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Rural Women's Intellectual Property Protections

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I. Introduction

Women are an integral part of the agriculture world. They are farmers, seed managers and custodians of traditional knowledge. Their roles and responsibilities help ensure rural food security and maintenance of agricultural biodiversity. In the developing world, rural women's informal exchange of knowledge and seed sharing is central to their farming practices. The World Trade Organization's (WTO) Trade-Related Aspects of Intellectual Property Rights (TRIPS) and other bilateral and regional trade agreements can pose a threat to these practices by introducing monopolistic and exclusive rights regimes covering plants, plant varieties, and seeds.¹ Expansive intellectual property rights with limited safeguards for plant varieties and genetic resources can potentially negatively affect rural women's reproductive health, agriculture, food security and traditional knowledge in health care and medicines violating the Convention on the Elimination of All Forms of Discrimination Against Woman (CEDAW).² Creating gender specific safeguards with in CEDAW and other treaties with respect to intellectual property rights will result in a greater security for rural women and ensure rural women's human rights.

II. Intellectual Property Rights

States and United Nations treaty bodies have recognized the detrimental impact TRIPS can have on rural women's human rights.³ Rural women routinely save and share seeds as a way of ensuring sustainability, resilience, and biodiversity, and reducing input costs. Several trade

¹ U.N. Commission on the Status of Women, Report of the Expert Group Meeting on CSW 62 Priority Theme: Challenges and Opportunities in Achieving Gender Equality and the Empowerment of Rural Women and Girls, 20-22 September 2017, at 4.3, EGM/RWG/Report.

² Convention on the Elimination of All Forms of Discrimination against Women, *adopted* Dec. 18, 1979, 1249 U.N.T.S. 13.

³ *Ibid.*

agreements include intellectual property protections that go beyond the requirements of the WTO's agreement on TRIPS. Recent agreements, like the Trans Pacific Partnership Agreement (TPP), require that States parties sign UPOV 91, a convention for the protection of new plant varieties.⁴ This convention establishes "plant breeder rights," which can result in monopoly rights over "the sale, reproduction, import, and export of new varieties of plants" effectively preventing farmers from selling or exchanging seeds or selling produce harvested from saved seeds.⁵ This can have a detrimental effect on rural women farmers, especially in the global south where eighty percent of their total seed supply is produced on farms.⁶

UPOV 91 allows agricultural food companies to utilize the plant breeder rights restrictions and patent protections.⁷ While an exemption does exist for small landholders who grow subsistence crops, the exemption only applies to those who can prove land holdings, and unfortunately, the majority of rural women farmers do not have these secure land holdings.⁸ Further, intellectual property rights have been awarded to large-scale multi-nationals for traditional plants and medicines that have been used by rural and indigenous women for generations, but which foreign corporations or researchers have claimed to have "discovered."⁹ With rural women farmers reliant on seed saving and exchange and are less likely to enjoy secure land holdings, the convention could be seen to be discriminatory and violate CEDAW.

⁴ The International Union for the Protection of New Varieties of Plants. See: <http://www.upov.int/portal/index.html.en>.

⁵ Ibid.

⁶ Jeroen van Wijk, (2004), "Terminating Piracy or Legitimate Seed Saving? The Use of Copy-Protection Technology in Seeds, Technology Analysis & Strategic Management," 16:1, pg. 121-141, 121.

⁷ U.N. CSW, Report of the Expert Group, Sept. 2017, at 4.3.

⁸ Ibid.

⁹ Ibid.

III. Case Studies

A. India

The rights of rural women holding traditional knowledge of seeds, plants, and medicines are increasingly violated by unfair patents and intellectual property rights through Free Trade Agreements. Indigenous communities in rural areas rely heavily on healthy ecosystems for their survival so protecting and conserving biodiversity is integral to their human rights. Seed saving alone can save farmers about thirty to forty percent of seed costs.¹⁰ Below are case studies from countries in different regions of the world, which highlight the impact trade agreements can have on rural women's sustenance and survival.

