enacting domestic legislations to ensure that ownership rights are exercised over the country's bioresources and that any prospecting for biological material can only take place after Prior Informed Consent has been taken from local communities. The commercial exploitation of bioresources is subject to the conditions that have been laid down for Material and Information Transfer Agreements.

Australian states enacted legislation almost immediately after the conclusion of the Biodiversity Convention that all genetic resources found in their territories is their property. Apart from establishing ownership, these Australian states passed a law that any one producing anything out of Australian biological resources would automatically have to pay 7 % of the profits made to the concerned Australian state as royalty.

The Philippines which are closer and have conditions similar to ours have unlike us, acted with promptness to regulate the use of their bioresources and to earn revenue from it. On 18 May 1995, the Philippines adopted a Presidential Executive Order which regulates bioprospecting. This Order lays down three essential conditions for those interested in prospecting for bioresources in the Philippines. Prospectors have to negotiate a research agreement with the government, seek prior informed consent and share benefits with local communities and indigenous peoples. It is

worth looking at the Philippine Order in some detail since it is a good document and could serve as a model for us. The Order includes among other things, the following.

Consent of Indigenous cultural communities. Prospecting of biological and genetic resources shall be allowed within the ancestral lands and domains of indigenous cultural communities, only with the prior informed consent of such communities, obtained in accordance with the customary laws of the concerned community.

Minimum terms of a commercial research agreement and academic research agreements include i) a limit on the samples that may be collected and exported ii) a complete set of all specimens to be deposited with the Philippine National Museum, iii) access to collected specimens and relevant data deposited abroad shall be available to all Filipino citizens, iv) the collector or principal must inform the Philippine government and affected communities if a commercial product is derived from ist activities, v) provision for payment of negotiated royalties or other compensation to the government, local community or designated beneficiary where there is commercial use, vi) the involvement of Filipino scientists in the prospecting and research at the cost of the collector, vii) transfer of equipment to a Philippine institute where appropriate, viii) a prospecting fee to be paid to the government and, ix) in the case of endemic species, the technology must be made available to the Philippines to use commercially, without having to pay royalty.