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Protecting the Living Victims: Evaluating the Impact of India's Farmer Suicide Crisis on Its Rural Women

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PROTECTING THE LIVING VICTIMS:
EVALUATING THE IMPACT OF INDIA'S FARMER
SUICIDE CRISIS ON ITS RURAL WOMEN

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INTRODUCTION

Ninety-eight percent of the world's undernourished live in developing countries.¹ Of those, the 500 million smallholder farmers² in the developing world who account for 60 percent of global agriculture

1. See U.N. FOOD & AGRIC. ORG., THE STATE OF FOOD INSECURITY IN THE WORLD 2012: ECONOMIC GROWTH IS NECESSARY BUT NOT SUFFICIENT TO ACCELERATE REDUCTION OF HUNGER AND MALNUTRITION 8 (2012), available at <http://www.fao.org/docrep/016/i3027e/i3027e.pdf> [hereinafter UNFAO, STATE OF FOOD INSECURITY 2012] (stating that the "vast majority of [the 870 million people], 852 million, live in developing countries.").

2. The International Fund for Agricultural Development defines "smallholder farms" as those that operate less than two ha of agricultural land. INT'L FUND FOR AGRIC. DEV., CONFERENCE ON NEW DIRECTIONS FOR SMALLHOLDER AGRICULTURE: PROCEEDINGS OF THE CONFERENCE 1 n.2 (2011).

“make up the largest share.”³ The calculations of the Food and Agriculture Organization of the United Nations (UNFAO) indicate that a full half of the world’s hungry come from such communities. Yet, while the UNFAO’s most recent report speaks glowingly of smallholder farmers’ ability to participate effectively in poverty reduction,⁴ it speaks of the agrarian malnutrition crisis only in terms of its propensity to hamper rural labor productivity and economic growth.⁵

Hunger and poverty are not the only problems faced by smallholder farmers. Estimates suggest that since the mid-1990s, over a quarter of a million Indian farmers (particularly those in the dry, primarily cotton-producing areas of Central and North-Eastern India)⁶ have committed suicide in “the largest wave of recorded suicides in human history.”⁷ National Crime Records Bureau (NCRB) records from 2012 indicate that at least 13,754 people in the “self-employed (farming/agriculture)” sector killed themselves that year.⁸ Though this number seems small in the context of India’s population size, it is quite likely that these figures under-report the issue. The NCRB uses an extremely restricted definition of “farmer” for the purposes of its count;⁹ furthermore, it does not include in its figures the number of attempted rural suicides,¹⁰ which exacerbates the statistical

3. Elwyn Grainger-Jones, *Global Food Crisis: Smallholder Agriculture Can Be Good for the Poor and for the Planet*, GUARDIAN (June 1, 2011), <http://www.guardian.co.uk/global-development/poverty-matters/2011/jun/01/smallholder-agriculture-farming-good-poor-planet>. Of these smallholder farmers, women actually produce 60–80 percent of the food in the global south, and are actually responsible for a full half of global food production. U.N. FOOD & AGRIC. ORG., *Women and Sustainable Food Security*, <http://www.fao.org/sd/fsdirect/fbdirect/FSP001.htm> (last visited Jan. 10, 2014) [hereinafter UNFAO, *Women and Sustainable Food Security*].

4. UNFAO, STATE OF FOOD INSECURITY 2012, *supra* note 1, at 28.

5. *Id.* at 29.

6. See CENTER FOR HUMAN RIGHTS AND GLOBAL JUSTICE, EVERY THIRTY MINUTES: FARMER SUICIDES, HUMAN RIGHTS, AND THE AGRARIAN CRISIS IN INDIA 1 (2011), available at <http://www.chrgj.org/publications/docs/every30min.pdf> [hereinafter EVERY THIRTY MINUTES] (“Cotton exemplifies India’s general shift towards cash crop cultivation . . . the majority of suicides are committed by farmers in the cash crop sector.”); P. Sainath, *Farm Suicides: A Twelve Year Saga*, HINDU (Feb. 1, 2010), <http://www.thehindu.com/opinion/columns/sainath/article94324.ece>.

7. EVERY THIRTY MINUTES, *supra* note 6, at 1.

8. See MINISTRY OF HOME AFFAIRS, NAT’L CRIME RECORDS BUREAU, ACCIDENTAL DEATHS AND SUICIDES IN INDIA 2012 242 (2013) [hereinafter NCRB 2012 REPORT], available at <http://ncrb.gov.in/CD-ADSI-2012/ADSI2012.pdf>.

9. P. Sainath, *Debt Burden More on Women: P. Sainath*, HINDU (Mar. 1, 2011), <http://www.thehindu.com/news/cities/Chennai/article1498597.ece> (“[W]omen farmers . . . are not considered farmers because the land is not in their name . . . suicide by the elder son of a family who took over the land of his father, and his debts too, is not counted either, for the same reason . . . Dalits . . . who commit suicide are not part of the official statistics as most of them do not have clear titles to the land they farm on.”).

10. BITTER SEEDS (Teddy Bear Films 2011), 00:59:21 (“[T]he actual number of desperate farmers who attempt suicide is much higher [than reported]. Most are saved at rural hospitals.”).

difficulties involved with determining with any accuracy the true extent of the crisis.

The smallholder farmers who own or operate India's cotton farms face many obstacles. Farmers, especially those in the cash-cropping sector, often incur debt by pledging their land against private loans from illegal moneylenders in order to pay not only for their capital needs, but also for "food for their own families, education or jobs for their children, marriage expenses, health care, [and] dreams of a more dignified life for their near and dear ones."¹¹ Private moneylenders are a last recourse for those who are unable to obtain credit from official sources, because their repayments are called in quickly and at excessive interest rates.¹² The decision of a male farmer to commit suicide as a result of these myriad pressures is deeply tied up in the patriarchal nature of rural Indian society.¹³ Although many complex structural and personal factors contribute to the decision to commit suicide, it is perceived in many cases as the only route by which to escape the cycle of crop failure and endemic debt.¹⁴ While some studies suggest that general socio-economic factors, in addition to drought and a lack of technical capacity on the part of smallholder farmers, are the major contributing factors to the suicide crisis,¹⁵ most observers agree that crippling debt is "one of the leading causes of the suicides."¹⁶ Despite the focus on the suicides themselves, however, ultimately "suicide . . . [is] about the living,"¹⁷ and those who are left behind when their loved ones commit suicide—the women, children, and the elderly—find themselves paying a steep price.¹⁸

The women who take on the traditional work of men when their husbands, fathers, or brothers commit suicide have been particularly adversely affected. First, debt does not disappear when its holder

11. RANJANA PADHI, *THOSE WHO DID NOT DIE: IMPACT OF THE AGRARIAN CRISIS ON WOMEN IN PUNJAB* xv (2012).

12. *Dowry Systems Fuelling Farmers' Suicides in Vidarbha*, NEWSTRACKINDIA.COM (May 20, 2012), <http://newstrackindia.com/newsdetails/2012/05/20/264--Dowry-system-fuelling-farmers-suicides-in-Vidarbha-.html> (noting that dowry payments often lead to excessive debt).

13. See PADHI, *supra* note 11, at xvi.

14. *Id.* at 16.

15. Colleen Scherer, *India Does Not Blame Bt Cotton for Farmer Suicides*, AG PROF. (May 9, 2012), <http://www.agprofessional.com/news/India-does-not-blame-Bt-cotton-for-farmer-suicides-150665905.html>.

16. *Id.*; see also SRIJIT MISHRA, *RURAL CREDIT AND SUICIDES IN MAHARASHTRA, INDIA: A CASE-CONTROL STUDY 6* (2006), available at http://www.igidr.ac.in/money/mfc_08/Rural%20Credit%20and%20Suicides%20in%20Maharashtra,%20India%20A%20Case-Control%20Study...Srijit%20Mishra.pdf ("Comparing suicide case with non-suicide controls, average outstanding debt is higher in the former by more than three and a half times.").

17. EVERY THIRTY MINUTES, *supra* note 6, at 4.

18. PADHI, *supra* note 11, at xvi–xvii.

commits suicide, and moneylenders continue to harass families for the repayment of loans.¹⁹ Additionally, in cases where the land has been sold or pledged in order to pay off debt, the main source of many women's productivity disappears.²⁰ Aside from these immediate impacts, however, the patriarchal structure of rural Indian society further serves to marginalize these living victims of India's rural suicide crisis, with systems like dowry drastically affecting their ability to take control of their own lives.²¹ Because women are second-class citizens in rural India,²² it is often hard for them to take on primary decision-making roles in rural households. This results in greater social insecurity for women and their families.²³

This Note suggests that the particular gendered impacts that result from India's farmer suicide crisis can be explained by the numerous capital constraints that are imposed on smallholder farmers, which undermine their ability to participate effectively and efficiently in the modern agricultural market.²⁴ Although smallholders produce many of the developing world's primary agricultural commodities, their relative market share remains low at the expense of the growth of large agricultural conglomerates such as Monsanto, Cargill, and Archer Daniels Midland,²⁵ especially in the cash-crop sector.²⁶ The corresponding increases in the availability of knowledge- and resource-intensive seed technology, combined with the fact that smallholder farmers lack access to credit,²⁷ further exacerbates the rural debt-suicide cycle.

19. *Id.* at xxii (stating that joint families need to "bear out . . . harassment of *arhitya*," or moneylenders).

20. *Id.* at 25.

21. *India's Unwanted Girls*, BBC NEWS (May 22, 2011), <http://www.bbc.co.uk/news/world-south-asia-13264301>.

22. PADHI, *supra* note 11, at 33 ("From ownership to land and access to wage work to fulfilling household responsibilities, women's position is continuously being determined in . . . a society that is deeply segregated with class and caste divisions.").

23. ALEXANDRA SPIELDOCH, INST. FOR AGRIC. AND TRADE POLICY, *A ROW TO HOE: THE GENDER IMPACT OF TRADE LIBERALIZATION ON OUR FOOD SYSTEM, AGRICULTURAL MARKETS AND WOMEN'S HUMAN RIGHTS* 16 (2007).

24. *See, e.g.*, EVERY THIRTY MINUTES, *supra* note 6, at 1; UNFAO, *STATE OF FOOD INSECURITY 2012*, *supra* note 1, at 30; Maggie Ellinger-Locke, *Food Sovereignty Is a Gendered Issue*, 18 BUFF. ENVTL. L.J. 157, 157 (2010).

