

Proceedings of the

National level consultation on "Agro-biodiversity hot-spots and Biodiversity heritage sites"

was held on

1-2 June 2007

at

North Eastern Hill University, Shillong, Meghalaya

Organized by

PPV&FRA, New Delhi

&

National Biodiversity Authority, Chennai

Following the discussion had a couple of months ago between the Chairperson PPV&FRA and the Chairman, National Biodiversity Authority (NBA), a National level consultation on "Agro-biodiversity hot-spots and Biodiversity heritage sites" was organized on 1-2nd June, 07 at the North Eastern Hill University, Shillong, Meghalaya. There was very positive response from the participants from the ICAR institutes, SAU's, traditional universities, CSIR institutions, private seed companies and NGO's. The lay out of the various discussions is appended (Appendix -I).

After a very brief welcome by Prof. S.K. Barik, Prof., Department of Botany, NEHU, three presentations were given outlining the importance of biodiversity by Prof. P. Tandon, Vice Chancellor, NEHU, on access to Benefit Sharing by Prof. S. Kannaiyan, Chairman, NBA and details regarding the Gene Fund by Dr. S. Nagarajan, Chairperson, PPV&FRA.

The following were the major points that came out during the course of discussion:-

- The Western Ghats, North Eastern India and Himalaya are amongst the most important bio-diversity rich area in the country.
- Expansion of agriculture, demand for industrial space and the pressure for raw material for the industry is affecting the biodiversity rich areas. Therefore, there is concern that this process may lead to the extinction of species which would result in loss of genetic forms.

- It was felt necessary to integrate indigenous, community knowledge system, to biodiversity and to the main stream system.
- Gene escape from transgenic in the biodiversity rich area is an issue that needs to be debated and understood.
- Greater alertness is required against bio piracy and the threat to agro biodiversity. The SAU can be considered as genetic enhancement centers and therefore, SAUs should take further steps in documenting their agro biodiversity and register the Farmers' Variety.
- The procedure to acquire plant material and traditional knowledge should be through a written permission. There are several models or approaches available for access to benefit sharing and the Authority may establish a dialogue to examine and formulate a unified approach to benefit sharing.
- It was also felt that the two Authorities should together organize sensitization debates on the issue of access to benefit sharing. It was pointed out that NBA, Chennai is taking the lead in organizing a meeting soon at Pondicherry along with the PPV&FRA, to address the issue of access to benefit sharing.

- There are more than 200 tribes and cultural diversity groups in the biodiversity rich parts of India. The biodiversity sustains their livelihood and the diversity there is primarily of multi crop/multi plant diversity in nature and therefore should be treated as a holistic system.
- There may be similar areas of agro biodiversity in the tribal belt where instead of a single species of plant, several species may occur together. They carry enormous traditional knowledge on how to sustain the system, hence there is a need to involve these tribal communities in a discussion.
- It was widely agreed that agro biodiversity hot spots do exist. It was also pointed out whether the biodiversity dense areas such as the community forest (Devta land) would accommodate the agro biodiversity hot spots within it, if they occur together. By doing so it would be possible to maintain the species diversity and recognize and reward the tribal community and woman through the Gene Fund.
- Village is considered as an integrated system of management and a representative unit. Therefore, many of the Farmers' Variety and agro biodiversity hot spots are likely to be under the preview/ownership of the village governance systems.

- It was also pointed out that Dr. M.P. Nayar, Ex-Director, Botanical Survey of India has delineated 20 bio-diversity spots as has been suggested by the PPV&FRA.
- Identification of the agro biodiversity hot spots should be not only based on species diversity but it may accommodate more than one economically important species that is relevant to the area. It may even cover the exotic and introduced plants out of which farmers in the last few century have picked up enormous variation as in the case of cashew, pearl millet etc.
- The agro biodiversity hot spots may include areas of diversity where wild species are rich. In tribal areas, where cropping system diversity is a way of substance, should not be left out of focus.
- It was felt necessary that a working group is constituted to further elaborate or advise on matters related to agro biodiversity hot spots, keeping in view the contents of the PPV&FR Act, 2001 and the Rules thereunder.
- It was felt that there is an underlying unifying factor on the issue of agro biodiversity and the minor variations listed above can be accommodated by drafting a frame work to accommodate various aspects.

