Lessons for access and benefit sharing from community seed banks in India

Photo: GREEN Foundation

The TheruBeedi Seed Bank and Producer Group facilitate informal benefit sharing mechanisms that can be very effective in protecting biodiversity and encouraging farmers to contribute to the genetic pool. The approaches include offering farmers incentives to cultivate traditional or rare varieties, providing assistance in the marketing of their products, and encouraging them to use traditional techniques associated with indigenous crops. The Seed Bank and Producer Group may be considered as a viable alternative to the emerging Indian ABS regime. Importantly, they may be more effective in protecting biodiversity and encouraging farmers to contribute to the genetic pool.

Vanaja Ramprasad and Amelia Clements

The TheruBeedi Community Seed Bank lies off the main road in a village in the hills of the state of Karnataka, India. Its outer walls are adorned with images of women harvesting crops, tending livestock, and collecting seeds. Inside, the brilliant blue walls are lined with tin storage bins and posters explaining organic farming practices in Uttara Kannada, a Karnataka district. Behind a locked door are most of the seed bank's wealth of finger millets and other millets and vegetable seeds, each in a carefully labelled container.

The work being done at TheruBeedi is a collaborative effort between local women farmers and the GREEN Foundation, an organisation that empowers small scale and marginalised farmers. Even though the seed bank is located in a seemingly remote village, its work is strongly connected to and relevant in the

international debate on farmer access to genetic resources. It responds to the facts that across the globe, plant and animal species face extinction and endangerment, longstanding ecosystems have become unstable, and traditional knowledge is fast disappearing.

The TheruBeedi Seed Bank

The TheruBeedi Seed Bank facilitates farmer access to genetic resources and shares the benefits that result from their use amongst community members. Local women and the GREEN Foundation collect, store, and cultivate the seeds of traditional crop varieties in order to safeguard regional biodiversity.

The genetic resources at TheruBeedi are part of a larger network of seven seed banks started by the GREEN Foundation in villages throughout Kanakapurataluk in the Ramanagara district. The efforts to store traditional and regional specific seed varieties are motivated by the principle that farmers, as stewards and developers of the world's crop genetic resources, are entitled to access the benefits that arise out of the use of those genetic resources.

Fox tail millet is a key crop at the Therubeedi Seed Bank. Photo: GREEN Foundation

Although the TheruBeedi Seed Bank was established more than a decade ago, it has been within the last two years that the current team of ten local women farmers was appointed to oversee operations. They make up the TheruBeedi producer group and are responsible for managing the seed bank's collection of seeds, cultivating certain varieties of rare and traditional crops, encouraging local farmers to produce seeds for buybacks, collecting and processing new seeds, and packaging seeds for sale.

GREEN Foundation project managers assist the producer group with marketing and distributing these seeds in surrounding villages. The proceeds from these seed sales provide economic benefits to the women who facilitate widespread community access to the genetic resources at the TheruBeedi Seed Bank.

The seed bank only collects seeds that have been cultivated using organic practices. This model emphasises *in situ* conservation in addition to *ex situ* seed storage, allowing further genetic diversity to develop. Involving local farmers in the seed production process also offers an additional source of income to those who use organic practices, particularly for the women involved in managing the community seed bank.

This initiative is motivated by the belief that the future of food security depends not just on the genetic resources that are stored away in international seed banks, but on the skills and knowledge of the farmers who maintain genetic diversity on a daily basis. The ambition of the TheruBeedi Seed Bank is to expand the number of producer groups and federate them into one company. Currently, there are three other seed banks which are joining hands in procuring seeds and making these available to urban gardeners.

Access and benefit sharing protocols

Recently, national governments have been faced with the challenge of developing standardised protocols for access and benefit sharing (ABS) to determine who has access to genetic resources and under what terms. In these negotiations, much is at stake for family farmers. Faced with wealthy multinational seed corporations, intellectual property right battles, pressures from urban food markets, and the growing trend toward monocroppings sugarcane, maize and tobacco, the crop diversity of many rural farmers has dwindled. These forces are putting traditional farming practices at risk, affecting the supply of food and eroding community cultures, diets and self-determination.