1. Background

The country of India is a largely agrarian economy with over seventy-percent of its population deriving their livelihoods from agriculture.¹¹ In India, especially in the dryland Deccan Plateau, women farmers play a major role in agricultural work being the primary managers of agricultural biodiversity, and custodians and users of traditional knowledge.¹² Yet, women farmers lack secure access to productive resources, and their contributions to agriculture and biodiversity management often go unnoticed.¹³ Women engage in sowing, weeding, harvesting, threshing and storing the grain after harvest.¹⁴ Their contributions are essential to these post-harvest tasks but tend to get labelled as "domestic" rather than agricultural work, which leads to frequent underestimation of women's knowledge in agriculture and seed

¹⁰ van Wijk, "Terminating Piracy," at 121.

¹¹ Ibid at 49.

¹² Swaminathan, M.S. (1998). Gender Dimensions in Biodiversity Management. New Delhi: Konark Publishers.

¹³ Ruiz, "Intellectual Property," at 53.

¹⁴ Ibid.

management.¹⁵ Rural women contribute fifty-five to sixty-six percent of overall farm production, however, many statistics undervalue rural women's contributions to rural livelihood systems.¹⁶

The traditional cropping pattern of the Deccan Plateau is highly diversified, featuring a wide array of dryland cereals, pulses and oilseeds.¹⁷ There is a clear differentiation between *paisa pantalu*, "cash crops", largely pursued by men, and *chillar pantalu*, "small change crops," that women farmers insist on growing in order to meet household's food security.¹⁸ If and when intellectual property rights regimes obtain patents on these small change crops, this may have a detrimental effect on women farmers in the Deccan Plateau.

2. Seed Saving

Seed-saving has been recognized as a "long-standing global institution, probably as old as agriculture itself... which helps farmers maintain their independence, allows them to predict how well a crop will perform in the following season, allows them to participate in maintaining the crop, serves as insurance against inadequate supplies of seeds, helps to maintain food security and creates a viable market that ensures that seed prices remain affordable."¹⁹ In India, all skills and knowledge associated with seed-keeping practices rest with women.²⁰ However, industrial seeds interfere with this practice and modify gender relations around seed provisioning.²¹ A gendered research study on the local seed economy in the Deccan Plateau shows that saving seeds at the household level enables women farmers to achieve a number of things, such as: (1)

¹⁵ Oakley, E. and J. Momsen (2007). *Women and Seed Management: A study of two villages in Bangladesh*. Singapore Journal of Tropical Geography, Vol. 28, pg. 92.

¹⁶ Ruiz, "Intellectual Property," at 53.

¹⁷ *Ibid* at 57.

¹⁸ *Ibid*.

¹⁹ Mascarenhas, M., and L. Busch (2006). *Seeds of Change: Intellectual Property Rights, Genetically Modified Soybeans and Seed Saving in the United States*. *Sociologia Ruralis*, Vol. 46, No. 2, pg. 122-137.

²⁰ Ruiz, "Intellectual Property," at 60.

²¹ *Ibid*.

building up their seed capital; (2) lending seed to other farmers; (3) keeping out of dependency on market and moneylenders; and (4) securing household-level bargaining power.²²

In addition to saving seeds at the household level, women farmers also engage in local seed exchanges. When there is a seed shortage for a given crop, farmers usually turn to other farmers for seeds. In the Deccan Plateau, seed loans come with an interest, which allows farmers to “build up seed capital,” which is about saving enough seeds from a harvest in order to be in a position to lend seeds to others.²³ In fact, seed loans are part of small and landless farmers’ strategies to increase their access to grains. Poor, female-headed households have been found to be especially active in the non-monetary seed trade taking place in communities. They turn some of the grain they earn as daily wage into seed, provide small seed loans, and receive double the amount in return.

3. Industrial Seeds

In most Asian countries, the Green Revolution, a large increase in crop production in developing countries achieved by the use of fertilizers, pesticides, and high-yield crop varieties, heralded the entry of industrial seeds into farming.²⁴ High yielding crop varieties of rice and wheat ended up displacing local varieties and resulting in biodiversity loss and ecological pollution.²⁵ The next products of the seed industry were hybrid and transgenic seeds triggering a new barrier for rural women farmers, the obstacle of not being able to save and reuse seeds.²⁶ The traditional modes of seed exchange have disappeared, and the seed has become a monetarized commodity, even within the community. Thus, not only have rural women lost their

²² Pionetti, C. (2005). *Sowing Autonomy. Gender and Seed Politics in Semi-Arid India*. London: IIED.

