Bio-piracy: defining the problem

by Jagath Gunawardane

The gaining of exclusive monopoly rights by individuals, institutes or companies of one country over the biological materials found in another country is known as bio-piracy. Most often, the biological material is found in developing nations while the monopolies are held by those from developed countries. These monopolies have been made possible by extending the scope of intellectual property rights legislation to cover living beings, their parts and even to substances made by and found in them. This is mostly being done by getting a patent over such material and its uses. More than fifty plants used in traditional medicine in Sri Lanka are now covered by patents. This is a growing problem faced by all bio-diversity rich developing countries and it needs to be dealt with not only at the national level, but even as a regional and international levels.

The term bio-piracy is, though very widely used, is of quite recent origin, being coined by the Canadian group RAFI in 1993. (This group is now known as ETC-Foundation). They used it in the title of the communique of 30.11.1993, which read as "Bio-piracy: the story of natural coloured cottons of the Americas. This article describes how a cotton breeder from California named Sally Fox obtained exclusive monopolies for two traditionally grown coloured cotton varieties found in Peru. The term was defined by them only in the Communique of December 1996. It defines "bio-piracy" as the use of intellectual property laws (patents and plant breeders rights) to gain exclusive monopoly control over genetic resources that are based on the knowledge and innovation of farmers and indigenous people. The first case described involved the getting of plant breeders rights over traditional varieties, although the majority of the cases nowadays involve patents.

There are some who try to equate bio-piracy with the theft of biological resources. Any unauthorized taking of biological materials is theft. A taking becomes unauthorized or illegal if it is done in contravention of the laws. That is, in other words, an act violating the provisions of Fauna and Flora Protection Ordinance, the Forest Ordinance, the Fisheries and Aquatic Resources Act or the National Heritage Wilderness Areas Act, or any regulations made under one of these. When the material is taken out of the country, it turns into an act of smuggling. In an act of theft, what we lose is part of the physical resource only. It may, or may not, affect the overall status of the resource base of the country. It is true that the development of technologies such as meristem culturing had made this kind of theft and smuggling much easier as one needs to take only small portions of plants from which thousands could be made.

Smuggling of a biological resource may make it rare or to make it extinct. If a small quantity has been taken out at one time, propagated and then such progeny has been sold, it would not affect our resource base at all. An example is the Fox-tail Orchid, (Rhincostylus retusa), a plant protected in Sri Lanka. It has two forms, the commonly found pink and white flowered one and the much rare pure white form. It was reported that someone had smuggled some plants belonging to both these forms during the late 1970's and large numbers were made through tissue culture in Thailand. Many catalogues in the early 1980's featured these plants. The existence of large numbers of this plant show that tissue culture had succeeded. This success does not affect the status of the plant in Sri Lanka adversely. It could even have reduced the need to smuggle it out because one could always buy a plant legally.

If the Sri Lankan government decides to culture and export Fox-tail Orchids to foreign markets, it would have to compete with existing suppliers. However, if we succeed in exporting it at cheaper rates, then it is easy to find the market. Since the resource is found in the country, it may even be possible to find more attractive forms, mass produce these and to export them. It is also possible to combine these two tactics. Those who have been profiting from the smuggled plant would not be able to stop us from doing so and would have to compete us at the same markets. The simple logic behind smuggling is, they would profit by exploiting our resources but would not be able to prevent others from reaching the same market. That is, our rights to export or market the same resource would not be affected at all.

In contrast, the main feature in bio-piracy is the loss of rights. An example is the endemic Binera (Exacum spp) that were smuggled out during the same period. Unlike in the case of the Fox-tail Orchid, minor variations of three species have been patented as new innovations. It is necessary to have only one distinct variation for a plant to get it covered by a patent. One patent covers Maha Binara (Eitrinervum macranthum) plants that have drooping stems. Plants showing this variation can be found in some places. Even the patent says that it was only a discovery. But, if Sri Lanka wants to export this form of Maha Binera as an ornamental plant to USA, the assignee of the patent can not only stop the selling of them but even to stop the importation to the country. Since the monopoly rights are held by the assignee, not even the country of origin is allowed any act that could transgress these rights.

When it comes to patents that cover a medicinally important compound, extract or a composition, the monopoly can be even more restrictive. It can be used to deny an opportunity even to the very country whose indigenous knowledge had been used as the basis for the patent. The coverage can even be extended to cover unknown aspects, equivalent products or similar products in some instances. Patents were meant to act as defensive tools, giving an inventor a fair and reasonable chance to profit from an invention that had taken his effort, time and resources. During this period of time, the inventor can use the invention without having to carry about any competitors. In return, the invention had to be disclosed to the public who are free to use it after the expiration of the monopoly.

At present, patents are increasingly being used as offensive tools, to gain markets and to throw out any potential competitors. This is done by preventing and obstructing research, wreak havoc on others through legal action, prevent introduction of equivalents, deny access to research materials and to keep the price of raw materials low. Some of the patents are never made use of by the assignees. What they intend is to exclude others. It is always seen that bio-pirates are more interested in the monopoly and not on the source material, especially if it is widely available. Therefore, bio-pirates need not necessarily be involved in smuggling.

This is because they clearly understand that once they get the necessary monopolies it is an easy task to put the rest in place. What they value is the patent and not the raw material. If there is no patents on a product, it is always possible that more than one entity will be making it at a given time. It is therefore possible for a provider of raw material to supply it to the most profitable buyer.

The buyer has to be always mindful that the supplier would always go to a competitor if a fair price is not given. The moment there is a patent, it preclude any competitors and so the product can be made only by the patent owner or by a party that buys the commercial rights. The supplier of materials has to either give it at a price decided by the buyer or go out of business. The buyer is well aware that since there is no competition, the supplier has very little choice in deciding prices.

There are still some who do believe that patents create a demand for raw materials and developing countries have a chance of getting benefits from supplying these. It is a well known fact that what is more profitable is the export of value added product and not raw meterials. Making a value added product creates employment opportunities. A patent prevents the making of such value-added product to foreign markets. The only available options are either to supply raw materials or get permission from a patent holder by paying the required royalty. Even the country where it was traditionally used will have to pay royalties to the new owners of their own knowledge. The patent holder could comfortably seek out raw materials from the cheapest source or even give permission to make the product on their behalf in a third country. Rather than increasing the value, a patent often diminishes the value of raw materials.

There are some who state that rather than fight bio-pirates, we can come into agreements with them to share benefits. The intention of getting a monopoly is to gather all profits to oneself, not to share it with others. The patent holder is well aware that others have very little room for manoeuvre, except in cases where the raw material is confined to one particular country. Therefore, any such agreement is heavily tilted towards the patent holder. The other aspect of such an agreement is that the victim will be acknowledging the claims of the bio-pirate as something valid and acceptable. It gives a legitimacy to a wrongful act, takes away all moral and legal rights to act against such things, dampens the resource of nations and keep nations divided. There are professionals working for such groups who have made the issue of benefit sharing as the primary vacation. All the reports, articles, examples cited and agreements made by them are heavily tilted towards their sources of funding — that is, biopirates and their associates. It is why we should analyse everything that is brought before us on access and benefit sharing, even the supposed to be best examples.

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