

## Biodiversity laws: Over regulation a cause?

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#### Over regulation defeating the purpose?

The NBA makes it cumbersome and uncertain for companies and individuals to access and work with India's Biodiversity, and conservation of the resources have turned into abandoning these from their proper utilization.

"The current Biodiversity act is draconian. From an academic sense too, this law is regressive. On the one side the Government of India is trying to attract the best talent in the world to come back to India to do science. The Biodiversity act dramatically restricts foreign nationals, including OCI card holders from doing research on Indian biodiversity. This is very poorly thought through and it does not look like that there is any active scientist or academic doing research in modern life sciences and using biodiversity in the panel," said Dr S Ramaswamy who feels that bill has been hijacked by a very narrow group of ideologists. "What we need is an inclusive bill that is made with representation.

Speaking on the similar lines, Dr Sivakumar further added, "In the zeal to protect the Biodiversity and ensure that local communities in whose domain the Biodiversity resource exists , do not get a raw deal, we are curtailing the generation of new knowledge ( e.g new and unidentified species and strains) and potential commercial benefits from these resources like new drugs, enzymes and genes which could help drive even more efforts to conserve and document these resources by overly regulating the access to these resources. This defeats the purposes of the Act."

"Because regulation is stringent, the outcome could still be uncertain after years of hard work. India's experience in bioprospecting is still at its infancy: lack of human resource of the right capacity is a major problem; our academia and industry are yet to feel comfort in working together; there is not enough inter-disciplinary cross talk and hardly any trans-disciplinary institutional structure; and there is insufficient programme management skill in our funding agencies. We need to learn a great deal from international experience on how to be innovative in research," said Dr Natesh.

#### Time to do away with it

The overwhelming feeling is that there is a need to amend the law in terms of shortening timeline to grant the approval. Ms Prity Khastgir is of the opinion that there should be a provision of express request by increasing the fee schedule for applying

for approval for access to biological resources to expedite the grant approval process. "This will not only encourage more entities to apply for the approval but at the same time will generate more revenues for the Indian government," she said while also suggesting introduction of special lucrative schemes for the mutual benefit of biodiversity conservation and for the biotech industry. As an example, Ms Khastgir mentioned, "Tax benefits for the biotech entities researching in the area of biodiversity conservation and for the betterment of mankind. Indirectly, it will lead to innovation and innovation will lead to job creation in the country."

According to Dr Reena Singh, "It is the sovereign right of India to control the use of country's resources. But, law should be reviewed. If Indian companies and residents are not able to come up with commercial products of Indian resources in stipulated time frame then foreigners or non-resident Indians might be invited or given the chance with benefit sharing mechanism or any other mechanism so that the optimal utilization of Indian resources can be achieved."

"It has to be recognized that being in possession of biodiversity and associated knowledge is one thing but converting these into socially or commercially viable products or processes is quite another," informed Dr S Natesh who points out that latter involves not only research and innovation but injection of considerable financial investment.

### **Separate governing body**

Currently the sufficient distinction between using biological diversity for research and that for commercialization is lacking. In most cases, we just do not have enough scientific knowledge about our wild-occurring biodiversity.

Experts suggest that government of India must appoint a high power committee that consists of practicing scientists in microbiology, industrial biotechnology, modern agriculture, veterinary medicine, traditional medicine, economists, NGO's, representatives from industry, etc. The body should do revisions for the bill with the aim or both securing our biodiversity, yet creating economic value from it.

A separate governing body, as per Ms Prity Khastagir, will address the issues related to biodiversity utilization for research purposes and provide one stop solution to the companies researching in this area. Echoing a broader sentiment, she said, "It will benefit in expediting the approval process."

Dr Reena Singh endorses the viewpoint when she mentioned, "The governing body (with members of multi-disciplinary field) may be given the responsibility to develop and monitor the entire programme on biodiversity utilization and bio-prospecting. This body may have the centralized information on all the research activities of biodiversity utilization and could be an important link between research and commercialization. industrial stakeholders may considered to be included as the member of the governing body."

However, Dr S Natesh believes that restrictions or any governing body may not help the purpose. Making his point, he quotes an example. "Take medicinal plant species as a case in point: For most of them we do not have adequate basic data on reproductive phenology, pollination and dispersal mechanisms, breeding cycles, cytology, seasonal and regional variations of bioactive compounds, pathways of secondary metabolites and their genetic control mechanisms, and other features that are fundamental to our understanding of the species. This is true most other feral species. Obviously, translation of this knowledge into application will take considerable inputs of time and talent not to mention money," explained Dr Natesh further, "Commercialization is even more distant. Even the skillsets required for early and late stage research are very different! There should be no restriction whatsoever on carrying out basic, knowledge-generation research. I am not sure if there should be a separate governing mechanism for this purpose. Just exempting it from the "permit" and "approval" system is all that is required."

Evoking nationalism to preserve the biodiversity in this case as explained by experts, has to be broadly in interest of the nation and not just serve merely as a lock on an unexplored treasure for the sake of it. The consensus on realistic approach ensuring both conservation of biodiversity as well as safeguarding the interests of industry and farmers has to be arrived at through extensive deliberations. There is a no escape route for that!

### **Possible Remedies**

• Make NRI's and OCI's equivalent to Indian citizens for the purpose of the NBA.

• Make the definition of "Indian company" consistent with the generally accepted definition. i.e a company is Indian if it is more than 50 percent Indian owned.

• Make the approval process automatic for certain categories of biodiversity access ( e.g isolation and screening of microorganisms) where there is no danger to the conservation of biological diversity since the act of isolation and screening only enhances the knowledge of the biodiversity present and preserves it.

• Exempt new knowledge generation (research and IP filing) from the approval process. New knowledge adds to the pool

of traditional knowledge and is a beneficial activity and should be encouraged and not regulated.

â€¢ As far as approvals for commercialization are concerned - If the Indian economy is benefitted in the commercialization of a process based on biodiversity access, then it should be considered as fair and equitable benefit sharing under the NBA (e.g. tax revenues, export earnings, employment generation all benefit the Indian economy).

Basic research in areas like Taxonomy, which only generates knowledge and not profits, in a different perspective and be excluded from the ambit of the Biodiversity act. I suggest the following amendment to the section 5 of the Biodiversity Act to make this effect, said Dr Rajan.

â€¢ 5. (1) The provisions of sections 3 and 4 shall not apply to basic research on biodiversity and collaborative research projects involving transfer or exchange of biological resources or information relating thereto between institutions, including Government sponsored institutions of India, and such institutions in other countries, if such collaborative research projects satisfy the conditions specified in sub-section (3).