25. For example, Monsanto saw an earnings increase of 45 percent and Cargill, 86 percent at the beginning of the 2007 global food crisis. Ellinger-Locke, *supra* note 24, at 157.

26. BHAGIRATH CHOUDHARY & KADAMBINI GAUR, *BT COTTON IN INDIA: A COUNTRY PROFILE* 4–6 (2010), available at http://www.isaaa.org/resources/publications/biotech_crop_profiles/bt_cotton_in_india-a_country_profile/download/Bt_Cotton_in_India-A_Country_Profile.pdf (stating that of the 9.6 million hectares of agricultural land used to grow cotton in India in 2009, 8.4 million hectares were used for Bt-cotton, a genetically modified strain sourced from Monsanto that is the subject of this Note).

27. *See* UNFAO, *STATE OF FOOD INSECURITY 2012*, *supra* note 1, at 30.

While academic literature has explored the causes of the Indian rural suicide crisis *ad nauseam*, it has largely overlooked the impact of these suicides on women,²⁸ despite the urgency of the issue. This Note will demonstrate how the international trade regime interacts with local laws and customs to disenfranchise rural Indian women, while at the same time undermining male farmers' access to financial resources that would help them to avoid spiraling debt traps. In this regard, the Indian rural suicide crisis has had a double-barreled gender impact.

To that end, Part I of this Note will discuss the origins of the current system of industrialized agriculture by analyzing the global food security and food sovereignty movements. It will focus on the relationship between food sovereignty and gender, first with regards to the philosophical underpinnings of this relationship, and second in the context of the legal regimes that address it.²⁹ Part II will analyze how the intellectual property protections associated with the global agribusiness regime interact with the Indian government's trade liberalization efforts to impact the country's agricultural sector. Part III will examine the impact that cultural and legal factors have on the female survivors of the rural suicide crisis. Part IV will offer proposals for how local and national actors might alter their approach to agricultural sovereignty in a way that will ensure greater financial and social security for those women who produce over half of the world's food.³⁰

I. FOOD SECURITY, FOOD SOVEREIGNTY, AND GENDER

A. *Global Food Policy and the Green Revolution*

A state of food security is said to exist "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life."³¹ The World Health Organization's (WHO) three-pillared approach to food security helps to ensure not only that people have enough food, but also the resources to obtain it and the knowledge of how to take care of their health and nutritional needs.³² However, there is a systematized pattern of food insecurity and a lack of sovereignty over natural resources in what we now refer to as "the

28. Only a limited number of studies have considered the specific issue of the impact of the suicide crisis on women; these include PADHI, *supra* note 11, and RATNA K. BANDILA, FARMERS' SUICIDES IN INDIA: IMPACT ON WOMEN (2009).

29. See Convention on the Elimination of All Forms of Discrimination Against Women art. 14, Dec. 18, 1979, 1249 U.N.T.S. 13 (entered into force Sept. 3, 1981), *available at* <http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm> [hereinafter CEDAW].

30. See Grainger-Jones, *supra* note 3.

31. *Food Security*, WORLD HEALTH ORG., <http://www.who.int/trade/glossary/story028/en/> (last visited Jan. 10, 2014).

32. The WHO's tripartite framework is built on the three pillars of food availability, access to food, and usage of nutritional resources. *Id.*

developing world.”³³ Many colonized regions were drawn into the world economy not as equal participants in the market system, but rather as producers of raw material goods and importers of manufactured technology.³⁴ As such, state support for traditional agricultural practices was limited or even absent.³⁵ This early “factory-farming” approach to primary resource production led, in many cases, to a shift away from traditional, sustainable food-production practices and towards cash-crop production.³⁶ This in turn concentrated land ownership in the hands of a small number of rural elite,³⁷ further reducing smallholder access to agricultural resources.³⁸

Additionally, the colonial economic project benefited from a comparative advantage trading system that undermined the ability of colonized states to actively undertake productive investment schemes.³⁹ As a result, “developing countries would enter the global economy . . . dependent on imported food to satisfy domestic nutritional needs, and plagued with poverty and inequality.”⁴⁰ Additionally, post-Second World War decolonization resulted in the formation of a slew of new states that lacked not only the technological innovations available in the First World, but also suffered under a continuation of comparative advantage-based trade limitations.⁴¹ Needless to say, this history has laid the foundations for the current state of rural poverty and food scarcity in India and many other developing states.

33. See, e.g., Ellinger-Locke, *supra* note 24, at 162; Carmen G. Gonzalez, *Genetically Modified Organisms and Justice: The International Environmental Justice Implications of Biotechnology*, 19 GEO. INT'L ENVTL. L. REV. 583, 594 (2007).

34. Gonzalez, *supra* note 33, at 595–96. Indeed, “colonial science viewed peasant agriculture as primitive, unproductive, and backward.” Lakshman Yapa, *The Poverty Discourse and the Poor in Sri Lanka*, 23 TRANS. INST. BRIT. GEOGRAPHERS 95, 102 (1998).

35. V. Nithyanandam, *Ethnic Politics and Third World Development: Some Lessons from Sri Lanka's Experience*, 21 THIRD WORLD Q. 283, 286–87 (2000).

36. Gonzalez, *supra* note 33, at 595–96; Yapa, *supra* note 34, at 101 (noting that the Crown Land Encroachment Ordinance of 1840 turned “nearly 90 [percent] of the land in Sri Lanka to Crown property by law”).

37. Gonzalez, *supra* note 33, at 596.

38. In Sri Lanka, cash crop planters successfully lobbied the government to import cheap rice from other regions in order to maximize land use for cash crops; not only did this force smallholders in those areas out of business, but forced smallholders in rice-growing regions to produce rice exclusively, rather than other crops. Yapa, *supra* note 34, at 101.

39. See ANDREA MANESCHI, COMPARATIVE ADVANTAGE IN INTERNATIONAL TRADE: A HISTORICAL PERSPECTIVE 97 (1998) (“[T]hrough machinery and new inventions the imperfect manufacturing industry of the East has been destroyed for the benefit of the European manufacturing power, and the latter enabled to supply the countries of the torrid zone with large quantities of fabrics at the cheapest prices.”).

40. Gonzalez, *supra* note 33, at 596.

41. Comparative advantage-based practices continued to be encouraged well into the post-colonial era in some circumstances, however. Early post-independence leadership in Sri Lanka came from the rural elite described in *supra* note 38, and promoting peasant agricultural initiatives and encouraging industrialization and import-substitution measures would have undermined their profit retention. Nithyanandam, *supra* note 35, at 289.

It was only in the aftermath of the Second World War that the question of food scarcity came to the table in a serious institutionalized way; innovations in farm machinery technology, new fertilizers, and more effective pesticides became available in the developed world, which resulted in significant yield takeoffs.⁴² Scientists such as Norman Borlaug took advantage of these technological changes; by creating new hybrid varieties of maize, and eventually rice and wheat, they were able to drastically increase the production of these basic food crops in what is now known as the Green Revolution.⁴³ Their methods “more than doubled” global food production,⁴⁴ which allowed states like Mexico and India (which had been classified as food-deficient prior to the agricultural developments of the 1960s) to become self-sufficient grain producers at a time when global famine had been predicted.⁴⁵ However, rural malnutrition and hunger are more closely linked to rural poverty than they are to actual food scarcity,⁴⁶ and on the basis of this thesis, the Green Revolution has not been nearly as successful as its proponents suggest.⁴⁷

This is because the high-technology, high-input approach to cash-crop agriculture could only ever be adopted in regions that were favorable to it in terms of irrigation and climate. As such, interregional income distribution was fundamentally altered to the detriment of “well over three-fourths of the poorer farmers in the . . . developing world.”⁴⁸ Even within the most technology-favorable environments, those farmers with the most assets reaped significantly more socioeconomic benefits than smallholders in the same region.⁴⁹ Moreover, global overproduction effectively pushed small farmers out of the market, rendering them destitute.⁵⁰ At the same time, the usage of high-input agriculture allowed for the rapid growth and institutionalization

42. GORDON R. CONWAY, *THE DOUBLY GREEN REVOLUTION: FOOD FOR ALL IN THE TWENTY-FIRST CENTURY* 46 (1997).

43. *Id.* at 47–49. Mexican grain yields had been averaging less than 800kg/ha prior to the establishment of Borlaug’s Office of Special Studies in the late 1950s; by the 1960s, maize yields were averaging over 1000kg/ha. *Id.*

44. Gonzalez, *supra* note 33, at 597.

45. Justin Gillis, *Norman Borlaug, Plant Scientist Who Fought Famine, Dies at 95*, N.Y. TIMES (Sept. 13, 2009), <http://www.nytimes.com/2009/09/14/business/energy-environment/14borlaug.html>; see also Donald K. Freebairn, *Did the Green Revolution Concentrate Incomes? A Quantitative Study of Research Reports*, 23 WORLD DEV. 265, 267–68 (1995).

46. AMARTYA SEN, *POVERTY AND FAMINES: AN ESSAY ON ENTITLEMENT AND DEPRIVATION* 1 (1981) (“Starvation is the characteristic of some people not *having* enough food to eat. It is not the characteristic of there *being* not enough to eat.”); Ellinger-Locke, *supra* note 24, at 159 (stating that the amount of food produced in 2007 was 150% of current demand); Gonzalez, *supra* note 33, at 594.

47. Gonzalez, *supra* note 33, at 597 (“The Green Revolution exacerbated hunger in the developing world by aggravating poverty and inequality.”).

48. Freebairn, *supra* note 45, at 267.

49. *Id.* at 267–68.

50. Gonzalez, *supra* note 33, at 597.

of agribusiness conglomerates,⁵¹ and a strong business-oriented ideology replaced the humanitarian interests that had caused these technological developments in the first place. Seed suppliers provided all the ancillary pesticides, fertilizers, and machinery needed to support the usage of their high-yield hybrids,⁵² which in turn drastically increased the amount of capital farmers needed to do their work.⁵³ Importantly, these developments were not limited solely to food production initiatives.⁵⁴

To the extent that the Green Revolution helped to avert a South Asian food crisis in the 1960s and 1970s, it was a success; however, the changes effected on global agriculture have drastically undermined local power over agricultural resources.⁵⁵ This is because industrial agriculture tends to turn people from active participants in their own livelihoods into mere “consumers” of a “product.” This view implicitly subjects the rural poor to the global processes of supply and demand.⁵⁶ Given that agricultural production is subject to the vagaries both of nature and agricultural futures markets,⁵⁷ this undermines both access to and availability of agricultural resources. In order to more fully address how the system exploits underserved groups such as smallholder Indian cotton farmers and their wives and daughters, a framework that also takes into account the power dynamics inherent in the global agricultural system is required.