²³ Ruiz, “Intellectual Property,” at 62.

²⁴ “Green revolution,” <http://www.dictionary.com/browse/green-revolution?s=t>.

²⁵ Ruiz, “Intellectual Property,” at 62.

²⁶ IAASTD (2008). *International Assessment of Agricultural Knowledge, Science and Technology, International Assessment of Agricultural Science and Technology for Development*, Island Press, Washington, D.C.

skills and knowledge, but the localized seed system has disappeared with the advent of commercial, market-centered agriculture.

These commercial corps have also had many other negative impacts on rural women farmers. The shift to commercial agriculture can result in declining nutritional standards at the local level as nutritious traditional crops are replaced by non-food items, food items of lesser nutritional value, or food items that, while quite nutritious, are sold rather than consumed.²⁷ Also, improved varieties only perform well under artificial conditions, with high levels of chemical inputs. The replacement of organic manure with chemical fertilizers has been increasing indebtedness and jeopardizing long-term soil fertility.²⁸

4. Food Sovereignty

Food sovereignty implies “citizen participation and more direct forms of democracy in the governance of food systems.”²⁹ It hinges on the active engagement of citizens, and especially women, in local organizations that promote democratized, ecologically sound and farmer-centered innovations systems in food and agriculture. Food sovereignty also implies the implementation of radical agrarian reform and gender-equitable redistribution of right of access to and use over resources, including land, water, forests, seeds and means of production. Reducing the impact of intellectual property rights and related developments on women’s roles in agriculture entails protecting small rural women farmers from the economic, ecological and social costs associated with commercial crops and hybrid or transgenic seeds.

²⁷ de Walt, K. (1993). Nutrition and the Commercialization of Agriculture: ten years later. *Social Science and Medicine*, 36, pg. 1407-1416.

²⁸ Reddy, S. (2009). *Organic Farming: Status, Issues and Prospects – A Review*, RULNR-CESS Working Paper Series No 2 (July), Hyderabad, India.

²⁹ Pimbert, M., Thompson, J., Vorley, W. T. et al. (2001). *Global restructuring, agri-food systems and livelihoods* London: Gatekeeper Series 100, IIED.

B. Peru

1. Background

Located in Pisac, Cusco, Peru is Potato Park, a self-proclaimed Indigenous Biocultural Heritage Area. It covers 9,000 hectares of land and is inhabited by more than 6,000 individuals of six indigenous Andean farming communities (Sacaca, Cuyo Grande, Chawaytire, Pampallaqta, Paru Paru, Amaru).³⁰ Together, they formed the Potato Park Association in 2000³¹. Potato Park is recognized in national legislation as an Agrobiodiversity Zone, which makes sense since it is a center of genetic diversity with over 350 recognized cultivated and wild varieties of potatoes, plus a wide range of medicinal plants and other native roots.³²

The Potato Park Association has established a series of projects to strengthen their collective by repatriation of local varieties, registration of traditional local knowledge and biodiversity in a Local Register, creation of a Medicinal Plants Women Collective, as part of a network of communal pharmacies, and agro-ecotourism activities based on trekking and gastronomy tours.³³ Activities in the Park are organized based on “collectives” that are responsible for operations in the Park including local register, gastronomy, and natural products development.³⁴ The collectives are formed by women and men from all six indigenous communities of the Potato Park.³⁵

At the Potato Park, women play an important role in improving their local livelihoods and conserving their indigenous culture. Women farmers take on the responsibilities of agricultural

³⁰ Manuel Ruiz, Intellectual Property, Agrobiodiversity and Gender Considerations: Issues and Case Studies from the Andean and South Asian Regions, United Nations Development Programme, Poverty Reduction, at pg. 23, September 2010.

³¹ Ibid.

³² Ibid.

