

## Bioresource and biotechnology policy for the Asian region: Recommendations from an international seminar

Gene Campaign, a non-governmental organization closely involved with the issues of biological resources, intellectual property rights, farmers' rights and community rights, organized a seminar on Bioresource and Biotechnology Policy for the Asian Region in New Delhi on 10 and 11 May 1997. The two-day meeting brought together experts and policy makers from India, Bangladesh, Nepal, Sri Lanka, Malaysia, and the Philippines who identified components of a common agenda for the Asian region.

At the seminar, the participants recognized that most of the world's biological resources are located in the developing countries and it is their communities that have protected these resources over generations. These countries have a major stake in how the bioresource base of the world is used and how benefits of this use are shared. These biodiversity-rich countries should formulate definite views on the rights of communities so that justice is done to the custodians of the world's bioresources. It is equally important that these countries reflect carefully about what kind of Intellectual Property Rights (IPR) regimes they accept.

The South and South East Asian region is gene-rich and has three major centres of diversity of important crops including cereals, pulses, oilseeds, vegetables, fruits and flowers. This region has contributed in a very significant way to the germplasm pool of the International Agricultural Centres and the countries of the North. Agriculture, which is the mainstay of the economy and the livelihood base of this region, is supported by research and development through public funding. Conversely, in the countries of the North, where people working on farms does not exceed 5% of the population, the private sector plays the most crucial role in agriculture. Therefore what is useful and acceptable in the North, may not be good for the South.

For the countries of the Asian region where agriculture is the backbone of the economy and where bioresources still form the socio-economic foundation of

tribal and rural communities, retaining control over these resources is a compulsion of survival. As the foundation material of biotechnology, one of the world's most dominant technologies, bioresources can become the vehicle for self-reliant growth for the countries in our region.

Biotechnology has emerged as a powerful tool for enhanced and improved productivity in various areas such as food, medicine and industrial products. Crops with better nutritional quality, increased resistance to biotic and abiotic stress, as also improved capacity for post-harvest processing, can be produced through biotechnology. Given its crucial role, biotechnology should become an integral part of bioresource development. This technology should be taken to the village to increase food and agricultural production, conserve genetic diversity, and enhance rural incomes. Genetic resources recognize natural, not political boundaries, so similar biological resources are found in more than one country. Therefore, it is of utmost importance that the countries of the region work together to formulate a regional policy. This is needed to strengthen their position as a gene-rich centre and derive the maximum possible benefits from their biological wealth, as also to ensure that no one country is able to undermine the larger interests of the region.

The IPR regime on bioresources which is being demanded by the North is not desirable for the countries of the Asian region. They should devise IPR regimes appropriate for their particular situation.

The recommendations of the seminar were as follows:

- IPR awareness and patent literacy must be improved at all levels.
- The region should move quickly to enact legislation pertaining to the Convention on Biological Diversity (CBD) to protect its bioresource and indigenous knowledge base. GATT-derived legislation on IPRs must be made subservient to the CBD.
- A comprehensive, mutually accessible database should be built up by accessing data from diverse sources. Appropriate steps must be taken to prepare computerized and easily accessible inventories based on reliable data in various areas. Technical jargon should be converted to easily comprehensible information in regional languages. This information should be made widely available to enable participatory decision making in this important area.
- In the laws of the countries of the region, oral documentation should be treated on par with coded documentation for all purposes. This should be admissible as evidence of knowledge existing in the public domain and constitute grounds for challenging unauthorized use. Austrian law has already established a working precedence in this regard.
- Capacity building should be a priority exercise with easy transfer of technology, exchange of materials, experiences and skills specially in fields like conservation. There should be exchange of expertise in taxonomy and the different ways countries manage and utilize their biological resources. A state-of-the-art institute in the area of biological taxonomy should be set up by a multi-nation consortium in the Asian region. The region should identify priority technologies for itself and either acquire or develop them jointly. Certain facilities such as the DNA fingerprinting facilities for animals and plants in Hyderabad and Delhi, should be open to all the countries of the Asian region at the same cost and with the same conditions as would be valid for the host country itself.
- The countries of the region should have an exchange programme of resource people with special skills in various areas, specially Intellectual Property Rights, Farmers and Community Rights and Benefit-sharing mechanisms.