B. Food Sovereignty and Gender

The food sovereignty movement provides just such a framework. By dealing with “the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods,

51. Mohsen Al Attar Ahmed, *Monocultures of the Law: Legal Sameness in the Restructuring of Global Agriculture*, 11 *DRAKE J. AGRIC. L.* 139, 145 (2006).

52. Gonzalez, *supra* note 33, at 598.

53. See Yapa, *supra* note 34, at 103–05 (noting that the amount of capital Sri Lankan farmers needed to run their operations in the 1960s and 1970s drastically increased because of the need to purchase high-nitrogen fertilizers and new pesticides).

54. Today, Monsanto offers patented hybrid seed varieties for cotton, canola and soybean crops as well. *Agricultural Seeds*, MONSANTO, <http://www.monsanto.com/products/Pages/monsanto-agricultural-seeds.aspx> (last visited Jan. 10, 2014).

55. Ellinger-Locke, *supra* note 24, at 176–77 (noting that food security can be had “under a benevolent dictator . . . [who] can provide you with meals and McDonalds and a little bag of vitamins to compensate your body for the nutrition that McDonalds will not provide”).

56. Eric Holt-Giménez, *The World Food Crisis: What Is Behind It and What We Can Do*, *HUNGER NOTES* (Oct. 23, 2008), <http://www.worldhunger.org/articles/09/editorials/holt-gimenez.htm>.

57. *Id.* (noting “back-to-back droughts in major wheat-producing countries in 2005–06” contributed to the global food crisis of 2008); see also Interview by Amy Goodman with Frederick Kaufman, Contributing Editor, *HARPER'S* (July 16, 2010), available at http://www.democracynow.org/2010/7/16/the_food_bubble_how_wall_street.

and their right to define their own food and agriculture systems,”⁵⁸ the movement enables analysts to directly consider how international agribusiness conglomerates affect local agricultural production.⁵⁹

Food sovereignty addresses not only agricultural but also environmental and rural development.⁶⁰ Its focus on smallholder producers allows subjects like women’s rights, migration, and especially the nature of traditional farming practice to be included in analyses of agricultural policy.⁶¹ Food sovereignty activists argue that the high costs associated with capital-intensive industrial agriculture can be mitigated by a focus on local knowledge, which may include embracing traditional methods of agricultural production that include seed-saving, natural fertilizer use, and crop rotation.⁶² This focus on modes of production allows analysts to consider the impact of agricultural liberalization not only on smallholder food producers, but also other members of the global agricultural community, including those who produce non-food primary commodities such as cotton, cacao, and coffee.

Women have a unique and distinct role to play in this world of small-scale agriculture, which has not gone unnoticed by either mainstream observers or food sovereignty advocates.⁶³ Both of these groups note that rural women face many more difficulties than men when it comes to gaining access to resources that enable their successful participation in agricultural work.⁶⁴ Significantly, it has been shown that development efforts directed at improving the lives of women specifically “benefit the whole household.”⁶⁵ As such, even organizations that emphasize the importance of high-yield approaches to farming, such as the International Food Policy Research Institute (IFPRI) in Washington, DC, assert that the empowerment of women is integral to ensuring food security in the developing world.⁶⁶

58. *Declaration of Nyeleni*, LA VÍA CAMPESINA (Feb. 27, 2007), <http://viacampesina.org/en/index.php/main-issues-mainmenu-27/food-sovereignty-and-trade-mainmenu-38/262-declaration-of-nyi>.

59. See Ellinger-Locke, *supra* note 24, at 183.

60. Steve Suppan, *Challenges for Food Sovereignty*, 32 FLETCHER F. WORLD AFF. 111, 118 (2008).

61. *Id.* at 111.

62. See Yapa, *supra* note 34, at 101 (describing the traditional practice of using shifting cultivation plots to maintain soil nutrition); BITTER SEEDS, *supra* note 10, 00:42:11–00:42:50 (explaining the use of seed saving techniques in the Maharashtrian cotton belt); BITTER SEEDS, *supra* note 10, at 00:43:48–00:44:08 (noting that cow dung was traditionally used as cotton fertilizer).

63. See UNFAO, *Women and Sustainable Food Security*, *supra* note 3.

64. UNFAO, STATE OF FOOD INSECURITY 2012, *supra* note 1, at 30.

65. INT’L FOOD POLICY RESEARCH INST., WOMEN: STILL THE KEY TO FOOD AND NUTRITION SECURITY 2 (2005), available at <http://www.ifpri.org/sites/default/files/pubs/pubs/ib/ib33.pdf> [hereinafter IFPRI, WOMEN: STILL THE KEY].

66. *Id.*; see CEDAW, *supra* note 29, at art. 14; Lisa R. Pruitt, *Deconstructing CEDAW’s Article 14: Naming and Explaining Rural Difference*, 17 WM. & MARY J. WOMEN & L. 347,

This means that a focus on women's rights is particularly valuable to the food sovereignty movement.⁶⁷ The emphasis on the power dynamics of the global agricultural system has particular resonance with feminists,⁶⁸ who are (generally speaking) also concerned with how power dynamics affect the human rights of women. In particular, three aspects of the current global food system stand out as being detrimental to these rights. First, the categorization of "the poor" as a homogeneous group ignores the possibility of significant variance between rural men and women with regards to access to entitlements.⁶⁹ Second, inherent cultural factors in the rural Third World detract from the ability of women farmers to effectively invest in their own resource management.⁷⁰ Third, agricultural liberalization has actually changed cultural practices associated with food production in ways that specifically undermine the role of women in the food system. For example, women in Meso-America have traditionally been seen as the "keepers of corn seeds," but the post-NAFTA elimination of tariffs resulted in U.S. corn dumping in Mexico.⁷¹ This undermined the cultural role of corn, which affected women because of their special relationship with the cash crop.⁷² This in turn has led to an increase in unemployment and insecurity for women as well as their families.⁷³

Though both the food sovereignty and feminist movements have a vested interest in dealing with the issue of women's limited access to rural economic opportunity, ecofeminists such as Vandana Shiva go the furthest in establishing a link between the scientific nature of agricultural liberalization and women's rights. Essentially, Shiva argues that though "science" is generally described as a value-neutral knowledge system, its origins as "a specific project of western man" betray its essentially exploitative nature.⁷⁴

360 (2011) [hereinafter Pruitt, *Deconstructing CEDAW*] (noting that Art. 14(1) of CEDAW "makes certain assumptions about rural women, for example, that they play economic roles—and not only nurturing ones—in relation to their families").

67. SPIELDOCH, *supra* note 23, at 12.

68. *Id.*

69. *See, e.g.*, MARTHA NUSSBAUM, WOMEN AND HUMAN DEVELOPMENT: THE CAPABILITIES APPROACH 60 (2000) (suggesting that the best way to address the problems faced by women in the rural developing world is to look at their individual levels of well-being).

70. For example, in Burkina Faso, men have greater access to "both household and non-household labor for their farm plots," which is to say they are more likely to be able to delegate tasks and use their land and time efficiently—in many parts of the developing world, where land ownership is concentrated in the hands of men and transferred between men, women's rights to use and gain access to land is limited, if not non-existent. IFPRI, WOMEN: STILL THE KEY, *supra* note 65, at 1–2.

71. SPIELDOCH, *supra* note 23, at 16.

72. *Id.*

73. *Id.*

74. VANDANA SHIVA, STAYING ALIVE: WOMEN, ECOLOGY AND DEVELOPMENT 15, 17 (1989), *reprinted in* THE POST-DEVELOPMENT READER 161, 162, 164 (Majid Rahnema &

This approach to the issue of science and gender provides an important analytical tool. If science is viewed as a socially constructed category,⁷⁵ rather than an objective truth, then its results can be evaluated on the basis of their socio-cultural impact rather than the “objective good” that they may be able to establish.⁷⁶ Furthermore, ecofeminism does not stop at an analysis of power structures. Rather, it establishes a solution to the problems of global agricultural liberalization: it “locates production and consumption within the context of regeneration . . . [and] creates the possibility of viewing the world as an active subject, not merely a resource to be manipulated and appropriated.”⁷⁷ Ecofeminism channels the reality of women’s involvement in global agriculture, taking into serious consideration the role that women play in maintaining a sustainable, regenerative form of rural life.⁷⁸ As such, it draws clear links between the issues of the marginalization of rural women and the exploitation of the environment. The ability to substantively interrogate this nexus will be valuable when it comes to the creation and evaluation of “new policy proposals.”⁷⁹

C. Rurality in the Convention on the Elimination of All Forms of Discrimination Against Women

The Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) uniquely and specifically addresses the circumstances and rights of women.⁸⁰ Unlike some other international human rights instruments, CEDAW “asserts that states [must] maintain positive obligations,”⁸¹ rather than merely desisting from discriminatory and sexist practices. More significantly, CEDAW explicitly calls on states to actively engage in the modification of destructive public and private norms,⁸² and even goes so far as to suggest that member states attempt to end all gender stereotyping.⁸³

Victoria Bawtree eds., 1997) (noting that modern science is a “consciously gendered, patriarchal activity”).

75. *Id.* at 167.

76. *Id.*

77. MARIA MIES & VANDANA SHIVA, *ECOFEMINISM* 33 (1993).

78. IFPRI, *WOMEN: STILL THE KEY*, *supra* note 65, at 1–2.

79. Ellinger-Locke, *supra* note 24, at 189.

80. Lisa L. Pruitt, *Migration, Development and the Promise of CEDAW for Global Women*, 30 MICH. J. INT’L L. 707, 729 (2009) [hereinafter Pruitt, *Migration, Development, and the Promise of CEDAW*]; Marta R. Vanegas & Lisa R. Pruitt, *CEDAW and Rural Development: Empowering Women with the Law from the Top Down, Activism from the Bottom Up*, 41 U. BALT. L. REV. 263, 272–73 (2012).