- From the presentations made by the participants representing different parts of the country, it was evident that there may be more than one agro biodiversity hot spot for a given crop.
- It was pointed out that the proposed agro biodiversity hot spots area are quite large in terms of sq kms. Within these spots smaller patches where agro biodiversity is dense and diverse can be identified. In these spots and patches SAU's can document the distribution pattern of various species, the magnitude of the diversity and the site where this frequency is very high. This can be done by joining hand with the state level biodiversity programs and by interacting with the NBA. A mechanism should be developed with clear procedures and transparency for identifying communities particularly tribal and women who have contributed for the conservation of plant species in the agro biodiversity hotspots.
- Since almost a large number of plants are categorized as medicinal plants without any supportive evidence or back up through traditional knowledge, identification of the hot spots for the numerous medicinal plants is a tricky issue. It was also felt that there is a very narrow gene pool of medicinal plants and on a priority basis they should be documented and catalogued.

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The National level consultation that was held for two days was effectively summed up in the concluding session by Prof. S. Kannaiyan, Chairman, National Biodiversity Authority, Chennai is given as below:

- Awareness creation at various level to be organized on the importance of genetic resources. The genetic resources activities required a multidisciplinary approach by including management, law, policy, IPR etc. Awareness creation on 'Biological diversity act and PPV&FRA needs greater attention: at various level: BD act is translated into Hindi, Malayalam, Tamil, Bengali, Marathi.
- Agrobiodiversity as well as tradition knowledge both formal and informal should be documented. It is important to establish Information System on Agrobiodiversity Documentation of the species, wild relatives, to local cultivars, land races and folk varieties to be taken up systematically. In this connection it is also important to use the available data in usable form by developing suitable methodology and database programme.
- *In situ* on farm conservation of Traditional cultivars and landraces could be promoted as priority areas.
- Farmers should be educated through KVKs on *in situ* on farm conservation of crop genetic diversity. KVKs can play a key role by forming farmers group association or Cooperatives for registration of farmers varieties.
- It is important to identify, locate and document and assess any threat to species, ecotypes, cultivars and population relevant to

Agrobiodiversity. This could also be focused more on the species that have originated in India as well as exotic introduced species over years.

- National Network approach by establishing linkages between Research Institutions and Universities on Agrobiodiversity and this Network platform can promote exchange of materials, Information sharing, technology transfer and sharing responsibilities on genetic resources activities. This would also provide for developing policy issue and also setting priorities and also to get the regional views.
- Agrobiodiversity Hotspots - identification - Dr. S. Nagarajan has given background information and suggested - 20 hotspots areas. But an expert group can work on this in detail and improve upon the suggested Agrobiodiversity hot spots.
- Erosion of genetic resources can occur in *ex situ* collection at farmers fields and in nature. Therefore, it will be appropriate to identify causes of genetic erosion. Communities participation/stakeholders meeting and participatory mode of conservation of Agrobiodiversity will be a practical solution to conserve local varieties and land races.
- IPR and Benefit sharing issues on Agrobiodiversity are to be addressed.
- It is important address on crop genetic resources and land races particularly on
 - Conservation
 - Sustainable use
 - Fair and equitable sharing of benefits

Action Points:

The two day round table discussion held at NEHU, Shillong, the following points are appended.

1 It was generally agreed that there is 'Agro biodiversity hot spots' and that has to be properly delineated by taking into account ecology and agriculture in a holistic manner.

Details can be worked out on the number of such spots in the country and the species or system that these spots cover. A mechanism to keep track of the health of these agro biodiversity hot spots for posterity should be framed.

2 There is a necessity to recognize and reward communities who are keepers of the agro biodiversity hot spots.

3 These keepers are reap low yield and for reasons of livelihood sustainability maintain these diverse plant population. It is from this diverse population useful genes are extracted or isolated for usage in plant breeding program for the development of new varieties of plants.

4 In the context of global weather change and the various uncertainties that face our futuristic agriculture it was felt necessary to institutionalize

the recognition and reward mechanism so that communities are encouraged to be in close vicinity of diversity and protect various plant species that are useful for agricultural progress.

5 It was also felt that reward should be a substantial amount, which the community can meaningfully use to conserve biodiversity. Such an award will stimulate others and a spontaneous national movement for conserving agro biodiversity will get initiated.

*Approved by the Chairperson, PPV&FRA, New Delhi & the Chairman,
National Biodiversity Authority, Chennai*