Considering these developments, the TheruBeedi Seed Bank is an example of resistance to rural disempowerment through informal and community based access and benefit sharing mechanisms. At the same time the initiative illuminates the complexities that are inherent in the implementation of national and

Women observing their finger millet plants.
Photo: GREEN Foundation

global benefit sharing regime. Community seed banks provide an opportunity for seed security, which is the basis of food security. In the words of Dr Regessa Fyissa from Ethiopia: *"A community seed bank iis a system in the process of community agriculture. Through this system farmers have played a key role in the creation, maintenance and promotion of crop genetic diversity. With the help of traditional skills, they have been selecting crop varieties to meet their specific needs such as quality, resistance to pests and pathogens, adaptation to soils, water and climates. Under this system local farmers have established their own seed networks to facilitate seed supply to their families and local markets. Community seed banks therefore are one of the major strategies for maintaining genetic diversity in crop/plant species."*

India's Protection of Plant Varieties and Farmers' Rights Act

As of 2014, India is party to the Convention on Biological Diversity, the Nagoya Protocol, and the Plant Treaty, and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). The stakes are particularly high in India, as more than half of the nation's work force is employed in the agriculture sector. There remains an urgent need to integrate and harmonise the various pieces of legislation related to the use of crop genetic diversity and ABS mechanisms. The 2001 Protection of Plant Varieties and Farmers' Rights Act (PPVFR) is a part of the Indian legislation that protects breeders' plant varieties under TRIPS and provides for farmers' rights as outlined in the Plant Treaty.

Under the Article 39 of the PPVFR, farmers are guaranteed the right to save, use, exchange or sell seed as long as it is not a protected variety in a branded package. In addition, farmers who breed or develop new varieties are entitled to the same intellectual property rights as breeders, as long as their varieties meet the criteria for registration. Registration qualifications include variety novelty, distinctiveness, uniformity, and stability (DUS criteria). Some regard India's PPVFR as a model for other countries seeking to reconcile breeders' rights with farmers' rights in their national legislation.

Challenges posed by the new legislation

Unfortunately, the implementation of PPVFR has not yet struck the balance between breeders and farmers. Though most scientists and corporate plant breeders have knowledge of the rights that are afforded to them by the PPVFR, rural farmers are disproportionately unaware of the institutional rules and structures that govern the crop varieties they are allowed to cultivate. The bureaucratic and complex procedure of crop variety registration is simply impractical for farmers who are illiterate, do not have access to the internet, or are without means of travelling to the appropriate government offices. Only a few NGOs are making an effort to facilitate this process. As a consequence, the official benefit sharing regimes are completely inaccessible for a number of farmers.

This is not only a result of the crop variety registration procedures, but also because of the DUS criteria. The variety registration requirements outlined by the PPVFR run counter to the goal of increasing and preserving crop diversity. Even if all rural farmers had the capacity to register their unique varieties, few would meet the criteria of distinctness, uniformity, and stability. Landraces are valued for their ability to adapt to changing environmental conditions and are rarely

Displayed seeds at the TheruBeedi Seed Bank.
Photo: GREEN Foundation

A mix of traditional seeds. Photo: GREEN Foundation

genetically homogenous. In addition to maintaining biodiversity, naturally occurring differences between plants add a measure of livelihood protection should one crop fail. Furthermore, communities that span villages, states, and even countries with similar agro-ecological conditions often develop farmers' varieties collectively.

In these cases, affording intellectual property rights to one farmer over another would misconstrue the process by which the variety in question came to exist. When put into practice, the imposition of a standardised model for variety registration and benefit sharing is detrimental to the continued development of biodiversity.

Frustrating farmers' rights

ABS and intellectual property rights regulation began to frustrate farmers' rights when India passed the 2003 Biological Diversity Act (BDA) in accordance with the objectives of the Convention on Biological Diversity. The BDA established a National Biodiversity Authority to regulate access and use of genetic resources. Also under the BDA, state level Biodiversity Management Committees are responsible for implementing benefit sharing practices. Then, in order to meet the standards of the Nagoya Protocol, the National Biodiversity Authority issued the Guidelines on Access to Biological Resources and Associated Knowledge and Benefit Sharing Regulations in 2014, defining how benefit sharing is to be carried out between interested parties.

In sum, all of the actions that have been taken in the last decade to regulate access to genetic resources and benefit sharing amount to a complex web of legal texts and government bureaucracy impenetrable for most rural farmers and their advocates.

Lessons from TheruBeedi

As part of the movement to preserve genetic resources, the TheruBeedi Seed Bank has benefited rural livelihoods while simultaneously showing other communities that seed is an important component of farming practice and can be produced from their own resources.

What lessons for the future management and development of seed can we draw from this experience? The TheruBeedi Seed Bank and Producer Group show that informal benefit sharing structures present an effective alternative framework to government regulated PPVFR and ABS institutions. A seed bank can be extremely effective in protecting biodiversity and encouraging farmers to contribute to the genetic pool.

The key elements that contributed to its success include offering farmers incentives to cultivate traditional or rare varieties, providing assistance in the marketing of their products, and encouraging them to use the traditional techniques associated with indigenous crops. To make access and benefit sharing relevant to the situation of small farmers and farmer's varieties, it is necessary to ensure community ownership and protect farmer's rights over the genetic diversity within the seed banks. There should also be a way of recognising women's rights to knowledge of plant genetic resources within the new systems that patent, privatise or compensate knowledge and genetic resources.

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