81. Kathleen Cornelsen, Note, *Doubly Protected and Doubly Discriminated: The Paradox of Women with Disabilities After Conflict*, 19 WM. & MARY J. WOMEN & L. 105, 116 (2012).

82. Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 349.

83. CEDAW, *supra* note 29, at art. 5.

CEDAW is also the first international legal instrument that acknowledges the existence of an “intersection” between gender discrimination and rurality.⁸⁴ By acknowledging that “geography or place” is one of the bases for the existence of a specific set of disadvantages,⁸⁵ CEDAW acknowledges the diversity of women’s experience, and shows a great degree of flexibility when it comes to addressing women’s rights and needs.⁸⁶ Article 14 of CEDAW in particular implicitly recognizes that the development of rural areas is inherently linked with the autonomous development of the women that live in them.⁸⁷ While some critics argue that the mainstream “rural development discourse” focuses too exclusively on “growth . . . capital . . . technology [and] becoming modern,”⁸⁸ Article 14(2)(a)’s emphasis that women should be involved in rural development “at all levels” leaves room for the kind of local engagement in agricultural decision-making that the food sovereignty and ecofeminist movements envision.⁸⁹ If it is true that women are the “keepers of the earth,” increasing their involvement in the processes of local, participatory development “endow[s] [them] with the power to reject certain development courses, should they so choose.”⁹⁰

Anecdotal evidence suggests that the women who work in India’s smallholder cotton sector women would prefer to return to less capital-intensive, more sustainable, agricultural production systems.⁹¹ Indeed, “dwindling agricultural income, rising input costs, deteriorating soil quality and depleting water tables are [a] cause of worry” for women who bear the primary responsibility for ensuring the livelihood of their families and the future of their children.⁹² However, the wives of smallholder farmers often take on all the ancillary household duties, including taking care of the livestock and the family.⁹³ As such, they are left with little time to participate in local policy-making,⁹⁴ even in

84. Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 350–51; Cornelsen, *supra* note 81, at 115.

85. Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 351.

86. *Id.*

87. *Id.* at 359 (“Thus CEDAW is at least implicitly concerned with all rural populations, not only with women.”).

88. ARTURO ESCOBAR, ENCOUNTERING DEVELOPMENT: THE MAKING AND UNMAKING OF THE THIRD WORLD 162 (1995).

89. CEDAW, *supra* note 29, at art. 14(2)(a).

90. Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 365.

91. *See, e.g.*, PADHI, *supra* note 11, at 34. One woman surveyed by Padhi notes that her family “spend[s] more than what [they] get . . . [they] spend so much on pumps and electricity, but the water supply is simply not sufficient. The land will never become what it was earlier.” *Id.* Another reports that she is “fighting hard not to sell the land just” for the sake of her children. *Id.*

92. PADHI, *supra* note 11, at 36.

93. *Id.* at 42, 44.

94. Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 366–67.

those rare situations where they are educated enough to take on these roles,⁹⁵ or are permitted to do so in the face of local resistance.⁹⁶

CEDAW addresses this problem by specifically noting that rural women are more heavily involved than their urban counterparts in the “non-monetized sectors of the economy.”⁹⁷ By calling on member states to “take all appropriate measures to ensure the application of the provisions of [CEDAW] to women in rural areas,”⁹⁸ its framers force them not only to acknowledge but also to deal substantively with the existence of a means of subsistence that cannot be accurately gauged using “official statistics relating to GDP and employment.”⁹⁹ By calling on member states to address the particularity of the rural woman’s experience both with regards to how it differs from the travails of urban women and certainly men, the Convention helps to lay the foundations for greater support of women’s involvement in local community decision-making. In turn, this helps to advance those aspects of the ecofeminist and food sovereignty agendas that speak to the positive impact that rural women can have on local agricultural development.

II. INTERNATIONAL INTELLECTUAL PROPERTY AND INDIAN AGRICULTURAL POLICY

The technological advances of the Green Revolution were driven to a great degree by humanitarian interests.¹⁰⁰ However, the broad-based use of seed hybridization technology has resulted in the establishment of a capitalist system that tends to exacerbate intra-regional inequalities and disenfranchise the poorest of the poor.¹⁰¹ While academic approaches to the problems posed by the current system of global agricultural production envision an entirely new approach to

95. U.N. DEP’T. OF ECON & SOC. AFF., DIV. FOR THE ADVANCEMENT OF WOMEN ET AL., *RURAL WOMEN IN A CHANGING WORLD: OPPORTUNITIES AND CHALLENGES* 35 (2008) [hereinafter *RURAL WOMEN IN A CHANGING WORLD: OPPORTUNITIES AND CHALLENGES*], available at <http://www.un.org/womenwatch/daw/public/Women%202000%20-%20Rural%20Women%20web%20English.pdf>.

96. *Id.* at 36 (noting that “stereotypical attitudes . . . and opposition from family and community members” often inhibit women from participating fully in local governance).

97. CEDAW, *supra* note 29, at art. 14(1). In Rwanda, for example, this work may include “cooking, gathering wood, grinding cereals, fetching water, maintenance work, [and] educating children.” Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 360 n.83.

98. CEDAW, *supra* note 29, at art. 14(1).

99. Pruitt, *Deconstructing CEDAW*, *supra* note 66, at 361 (citing Noreen Burrows, *The 1979 Convention on the Elimination of All Forms of Discrimination Against Women*, 32 NETH. INT’L L. REV. 419, 447 (1985)).

100. Gillis, *supra* note 45 (quoting one of Norman Borlaug’s letters to his wife, in which he says that he “do[esn’t] know what we can do to help these people, but we’ve got to do something”).

101. See *supra* notes 46–50 and accompanying text.

rural development,¹⁰² such an idealistic view does not give sufficient weight to the intractability of the international legal regimes in play.¹⁰³ This Part will briefly address how the emphasis on plant breeders' rights in the international intellectual property regime has influenced India's domestic agricultural policy, and how that policy in turn has impacted those women who depend on India's cotton farming sector for their livelihoods.

A. International Intellectual Property Rights (IPR) and Plant Breeders' Rights

The first international instrument which granted strong IPR in the reproduction, commercialization, and sale of protected plant varieties was the International Convention for the Protection of New Varieties of Plants (UPOV).¹⁰⁴ This treaty grants to breeders the "sole"¹⁰⁵ rights to reproduction, commercialization, and sale of treaty-protected plant varieties. In order to obtain a breeders' right, the variety being submitted for consideration must be "clearly distinguishable," "uniform," "stable," and "new."¹⁰⁶ These criteria are not particularly useful for smallholder farmers, who are likely to value uniformity and homogeneity far less than they do cost, adaptability, and ease of growth.¹⁰⁷

UPOV originally acknowledged these specific needs by carving out an exception for the usage of genetically modified plant varieties that allowed farmers to use the technology for "propagating purposes, on their own holdings,"¹⁰⁸ even during the 20–25 year period mandated for the protection of breeders' rights.¹⁰⁹ This provision allowed

102. See *supra* notes 66–67 and accompanying text.

103. See International Convention for the Protection of New Varieties of Plants, Dec. 2, 1961, 1861 U.N.T.S. 281 (entered into force Aug. 10 1968), available at <http://www.upov.int/upovlex/en/conventions/1991/act1991.html> [hereinafter UPOV] (generally protecting the rights of plant breeders); Ahmed, *supra* note 51, at 157 (stating that UPOV "sanctifies—and thus attaches importance to—the necessary criteria for monoculture production systems"); Gregory C. Shaffer, *The World Trade Organization Under Challenge: Democracy and the Law and Politics of the WTO's Treatment of Trade and Environment Matters*, 25 HARV. ENVTL. L. REV. 1, 13 (2001) (noting that private, non-state actors such as Monsanto often have a significant voice in international policy-making).

104. See UPOV, *supra* note 103, arts. 6(1)(a)–(d), 15(2), 19 for provisions relating to requirements for protections of plant varieties and early protections of farmers' rights; Ahmed, *supra* note 51, at 153–58; Ellinger-Locke, *supra* note 24, at 170; Lauren Winter, Note, *Cultivating Farmers' Rights: Reconciling Food Security, Indigenous Agriculture, and TRIPS*, 43 VAND. J. TRANSNAT'L L. 223, 232–33 (2010) for further discussion of UPOV's impact on indigenous agriculture generally.

105. Ellinger-Locke, *supra* note 24, at 170.

106. UPOV, *supra* note 103, arts. 5(1)(i), (iv), and (7).

107. Ahmed, *supra* note 51, at 156.

108. UPOV, *supra* note 103, at art. 15(2).

109. *Id.* at art. 19(1)–(2).

farmers to minimize their costs at the beginning of every new planting season by reusing seed that had been saved “on the farm where it was harvested.”¹¹⁰ Given that the kinds of genetically modified crops that are protected under UPOV were developed with the intent of improving yield in some way,¹¹¹ smallholders would have been able to gain higher profits by decreasing capital and increasing revenue. However, in a broad concession to the interests of the agribusiness conglomerates,¹¹² the 1991 amendment to UPOV renders these exceptions optional.¹¹³

Although UPOV is not a widely adopted treaty,¹¹⁴ its relaxation of the farmers’ exception provision is indicative of a broader shift in the international IPR regime towards stronger protection of plant breeders’ rights. One example of this emphasis on breeders’ rights can be found in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement),¹¹⁵ which is one of the mandatory agreements associated with WTO membership.¹¹⁶ The TRIPS Agreement calls for the protection of plant genetic resources in the form of patents, an effective *sui generis* system, or some combination of the two.¹¹⁷ Although there has been limited guidance relating to what might constitute an appropriate *sui generis* system,¹¹⁸ IPR activists have called for states to adopt UPOV as a model for plant variety

110. Winter, *supra* note 104, at 232.

111. E.g., Monsanto’s Bollgard(R) gene allegedly improves yield by increasing crop resistance to the bollworm pest; “semidwarf” wheat hybrids were developed with the specific intent of increasing yield. See Gillis, *supra* note 45; *Cotton in India*, MONSANTO, <http://www.monsanto.com/newsviews/Pages/india-pink-bollworm.aspx> (last visited Jan. 10, 2014).