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

chores in the fields, leading communal businesses, specifically in medicinal plants and natural products, participating in seed fairs and selecting the best seeds for conservation, consumption and exchange.³⁶ The commercial marketplace is only a marginal component of Potato Park's development strategy since it is viewed by community members with caution and suspicion.³⁷ The Potato Park Association does not see community success through commercialization, but instead by enhancing livelihoods of its six communities through a subsistence model of agriculture, small scale tourism and sale of local medicinal plants, soaps, creams, and other products.³⁸

2. Intellectual Property Rights Implications

It is generally accepted that if small farming community, like Potato Park, start utilizing intellectual property (IP)-protected seeds, turning to foreign technological packages that alter their ancestral cultivation processes and practice, it will inevitably lead to a decrease and devalue of their customary practices and cultural values.³⁹ In particular, patents and plant breeder right protections over seeds could negatively affect women's activities by restricting or stopping altogether traditional exchange of seeds among women farmers and seed managers.⁴⁰ Exchange options would be reduced due to uniform settling in fields and would negatively affect the conservation of genetic diversity, a celebrated trait of Potato Park.⁴¹

This would also limit women farmer's opportunities to earn extra cash from selling seeds even in farming communities like Potato Park where commercialization still remains minimal.⁴²

This can also erode traditional knowledge of women farmers who would start detaching

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid at 24.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

themselves from traditional ways and practices to dedicate more time to non-agricultural activities to raise cash, which mean less time on the farm, with children, collaborating with their husbands in agricultural chores, and for traditional cultural activities and ceremonies.⁴³ These minor changes in cultivation and daily living habits, may have profound impacts on the culture and livelihoods of indigenous farming families and most specifically on women.

a. Biopiracy

Biopiracy is the misappropriation of knowledge, resources and heritage of biodiversity-rich countries and their indigenous communities, including traditional women farmers.⁴⁴ When genetic resources and traditional knowledge are appropriated through bioprospecting projects, products from the research and development process are subject to patents or intellectual property rights.⁴⁵ However, the countries and communities from which resources and traditional knowledge are obtained rarely participate or equitably gain anything from the benefits generated by the patents. For example, women farmers are often interviewed by researchers who obtain specific information from them about the use of seeds or medicinal plants, the researches then use the traditional knowledge of these women farmers to establish their patents, but those women farmers do not receive any credit or compensation for the valuable information they shared.⁴⁶

Cases of biopiracy in the Peru have been well-documented over the years. Quinoa (*Chenopodium quinoa*), nuña (*Phaseolus vulgaris* var *ñuña*) and maca (*Lepidium meyenii*) are just a few examples of Andean grains and tubers grown for centuries by traditional farmers, but now each with dozens of patents claiming inventions derived from these crops by northern

⁴³ Ibid.

⁴⁴ Ibid at 26.

⁴⁵ Ibid.

⁴⁶ Ibid.

nations, such as, the United. States, Europe and Japan.⁴⁷ Women and Potato Park representatives have raised concern about biopiracy, speaking up in the media, through public statements and during national and regional workshops addressing biopiracy.⁴⁸ This increased after 2000, when a patent was granted to a U.S.-based company over a Peruvian nuña, an Andean bean cultivated for centuries by farmers in the region.⁴⁹ The Potato Park Association and a group of supporting institutions, internationally denounced the granting of this patent.

b. Repatriation

Repatriation is the returning of genetic resources and related held in ex situ conditions to countries of origin and their communities.⁵⁰ In 2005, the International Potato Centre (CIP) gave Potato Park a set of seeds of over 300 potato varieties that had all but disappeared from the Park mainly through ill-conceived extension programs in the 1970's, which had the effect of dramatically reducing genetic diversity and forced women to seek external foods, such as, noodles, rice and canned food.⁵¹ These 300 potato varieties are now growing in the Park and are used for food security and medicinal and religious purposes.⁵² The most important feature of this repatriation process has been the recognition of farming communities' rights over these varieties. However, these are not legal "property rights," but symbolic and provide evidence that these varieties are part of the cultural heritage of Potato Park communities.⁵³ Nonetheless, this type of evidence and the repatriation process in general would provide support for intellectual property protections on plants rural women farmers and indigenous communities depend to sustain their livelihoods.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ "Andean Groups Hopping Mad About Popping Bean Patent," <http://www.etcgroup.org/fr/node/275>.