The region should set up a common forum to challenge infringements and violations pertaining to use of biological resources and indigenous knowledge.

The region should have a mechanism like an Inter-Regional Standing Committee for early warning, containment and emergency responses to accidents like unintended release of genetically modified organisms (GMO).

The region should have a common position in international negotiations and intervene strongly in follow-up negotiations.

The indigenous technology of the area should be collected and ownership established over this and over the resource itself. Patenting and extensive use of traditional practices must be prohibited unless there is adequate compensation to the community.

Countries should exercise control over export of their biological resources on the same stringent level as export controls over 'dual-use' technology for national security and foreign policy reasons.

The voluntary sector must be strengthened.

Constitutionally-guaranteed rights over resources should be given to all communities that have been living for, say a hundred years, in forest

and other reserved areas, sanctuaries and national parks. The management of these areas must involve these communities in a way that they have a major voice in the management of the area.

- Every organization - governmental or non-governmental, funded wholly or partially by public money, must be transparent and accountable for its statements and actions, and must be taken to task if any information that it presents is shown to be substantially wrong.
- Patent laws should be revised, where necessary, to prohibit the patenting of any living form (micro-organism, plant or animal) or of any product made directly by or from the living form. This provision would thus prohibit the patenting of any genetically engineered life-form, or a product such as azadirachtin derived from neem.
- Asian countries including India should design their own *sui generis* systems for protection of plant varieties, farmers' rights and breeders' rights. Their system should reflect the strengths and compulsions of gene-rich developing countries.
- Appropriate steps should be taken, both by the government and NGOs to make the people of the Asian region aware of their bioresources and of biotechnology; of the legal, so-

cial, moral, ethical, political and economic implications of modern biotechnology and of the role that biotechnology can play today in both conservation of bioresources and their utilization for development. An appropriate policy in regard of the above-mentioned use of biotechnology must be evolved and reviewed continuously in real time.

- As a rule, no foreign aid should be accepted for work in sensitive areas that relate to biodiversity and/or conservation unless it is ensured with full transparency that the aid being given has no conditions attached that would not be in national interest. This would obviously not apply to genuine bilateral or multilateral collaboration that permits free use and publication of the results of the research.
- Asian countries must come out with a viable and sensible science policy, technology policy and agricultural policy.
- Political organizations such as parliamentary scientific committees should play an important role in the evolution of the above-mentioned policies, by providing an interface between professional scientists and parliamentarians.

---

Suman Sahai, Gene Campaign, C-130, Raju Park, New Delhi 110 062, India.

---

## Biosafety concerns in biotechnology\*

The Convention of Biological Diversity (CBD), which has now been ratified by over 170 countries, contains several provisions related to biosafety and safe handling of biotechnology products. The question of developing an agreed international protocol for biosafety is being considered at meetings of an open-ended ad hoc working group of the

conference of parties to the CBD. It is hoped that an agreed biosafety protocol will emerge at the next conference of parties scheduled to be held in 1998. Such a development will enable all countries, particularly developing ones, to derive benefit from the striking progress made during recent decades in mobilizing the tools of molecular biology and biotechnology for achieving the goals of food and health security.

There is understandable public concern about the safety, equity and ethical aspects of biotechnology. Although one could ask, 'how safe is safe?', it is essential that scientists undertake a thor-

ough action-reaction analysis, using a systems approach. Public concerns must be addressed and fears allayed. The emerging challenges in the field of agriculture can be met only through appropriate integration of frontier science and ecological prudence. The Asia-Pacific region with a vast population and a high degree of poverty needs, in particular, all that science and technology have to offer in alleviating hunger and deprivation. This calls for greater R&D investment in low external input, sustainable agriculture and aquaculture technologies rooted in the principles of ecology, economics, and social and gender equity.

---

Report of the Asia-Pacific workshop organized jointly by M. S. Swaminathan Research Foundation and Department of Biotechnology, Government of India with technical and financial support from Cornell University and USDA.