112. See Winter, *supra* note 104, at 232 (“[T]he seed industry tends to dislike farmers’ privilege since it exempts small farmers replanting seeds for their own use from repurchasing a successful plant variety year after year.”) Indeed, UPOV was certainly not the last legal instrument to give breeders’ rights priority over farmers’ rights; the U.S. Congress followed UPOV’s suit in 1994 and removed a similar farmer’s exception provision from the Plant Variety Protection Act of 1970. Susan K. Sell, *Post-TRIPS Developments: The Tension between Commercial and Social Agendas in the Context of Intellectual Property*, 14 FLA. J. INT’L L. 193, 203 (2002).

113. Winter, *supra* note 104, at 232.

114. Less than half of all countries are members of UPOV; India is one of these states. See V. Members of the International Union for the Protection of New Varieties of Plants, Status on Dec. 5, 2012, available at <http://www.upov.int/export/sites/upov/members/en/pdf/pub423.pdf>. Notably, India is not one of the countries on this list.

115. Agreement on Trade-Related Aspects of Intellectual Property Rights arts. 27(3), 30, 31, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 1197 (1994) [hereinafter TRIPS Agreement].

116. *Frequently Asked Questions about TRIPS in the WTO*, WORLD TRADE ORG., [http://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm#Who%27s Signed](http://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm#Who%27s%20Signed) (last visited Jan. 10, 2014) [hereinafter *Frequently Asked Questions*, WTO] (“The TRIPS Agreement . . . applies to all WTO members.”).

117. TRIPS Agreement, *supra* note 115, art. 27(3).

118. Sell, *supra* note 112, at 203.

protection.¹¹⁹ Though “TRIPS does not require UPOV protection [and] UPOV protection is not the only permissible approach to *sui generis* protection,”¹²⁰ because TRIPS obligations “are legally recognized as the minimum standards of protection and enforcement that must be afforded,”¹²¹ all WTO Member States must implement some kind of plant genetic resource protection regime that is in compliance with the TRIPS Agreement’s patenting rules.¹²²

B. India’s Struggle with Plant Breeders’ Protections

Generally speaking, the Indian government has been chary of the idea of introducing transgenic plant varieties for commercial use.¹²³ However, India is the only country in the world that produces all four main species of cotton,¹²⁴ and produces 18 percent of the world’s supply from over a quarter of its cotton-producing area.¹²⁵ “Roughly ten million farm households”¹²⁶ or up to “60 million people”¹²⁷ rely on cotton cultivation for their livelihoods. These clear socio-economic incentives to support the country’s domestic cotton sector in whatever way possible may have been a strong contributing factor to the approval of three Bt-cotton varieties in 2002.¹²⁸ However, the government has been prevented from providing adequate protections for those who rely on cotton production for their livelihoods by the plant breeders’ protections contained in the international IPR regime.

Because India is a WTO member state, it is required to comply with the standards set out in the TRIPS Agreement.¹²⁹ However,

119. *Id.*

120. *Id.* at 205.

121. *WTO TRIPS Implementation*, INT’L INTELL. PROP. ALLIANCE, <http://www.iipa.com/trips.html> (last visited Jan. 10, 2014).

122. See, for example, TRIPS Agreement, *supra* note 115, arts. 30–31, which heightens the requirements for non-authorized use of a patented product. Article 30 provides that members may provide “limited” exceptions to exclusive rights that do not “unreasonably conflict with a normal exploitation of the patent.” *Id.* at art. 30. Furthermore, rights holders in patents should be paid “adequate remuneration . . . taking into account the economic value of the authorization.” *Id.* at art. 31.

123. See *Objection Against Bt Cotton Speculative, Confusing: Pawar*, HINDU BUS. LINE (Nov. 27, 2012), <http://www.thehindubusinessline.com/industry-and-economy/agri-biz/objection-against-bt-cotton-speculative-confusing-pawar/article4140250.ece> (noting that by 2012, Bt cotton was the only transgenic variety approved for commercial use).

124. O. P. Agarwal, *Cotton Economy in India*, 2007 WORLD COTTON RES. CONF. (Sept. 11, 2007, 1:45 PM), <http://wrc.confex.com/wrc/2007/techprogram/P1780.HTM>.

125. *Id.*

126. FRANK EYHORN, *ORGANIC FARMING FOR SUSTAINABLE LIVELIHOODS IN DEVELOPING COUNTRIES?: THE CASE OF COTTON IN INDIA* 7 (2007).

127. Agarwal, *supra* note 124.

128. Kana Talukder & Jennifer Kuzma, *Evaluating Technology Oversight Through Multiple Frameworks: A Case Study of Genetically Engineered Cotton in India*, 35 SCI & PUB. POL’Y 121, 121 (2008).

129. *Frequently Asked Questions*, WTO, *supra* note 116.

it was only after the U.S. and the E.U. filed complaints with the WTO's dispute resolution panel regarding India's failure to implement TRIPS-compliant pharmaceutical and agricultural patenting that India established its *sui generis* system for the protection of new plant varieties.¹³⁰ But India did not use UPOV's framework when it developed the Protection of Plant Varieties and Farmers' Rights Act of 2001 (PPVFRA). Indeed, the PPVFRA differs significantly from UPOV in that it emphasizes the rights of farmers "in respect of their contribution made at any time in conserving, improving, and making available plant genetic resources for the development of new plant varieties."¹³¹ The PPVFRA protects farmers' rights to save, use, exchange, and share all farm produce, including seeds that fall under the auspice of the Act,¹³² and it provides protections of indigenous knowledge against unwary monetization.¹³³

The possibility thus exists for rural women to be specifically included in the rural development process. Very often, it is the women in farming communities who are the keepers of the seed; they retain responsibility for selecting seeds for the next season, and pass on that knowledge to their daughters.¹³⁴ To the extent that the PPVFRA maintains the "social and economic welfare"¹³⁵ of the country's agricultural populations even in the face of compelling and overwhelming technological advance, it provides a successful *sui generis* framework for plant protection that other, similarly situated states can follow. Despite the relative liberalism of the PPVFRA, however, a more recent piece of legislation seems to uphold breeders' rights even in the face of controversy.¹³⁶

130. Appellate Body Report, *India—Patent Protection for Pharmaceutical and Agricultural Products*, WT/DS50/AB/R/ (Dec. 19, 1997).

131. The Protection of Plant Varieties and Farmers' Rights Act, No. 53 of 2001, INDIA CODE (2001), vol. 64, at 1 [hereinafter PPVFRA], available at <http://www.plantauthority.gov.in/pdf/PPV&FRAct2001.pdf>. See also Shrividhya Ragavan & Jamie Mayer O'Shields, *Has India Addressed Its Farmers' Woes? A Story of Plant Protection Issues*, 20 GEO. INT'L ENVTL. L. REV. 97, 113–23 (2007) for more detail on the working parts of the PPVFRA.

132. PPVFRA, *supra* note 131, at art. 39(1)(iv).

133. See *id.* at art. 40 (reserving the Registrar's right to reject applications for registration of new plant genetic resources if they are satisfied that the applicant has failed to "disclose . . . information regarding the use of genetic material conserved by any tribal or rural families in the breeding or development of such a variety").

134. Kavitha Kuruganti, *This Seeds Bill Must Go*, INDIA TOGETHER (Aug. 16, 2005), <http://www.indiatogether.org/2005/aug/agr-seedbill.htm>.

135. Ragavan & O'Shields, *supra* note 131, at 101 (noting that an "effective" *sui generis* system under TRIPS Article 27 should be read in light of the Agreement's Article 7 & 8 requirements, which, in balance, allow for "members' rights and obligations [to] be read alongside . . . principles[] which vest members with the right to prioritize their national public interests").

136. See Suman Sahai, *The Controversial New Seed Bill*, Gene Campaign Press Release (May 9, 2011), <http://www.docstoc.com/docs/79095014/THE-CONTROVERSIAL-NEW-SEED-BILL>.

The Seeds Bill of 2004 contained three specific provisions that came under fire from farmers' rights activists. First, this Bill went further than the PPVFRA in opening the Indian market to private and foreign investment.¹³⁷ Second, the Seeds Bill's registration requirements do not incorporate the PPVFRA's high standards for establishing parentage and origin of new seeds in the process of commercialization grants,¹³⁸ leading to a lack of clarity as to which piece of legislation controls. However, the third provision is the most egregious; Article 22(1) of the Seeds Bill characterizes the "bartering" of seed as "dealing" of seed, and thus requires even smallholder farmers who barter seed as a matter of course to obtain registration certificates as seed dealers from the state government.¹³⁹ Characterizing smallholder farmers as dealers leads to a monetization of traditional agricultural practice in precisely the way that many theorists deride. Such an approach veers away from the sustainable, thoughtful practice of traditional agriculture and towards a market-incentivized bureaucratic method of conducting business that ultimately marginalizes the rural poor and creates yet another barrier to entry into the development process.¹⁴⁰

Given that the PPVFRA was not superseded by the Seeds Bill, there remains a question as to why the Indian government felt compelled to shift away from the former document's protectionist tone when it drafted the later legislation. Increased international pressure to open the country's market to foreign products and foreign direct investment undoubtedly had an impact on national decision-making. There is a possibility that the Seeds Bill was established in 2004 in order to court a special economic relationship with the U.S. Indeed, one of the elements of the 2005 trade agreement between India and the U.S. was the establishment of the Indo-U.S. Knowledge Initiative in Agricultural Research, Education and Marketing.¹⁴¹ Significantly, Monsanto retains a permanent representative seat on the Initiative's

137. Sukanya Pillay, *India Sinking: Threats to the Right to Food, Food Security & Development in an Era of Economic Growth*, 27 WINDSOR Y.B. ACCESS JUST. 127, 162 (2009).

138. Kuruganti, *supra* note 134.

139. The Seeds Bill, No. 52 of 2004, INDIA CODE, art. 22(1) (2004).

140. Ragavan & O'Shields, *supra* note 131, at 126 ("[A]ggressive privatization can result in marginalizing those who practice traditional farming.").