⁵⁰ Ruiz, "Intellectual Property," at 29.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

c. Traditional Knowledge

Traditional knowledge, culture, and practices are important to women in Potato Park. However, the idea of privatizing or commoditization of biodiversity is foreign to them and thus so are intellectual property rights, which are viewed with suspicion. Nonetheless, they understand the importance of protecting against biopiracy and have created a local register to preserve all knowledge, innovations and practices of the Park.⁵⁴ Young women have been trained to use video to document practical applications of indigenous knowledge: in farming chores, curative activities, conservation efforts, development of natural products, and preparation of local palates and foods.⁵⁵ The register is seen by them as a tool to assist in protecting of indigenous peoples' traditional knowledge and resources.⁵⁶

In addition, the women of Potato Park have formed the Medicinal Plants Women's Collective (Sipaswarmi), which is a group of women specialists in the use of medicinal plants located in the Potato Park area.⁵⁷ The goal of the Collective is to conserve local medicinal plants and maintain traditional knowledge and culturally-sensitive therapeutic applications.⁵⁸ It is mainly women who are best-informed and traditionally have been trained by their mothers. As part of one of the Potato Park's project, the women in the Potato Park are entirely responsible for developing phytomedicines for local and regional consumption.⁵⁹ Products are presented and sold to visitors and in local and regional fairs.⁶⁰ Women in the Potato Park also created a network

⁵⁴ Ibid at 30.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid at 31.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

of Communal Pharmacies that provide medicinal products to cover basic health needs of the Potato Park communities.⁶¹

Lastly, Potato Park has a Gastronomy Collective, composed exclusively of women and has been responsible for a reemergence of local foods and cuisine. The shift to consuming noodles, rice, processed food and products introduced in the 1970's has been reversed and, presently, all local consumption of basic food is founded in native and local produce.⁶²

Traditional knowledge and practices as the ones mentioned above are vital to communities like Potato Park. Intellectual property rights by northern countries threaten the traditional knowledge of these communities putting barriers in place of community growth and food security and hinder their sustainability. Unlike patents by corporations, traditional knowledge is maintained and used for the good of the community and should be protected for future generations to use.

d. Consequences

Intellectual property rights have both direct and indirect implications on communities like Potato Park. The direct impact of patents and plant breeders' rights include perpetuate biopiracy and misappropriation of resources and traditional knowledge.⁶³ Indirect consequences of new IP-protected seeds and technologies displace traditional crops, erode traditional knowledge and alter customs, traditions and regular practices of women in the community.⁶⁴ If intellectual property policy and legal trends continue to move towards stronger intellectual property regimes, such as, UPOV 91 for plant varieties, the United Nation needs to step in to protect the traditions and culture of rural women farmers in small farming communities like Potato Park.

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid at 33.

⁶⁴ Ibid.

IV. Conclusion

Rural women farmers have a very important and critical role in contributing to conservation and sustainable use of agrobiodiversity, and in the maintenance and development of local communities and family livelihoods. Their informal exchange of knowledge and seed sharing help ensure rural food security. TRIPS and other trade agreements can pose a threat to these practices by creating monopolies and exclusive rights of plants and seeds. These trade agreements should not be exempt from human rights principles, and as international agreements they should take a positive role in relation to human rights. Rural women's own contribution to seed and plant preservation and use and development of traditional knowledge have been overlooked in the context of establishing intellectual property rights. All of this may constitute a breach of Convention on the Elimination of All Forms of Discrimination Against Women and other U.N. treaties.

V. Recommendations

Human Rights Advocates recommends the following to the U.N. Commission on the Status of Women:

- Add language to the agreed conclusions establishing protections for traditional knowledge of rural women;
- Adopt the Expert Group's recommendations on intellectual property rights addressed in section 4.3 of the U.N. Commission on the Status of Women's Report of the Expert Group Meeting regarding:
 - the detrimental effect plant patents have on the livelihoods of rural women; and

- the unacknowledged contributions rural women have had on seed and plant preservation and traditional knowledge development in the context of establishing intellectual property rights;
- Urge governments to comply with CEDAW's discrimination and exclusion provisions to help prevent the negative impacts of intellectual property rights have on rural women and ensure the enjoyment of human rights by rural;
- Urge State parties to the International Covenant on Economic, Social, and Cultural Rights (ICESCR) to hold their national and international intellectual property regimes accountable so rural women may have a full realization of all the Covenant rights; and
- Urge State parties follow the Universal Declaration on Human Rights by developing intellectual property systems to protect rural women's personal, collective, and traditional knowledge of seeds, plants and medicines.