141. Devinder Sharma, *'Free' Trade Killing Farmers in India* 55, 56, in BIOTHAI & GRAIN, FIGHTING FTAS: THE GROWING RESISTANCE TO BILATERAL FREE TRADE AND INVESTMENT AGREEMENTS (2008), available at <http://www.bilaterals.org/fightingFTA-en-Low.pdf>. The main objectives of this Initiative are to encourage knowledge-sharing between Indian and American experts in the fields of food processing, food marketing, biotechnology, and water management. GOV'T OF INDIA, MINISTRY OF AGRIC., DEP'T OF AGRIC. R. & EDUC, INDO-US KNOWLEDGE INITIATIVE ON AGRICULTURE: FACT SHEET (2007), available at <http://pib.nic.in/newsite/erelease.aspx?relid=16134>.

governing board,¹⁴² which indicates both that Monsanto has some degree of influence on American policy-making initiatives,¹⁴³ and now, on India's as well. Whether or not the Seeds Bill was drafted in the hope of establishing some kind of trade relationship with the U.S., it is nevertheless clear that this relationship has curtailed the ability of the Indian government to adequately represent and protect the needs and rights of its smallholder farmers.¹⁴⁴

C. Impact of India's Plant Breeders' Protections on Women

Women are specifically disenfranchised by market approaches to agricultural growth and development. While there is certainly a possibility that "landless women . . . known for their seed selection and seed keeping skills"¹⁴⁵ might have some opportunity to capitalize on the "dealer" status that the 2004 Seeds Bill might impose, such an argument is ignorant of the cultural reality in which these women live. Lack of access to resources in areas known for widespread corruption (as, unfortunately, vast swathes of India are) could subject illiterate, landless women who have long thrived on trust-based community systems to the vagaries of bureaucratic systems that they know nothing about.¹⁴⁶ At the same time, the fact that the Seeds Bill encourages market liberalization without providing adequate protection for farmers serves only to exacerbate rural inequality.¹⁴⁷

It is clear that the commercialization of agriculture that resulted from the Green Revolution has found much traction in the international IPR regime, and certainly in inter-state trade agreements. Furthermore, it is evident that those regimes have the ability to influence national policy in a way that enables international agribusiness

142. GOV'T OF INDIA, MINISTRY OF AGRIC., DEPT OF AGRIC. R. & EDUC, US-INDIA AGRICULTURAL KNOWLEDGE INITIATIVE: BOARD MEMBERS (2007), available at http://www.fas.usda.gov/ICD/india_knowl_init/board.asp.

143. Although it is true that international legal regimes and inter-state relationships are traditionally developed and governed by state representatives, private, non-state actors often have a significant role to play in international policy-making; this is just one example of how that role may play out in reality. Shaffer, *supra* note 103, at 13.

144. One of the most disturbing manifestations of this failure to protect smallholder needs is that affordable, non-hybrid seed varieties are now almost unavailable on the market; if farmers want to plant cotton, they are restricted to purchasing expensive Bt-licensed varieties. BITTER SEEDS, *supra* note 10, at 00:44:29–00:44:59.

145. Kuruganti, *supra* note 134.

146. *Id.*

147. It has been alleged, for example, that the Bollgard II(R) technology that replaced the original Bt cotton varieties to which bollworms developed resistance were the result of business strategies specifically designed to "grossly increase high-cost inputs on an annual basis." Pillay, *supra* note 137, at 163; see also Kamaldeep Singh Brar, *Bt Cotton: No Seed of Doubt Left*, HINDUSTAN TIMES (Nov. 6, 2012) <http://www.hindustantimes.com/Punjab/Bathinda/Bt-cotton-no-seed-of-doubt-left/SP-Article1-955811.aspx>.

firms to capitalize on and subvert traditional relationships between farmers and their crops. The disenfranchisement of women from one of their traditional roles in agricultural production, however, is only one unintended side-effect of improving transnational corporate access to domestic crop sectors. The spiraling debt traps that have resulted from the introduction of Bt varieties into the Indian cotton market are one of the primary causes of the spate of agricultural suicides, which in turn create various gendered problems in India's cotton belt.

III. CULTURE, GENDER, AND SUICIDE

The international IPR regime has internalized the profit-driven logic of industrial agriculture, thus drastically altering the day-to-day practices of smallholder farmers the world over. The women who depend on these farms face limitations on their ability to participate in their own livelihoods even without the disenfranchisement that accompanies cash-crop agricultural production. As a result, the increased social vulnerability that arises when a husband or father commits suicides makes women's lives even more difficult.¹⁴⁸ This Part will consider how the patriarchal nature of rural Indian society contributes to the current farmer suicide crisis, specifically through the lens of the dowry system. It will also discuss some of the tribulations that widows, mothers, daughters, and sisters face when male farmers commit suicide. This Part will then argue that local and national policy attempts to alleviate these specific gendered burdens have failed to adequately do so, first because of the assumptions made about the nature of women's labor in the agricultural sector, and second because they never truly address the underlying cause of the crisis.

A. Dowry and Debt

Although India officially outlawed dowry in 1961, in reality there has been little abatement in the practice.¹⁴⁹ By and large, dowry entails the payment of a "groom price" paid by the family of the bride.¹⁵⁰ Because the marriage of a daughter is considered to be a father's duty, the birth of a girl in an Indian agricultural household is often seen as an unwelcome addition to the family's debt burden.¹⁵¹ Importantly,

148. See BITTER SEEDS, *supra* note 10, at 01:23:35–01:23:55 ("The children of fathers who commit suicide are victimized twice. First they lose their father's protection, then they lose their childhood.").

149. *India's Unwanted Girls*, *supra* note 21.

150. PADHI, *supra* note 11, at 62.

151. *India's Unwanted Girls*, *supra* note 21; BITTER SEEDS, *supra* note 10, at 00:53:29 ("Farmers who cannot afford to marry their daughters suffer extreme social shame.").

the ability of relatively wealthy farmers to “indulge in lavish wedding celebrations”¹⁵² in the aftermath of the Green Revolution drastically inflated the value of dowries,¹⁵³ and it is not uncommon today for potential grooms’ families to demand impossibly high settlements.¹⁵⁴ Parents of daughters often go into deep debt in order to assure that their daughters will be married.¹⁵⁵ In instances where such families have exhausted their access to institutional loans, often because they are obliged to pay for expensive hybrid seeds and brand-name fertilizers, “the poor are left with no other option but to approach private moneylenders . . . who, taking advantage of their helplessness, tend to suck them dry.”¹⁵⁶ Sometimes, when peasants are obliged to pledge their land against their debt, the “shock and the shame” associated with this realization also results in suicide.¹⁵⁷

Problematically, dowry-related debt cannot generally be alleviated under the kinds of post-suicide remuneration orders that are available in some Indian states. For example, the state of Andhra Pradesh is willing to give up to INR 150,000 (1.5 lakhs) to the families of rural suicide victims, as long as the suicides “arise[] out of farm income related issues.”¹⁵⁸ However, debt incurred because of dowry is unlikely to be seen as sufficiently related to farming inputs for debt alleviation compensation to become available. As such, when a farmer commits suicide because of dowry-related debt, his female relatives are charged with paying off his loans without the benefit of state assistance.¹⁵⁹ If the farmer in question was obliged to sell his land in order to put together a dowry, or if he was a landless laborer in the first place, the surviving women must make payments while also attempting to lease land, or perform seasonal, low-wage labor on somebody else’s.¹⁶⁰ As a result, when farmers commit suicide over their debt, whether that debt is caused by the need to pay for daughters’ dowries or Bt cotton seeds, they are transferring to their female relatives a “culture of destruction” that is almost impossible to escape without substantial assistance.¹⁶¹

152. PADHI, *supra* note 11, at 67.

153. *India’s Unwanted Girls*, *supra* note 21.

154. *See BITTER SEEDS*, *supra* note 10, at 00:51:57–00:52:53.

155. PADHI, *supra* note 11, at 64.

156. *Id.* at 64–65.

157. *BITTER SEEDS*, *supra* note 10, at 00:57:59–00:58:56. In the dowry context, this shame is as likely to be associated with the inability to pay the demanded price (and attendant inability to provide for one’s daughter’s future) as it is with the realization that there is no more land to work or own. *See id.* at 00:53:29.

158. GOV’T OF ANDHRA PRADESH, G.O.MS. NO. 421 (2004), available at <http://www.aponline.gov.in/quick%20links/departments/revenue/govt-gos-acts/2004/go.ms.421.2004.html> [hereinafter G.O.MS. NO. 421].

159. PADHI, *supra* note 11, at 70.

160. *Id.* at 44–45.

161. *Id.* at 46.

B. The Impact of Suicide on Women's Production

Women are second-class citizens in rural India.¹⁶² Although they may not be directly involved in the “productive” labor of a small farm,¹⁶³ they are nonetheless integral to its functioning. In addition to “procuring clean water . . . and cultivating home gardens to supplement the family diet,”¹⁶⁴ women perform significant amounts of outdoor agricultural work in their family’s fields.¹⁶⁵ Despite this, “women are not seen as farmers—only as farmers’ wives,”¹⁶⁶ which undermines the extent to which they are able to take a central role not only in their own development, but also in the development of their communities.¹⁶⁷

Significantly, because rural Indian women are already societally relegated to the sphere of “home economics,”¹⁶⁸ they tend to take an active, visible role in the management of their landholdings only when the (male) head of the house is incapacitated.¹⁶⁹ Because they must juggle “intense agricultural work in addition to housework and caring of livestock,”¹⁷⁰ the women who end up taking on primary decision-making roles subject themselves to unique pressures that male farmers in rural India need never face. But because they do face these unique risks and pressures, and because their successful navigation of these pressures is likely to result in greater community returns,¹⁷¹ rural Indian women are provided with special assistance from state and local governments.

C. The Inadequacy of State Remuneration

It has been noted already that state and national governments are willing to try and help alleviate the capital pressures on farmers and their families. At the state level, governments have offered to provide economic assistance to the bereaved family members of farm suicide victims;¹⁷² at the national level, the possibility of increasing

162. *Id.* at 33 (“From ownership to land and access to wage work to fulfilling household responsibilities, women’s position is continuously being determined in relation to the patrilocal, patrilineal family, in a society that is deeply segregated with class and caste divisions.”).

163. *Id.* at 36.

164. Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 727.

165. PADHI, *supra* note 11, at 48.

166. *Id.* at 44.

167. *See supra* notes 63–64 and accompanying text.

168. Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 727.

169. PADHI, *supra* note 11, at 40.

170. *Id.*

171. IFPRI, *WOMEN STILL THE KEY*, *supra* note 65, at 2.

172. G.O.Ms. NO. 421, *supra* note 158.

agricultural investments and raising minimum crop prices to improve farmers' income has been discussed.¹⁷³ In both instances, the government is clearly taking action with the intent of keeping smallholder households as far away from the debt cycle as possible. However, because these debt-alleviation strategies do not question the underlying logic of high-production agriculture,¹⁷⁴ their ability to truly lift farmers out of poverty is limited.

In order to be truly successful, such strategies—especially those that involve providing compensation to farmers' families—need to take into specific consideration the actual nature of the constraints imposed upon smallholders. It has already been noted that Andhra Pradesh's G.O. 421 does not make funds available for the repayment of dowry-related debt when there is a strong correlation between that debt and the "social humiliation eventually leading to suicide."¹⁷⁵ Dowry debts are often excruciatingly high, and the profits upon which farming families generally rely are swallowed up by debts associated with farming costs.¹⁷⁶ As such, it is easy to imagine how the need to repay dowry loans might be seen as the straw on the proverbial camel's back. However, where a "suicide verification and certification" committee's investigations show that dowry payments constituted the majority of a farmer's debt or worries about his debt, then it is wives and daughters and sons that will be saddled with the cost of repaying it.

Rules such as G.O. 421 utterly fail to take into consideration the fact that the person whose name is on a deed is not always the farmer who works the land, and as a result is not always the farmer who has taken his or her life.¹⁷⁷ This is another realm in which the devaluation of women's labor in rural India comes into play. Because state officials who implement G.O. 421 have internalized the traditional, "insular" view of women's roles in rural society,¹⁷⁸ some of them categorically deny that women who are obliged to take on the primary role

173. *Farmers' Suicide a Serious Issue, but Numbers Declining: Sharad Pawar*, TIMES OF INDIA (Oct. 9, 2012), <http://www.im4change.org.previewdns.com/latest-news-updates/farmers039-suicide-a-serious-issue-but-numbers-declining-sharad-pawar-17499.html> [hereinafter *Farmers' Suicide a Serious Issue*].

174. See ESCOBAR, *supra* note 88, at 162.

175. G.O.MS. NO. 421, *supra* note 158; see also *supra* notes 156–58 and accompanying text.

176. PADHI, *supra* note 11, at 63. The average loan amount to cover wedding and dowry expenses easily exceeds INR 100,000 and interest rates on non-institutional loans often exceed 20 percent per annum. *Id.* at 62–63.

177. Uma Sudhir, *Women Farmers Who Commit Suicide Ignored by State*, NDTV.COM (Jan. 8, 2012), <http://www.ndtv.com/article/india/women-farmers-who-commit-suicide-ignored-by-state-164440>.

178. *Id.*

in a small farming household had even done so in the first place.¹⁷⁹ By suggesting that the families of women who commit suicide because of the pressures associated with farming are not eligible to receive government aid, those officials who espouse this position ignore entirely the fact that women take on these prominent family roles only under “dire conditions and tragic circumstances.”¹⁸⁰ As a result, even when officials who are charged with implementing G.O. 421 do so in an efficient way,¹⁸¹ the “cabining” of Indian women into an exclusively “home economic” role doubly disenfranchises the families of suicide victims by taking away not only their last means of productive capacity,¹⁸² but also any ability that they may otherwise have to cope with that loss.

D. Problems with CEDAW-Compliant Women’s Support Mechanisms

CEDAW clearly has an important role to play in establishing positive rights for rural women that help them to rise above the limited role that they are given in traditional patriarchal systems. Indeed, Article 14 calls for states to ensure that women have greater access to “self-help groups and co-operatives in order to obtain equal access to economic opportunities” and “equal access to agricultural credit and loans [and] marketing facilities.”¹⁸³ CEDAW enforces these aspirational clauses by imposing a strong burden for domestic incorporation.¹⁸⁴ In addition to this incorporation requirement, Article 18(1) of CEDAW establishes that states must report to the Secretary-General once every four years after ratification on “the legislative, judicial, administrative or other measures which they have adopted to give effect to the provisions of the present Convention.”¹⁸⁵ CEDAW’s strength as a tool for rights enforcement was enhanced by the adoption of the Optional Protocol,¹⁸⁶ which includes a procedure by which

179. *Id.*

180. PADHI, *supra* note 11, at 40.

181. *Implement GO 421, Says HRF*, HINDU (June 25, 2012), <http://www.thehindu.com/todays-paper/tp-national/tp-andhrapradesh/article3567744.ece> (noting that “only nine families [out of 54 cases] have got interim financial assistance under GO 421”).

182. Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 727.

183. CEDAW, *supra* note 29, at arts. 14(2)(e), (g).

184. Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 733 (“States that have ratified or acceded to CEDAW ‘are obliged to undertake all legislative and other appropriate measures to eliminate discrimination against women without delay.’”).

185. CEDAW, *supra* note 29, at art. 18(1).

186. Optional Protocol to the Convention on the Elimination of All Forms of Discrimination Against Women, G. A. Res. 54/4, U/N.DOC.A/54/49 (2000) (entered into force Dec. 22, 2010) [hereinafter CEDAW, Optional Protocol].

individuals or groups can bring complaints against a state party for behavior that is not “compatible with the provisions of the Convention.”¹⁸⁷ Though the Committee on the Elimination of Discrimination against Women (the Committee) has only issued decisions on ten complaints since the passage of the Optional Protocol, none of which pertain to Article 14,¹⁸⁸ and though its recommended changes are not legally binding, the existence of such a rights-based dispute mechanism helps to give CEDAW teeth as an international instrument.

India has taken its CEDAW obligations quite seriously. Eighty-four percent of India’s rural self-help groups (SHGs) are restricted to women’s membership, and India has reported that their usage has enabled “nearly two million poor, rural families to gain access to the ‘formal banking system.’”¹⁸⁹ In addition, the Rural Women’s Development and Empowerment Project has disbursed “nearly [INR] 3,904 million . . . to about 1.1 million SHGs,” of which about 90 percent are “exclusive women’s groups.”¹⁹⁰ Although it is true that as of 2005, only 14.5 percent of the loans disbursed through these microcredit agencies went to women looking to borrow less than INR 200,000, the fact that such agencies and self-help groups exist at all could, to a limited degree, help to explain why less women in rural India appear to commit suicide on account of their debt burdens.¹⁹¹

To the extent that this statistical difference can be explained by such government initiatives, this could be because co-operatives and SHGs have a clear and significant role to play in rural development processes.¹⁹² So too do women, who have a greater impact on community development in rural areas than their male counterparts.¹⁹³ Why is it still the case, then, that India’s farmer suicide crisis has seen such little abatement?

The first part of the problem may be that there is a lack of rural infrastructure to help SHGs and their female participants to communicate with each other beyond the borders of their immediate

187. *Id.* at art. 2.

188. Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 734 n.2.

189. *Id.* at 740.

190. Convention for the Elimination of All Forms of Discrimination Against Women, *Combined Second and Third Periodic Reports of States Parties: India*, ¶ 78, U.N. Doc. CEDAW/C/IND/2-3 (Oct. 19, 2005), available at <http://www.un.org/womenwatch/daw/cedaw/cedaw36/India2-3E.pdf> [hereinafter *India, Combined Reports*].

191. NCRB 2012, REPORT, *supra* note 8, at 201. Only 1,956 women who were employed in the farming/agriculture sector were officially reported as suicides, in comparison to the 12,071 men in that same employment bracket. However, the problems associated with these official statistics has already been addressed *supra* notes 8–10 and accompanying text.

192. Vanegas & Pruitt, *supra* note 80, at 275.

193. IFPRI, WOMEN: STILL THE KEY, *supra* note 65, at 2.

localities.¹⁹⁴ Such infrastructure would promote intra- and even inter-regional knowledge sharing, which could actually prevent the ecological disaster of running out of domestically grown, non-hybridized, low-capital seeds for crops.¹⁹⁵ Indeed, the increasing affordability and availability of cell phones and cell towers in rural India could be integral to improving the autonomy and participation of women in local communities.¹⁹⁶ Numerous studies have shown that cell phone availability can improve women's lives by increasing access to health-care, markets, economic independence, and even mitigating domestic violence.¹⁹⁷ Additionally, because these kinds of technologies could be adopted by SHGs as a whole rather than by specific farming families, the risk that economic differences might be exacerbated by technological adoption is lessened.

Even if the Indian government were able to improve rural telecommunications infrastructure, however, focusing on improving women's access to resources like cell phones and microcredit seems to run the risk of inadvertently ignoring whether poor male farmers have similar access to similar resources. It is significant in this regard that the Mann Deshi Mahila Group, which includes the "largest micro-finance bank in Maharashtra state,"¹⁹⁸ runs its entire program "by and for women."¹⁹⁹ Although the number of clients that use the resources of the Mann Deshi Bank could indicate only that women are more likely to use microcredit as a source of loans than men are, it may still be the case that they do so merely because there are sources of microcredit available to them. Another reason why the Mann Deshi Bank has so many clients may be because it provides them with many ancillary development-related resources, including "financial and business management training, community radio, and women's health and farming workshops."²⁰⁰ These are all provided under the auspices of its subsidiary NGO, the Mann Deshi Foundation.²⁰¹ These farming

194. Vanegas & Pruitt, *supra* note 80, at 292–93 (explaining how "technology can play a critical role in closing the opportunity gap . . . by fostering networking among women in different communities and . . . facilitating instruction that may otherwise be accessible only in metropolitan regions").

195. BITTER SEEDS, *supra* note 10, at 00:44:40–00:44:59 ("[B]ut [farmers] don't realize that the next village has [given up on its traditional seed saving], and the next, and the next. And before you know it, in one season, an entire area has no local seed of any local crop left.").

196. See Nilanjana S. Roy, *Mobile Phones Offer Indian Women a Better Life*, N.Y. TIMES (May 22, 2012), <http://www.nytimes.com/2012/05/23/world/asia/23iht-letter23.html>.

197. *Id.*

198. Vanegas & Pruitt, *supra* note 80, at 314.

199. *Who Are We*, MANN DESHI MAHILA BANK, <http://www.manndeshi.org/index.html> (last visited Jan. 10, 2014).

200. Vanegas & Pruitt, *supra* note 80, at 314.

201. *Id.*

workshops help women to produce high crop yields by offering soil-testing facilities and composting education, advice on how to run a cost-efficient dairy, as well as mobile veterinary services where women are taught how to care for their livestock.²⁰²

There is no doubt that women require, and can greatly benefit from, access to women's-only microcredit and agricultural training programs, and as such there is no doubt that their access to such exclusive resources should be maintained. But to the extent that male smallholder farmers are forced to rely on institutional loans and moneylenders in order to fund their work, the wives, mothers, daughters, and sisters of such farmers end up caught in the same debt-crises as their male relatives. As a result, they run the risk of having to face the aftermath of a farmer suicide.²⁰³ That institutions like the Mann Deshi Bank can help them in such circumstances ignores the fact that the suicides should not be occurring in the first place.

Despite the promise of CEDAW and the Indian government's attempts to be in compliance with it, when women do not have a strong decision-making voice in their own homes, mere participation in these potentially useful SHGs may not be enough to ensure that new knowledge and reasonable debt management skills penetrate individual households. Where women are obliged to take on all the duties of a household because their husbands or fathers are incapacitated or dead, they may not even have the time or energy to dedicate towards taking advantage of the resources that may be available. To that degree, the lack of availability of non-gender-specific support systems that male farmers might be able to take advantage of could be contributing to intra-regional knowledge and wealth disparities in large swathes of rural India. As such, the expansion of resources like those offered by the Mann Deshi Foundation to entire rural communities might help to mitigate the suicide crisis.

Because so many of the Indian government's gendered agricultural initiatives arise out of CEDAW's Article 18 reporting requirements, it is clear that at least some of the positive rights enumerated in the Convention are on their way towards being realized.²⁰⁴ However, the fact that India has funded over a million SHGs across rural India without taking any further care to ensure the survival and efficacy

202. *Farming Programs*, MANN DESHI FOUND., <http://www.mannadeshifoundation.org/farming.html> (last visited Jan. 10, 2014).

203. See *infra* Parts III.B and III.C for what this may entail.

204. See, e.g., Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 743 (national education programs "aimed specifically at rural girls' primary education . . . succeeded in bringing about ninety percent of rural children within one kilometer of a primary school").

of such organizations suggests that they have done so merely because Article 14(2)(e) of CEDAW indicates that such institutions should be established. As a result, these SHGs are less able to provide useful help to those whom they are intended to serve.

Having said that, the possibility for SHGs to facilitate communication between female farm workers in different parts of the country poses exciting prospects for the future of Indian smallholder agriculture, and the provision of reliable telecommunications infrastructure could be one of the keys to a watershed change in the way smallholder farms conduct their business. Ultimately, however, while the focus on providing microcredit to women could help widows and mothers to avoid permanent and endemic debt, perhaps the most productive way to deal with both the suicide crisis and help the rural women who suffer because of it is to dissolve that which causes the debt in the first place.

IV. POSSIBLE MEANS TO ALLEVIATE THE CRISIS

“The true India is to be found not in its few cities, but in its seven hundred thousand villages. If the villages perish, India will perish too.”²⁰⁵ Today, India’s villages are perishing. The commodification of the land and of women’s bodies has cost the men and women of rural India a heavy price,²⁰⁶ and they will continue to pay it unless certain changes are made to the cultural and economic reality in which they live. This Part will show that with some adjustments to how India implements its rural development policy, the rights and needs of those who depend on its agricultural sector can be upheld and preserved.

A. Recognition of Women’s Roles in Agricultural Households

Women’s agricultural labor is “invisible,”²⁰⁷ and their ability to contribute to decision-making processes goes all but ignored. To the extent that a woman can be said to confer real value in a traditional rural Indian household, it is because she may be a useful source for young men’s families to obtain a “fat dowr[y]”²⁰⁸ and an extra pair of hands to perform the “back-breaking domestic labor” that necessarily attends rural life.²⁰⁹

205. Satish Kumar, *Gandhi’s Swadeshi—The Economics of Permanence*, <http://caravan.squat.net/ICC-en/Krrs-en/ghandi-econ-en.htm> (last visited Jan. 10, 2014).

206. See *supra* notes 6–7 and accompanying text.

207. PADHI, *supra* note 11, at 39.

208. *India’s Unwanted Girls*, *supra* note 21.

209. PADHI, *supra* note 11, at 39.

Dowry, then—one of the most insidious manifestations of patriarchal rural culture—exploits poor women and their families in order to generate large amounts of excess income, often for the benefit of those families who would be capable of surviving without it. In some ways, this mimics the process by which the commodification of agriculture has destroyed traditional, sustainable farming practices.²¹⁰ By turning women's lives and women's bodies into a mere commodity to be sold and bought, the dowry system devalues the unique, individual contributions that young women might otherwise be able to make in their communities. Similarly, the homogenization of nature on which all industrial agriculture is based “leads to [a] destruction of diversity” and local knowledge that ultimately results in “indebtedness, of peoples and nations.”²¹¹

If the dowry system persists even despite the fact that it was illegalized a full half-century ago,²¹² it is because there has not been a sufficient change in how rural India views its women. This Note thus proposes that rural women be viewed as providers of sustenance rather than as producers of profit,²¹³ in order to emphasize the integral role that they play in rural life. Such a view allows women to be seen not as subjects or victims of economic and cultural processes that are outside their control, but rather as active participants in the sustenance and development of their own communities. Indeed, when the rights of women are specifically addressed by local and national state- and non-state initiatives, both men and women benefit. For example, one aspect of India's education policy involved increasing retention of females in primary schools.²¹⁴ By opening a number of schools to serve this purpose, the initiative successfully brought 90 percent of rural children (both boys and girls) within half a kilometer of a primary school,²¹⁵ and thus access to a free primary education.

Similarly, a view of rural women that takes into account the value of their agricultural contributions could enhance their decision-making capacity within households. As a result, women's participation in SHGs like the Mann Deshi Foundation would be able to improve farm efficiency even in those instances where women are not the primary producers.²¹⁶ If the Mann Deshi Foundation were to incorporate

210. See VANDANA SHIVA, *STAYING ALIVE: WOMEN, ECOLOGY AND DEVELOPMENT* 45 (1989).

211. *Id.*

212. *India's Unwanted Girls*, *supra* note 21.

213. See SHIVA, *supra* note 210, at 42.

214. India, Combined Reports, *supra* note 190, at ¶¶ 192–96.

215. Pruitt, *Migration, Development, and the Promise of CEDAW*, *supra* note 80, at 743.

216. See *supra* notes 198–202 and accompanying text for more information regarding the work of the Mann Deshi Group.

some type of local seed banking or seed saving mechanism into their already-broad range of available rural management training programs, that, too, would certainly contribute to an increase in rural households' economic security.

Finally, if it is possible for women to be viewed in rural India on the basis of their own merit and not on their potential value to a man's family, perhaps their purchase and sale will finally end. This would remove one of the major causes of rural debt altogether.²¹⁷

B. National Approaches to Improving Farmers' Economic Security

The other main cause of the inescapable rural debt cycle faced by smallholder farmers is that when smallholders engage in cash-crop agricultural practices, they find themselves making large capital investment for relatively low revenue.²¹⁸ This is because the logic of industrialized agricultural production favors large-scale farming.²¹⁹ In general, the nature of wealth distribution in rural India is such that only those farmers who already have the most assets can afford to engage in technology-intensive agricultural production.²²⁰ As such, those farmers with few assets in terms of land or actual capital are forced into debt in order to remain competitive in the global capitalist economy, and those debt cycles also have adverse impacts on women.²²¹ Because large agribusiness conglomerates like Monsanto tend to deal specifically with the Indian federal government when it comes to the issue of setting rural development policy,²²² it is the federal government that bears the greatest responsibility and the greatest ability to make systemic adjustments to those elements of the nation's agricultural production system that have resulted in crisis and farmer death. Additionally, because women suffer disproportionately when their male relatives commit suicide,²²³ there is an argument to be made that the Indian government could use debt-mitigation initiatives in its reports to the Committee on the Elimination of Discrimination Against Women.

Specifically, this Note argues that because the purchase and planting of specially designed hybrid seeds constitutes a large part of the cost of smallholder farming, knowledge of the PPVFRA's farmers'

217. PADHI, *supra* note 11, at 63.

218. Yapa, *supra* note 34, at 103–05.

219. BITTER SEEDS, *supra* note 10, at 01:20:12.

220. Freebairn, *supra* note 45, at 267.

221. See *supra* Parts III.A and III.B (discussing how rural debt crises affect the lives of rural Indian women).

222. See *supra* notes 138–41 and accompanying text.

223. See *supra* Parts III.A & III.B.

rights provisions should be more widely spread amongst the agricultural community.²²⁴ By allowing farmers to save, use, exchange, and share even seeds that are otherwise protected under the PPVFRA,²²⁵ the Act mitigates at least some of the capital costs associated with the adoption of genetically modified, high-yield plant varieties. And while seed producers may argue (as Monsanto recently has) that “restrictions on reproduction, use and transfer are essential to protect the company’s investment in its patented technology,”²²⁶ concerns about patent exhaustion are not present in the context of the PPVFRA. In fact, if seed companies fear that their biotechnology will be used by farmers to turn a profit, the PPVFRA should cause them no concern: farmers are prohibited in India from re-selling seed varieties protected under the Act.²²⁷ Additionally, seed companies’ concerns about recovering their “research and development investment through multiple transactions over many years”²²⁸ is perhaps a slightly disingenuous argument when the discussion of pest-resistant crop strains is in play, as it is in India.²²⁹ To the extent that seed companies express a real concern about research and development compensation, it may be possible for the Indian government to compensate holders of plant breeders’ rights for the anticipated loss of profit that could result from the protection of farmers’ rights.²³⁰ By doing so, the government would be able to maintain those aspects of the PPVFRA that protect the rights of farmers to practice affordable, sustainable agriculture, while also acknowledging the fact that the biotechnological industry also has high capital costs on which it needs to make returns. This approach could allow the Indian government to protect its farmers without finding itself in violation of its TRIPS obligations, or alienating any party (state or non-state) that could otherwise be useful in developing new trade relationships.²³¹

224. See, e.g., PPVFRA, *supra* note 131, at art. 39(1)(iv).

225. *Id.*

226. Brief for Respondents at 4, *Bowman v. Monsanto Co.*, No. 11-796 (S. Ct. filed Jan. 16, 2013) [hereinafter Brief for Respondents, *Bowman v. Monsanto Co.*].

227. PPVFRA, *supra* note 131, at art. 39(1)(iv).

228. Brief for Respondents, *Bowman v. Monsanto Co.*, *supra* note 226, at 13.

229. M. R. Subramani, *Bollgard III May Come to India Only Around 2020*, HINDU BUSINESS LINE, (Nov. 16, 2011), http://www.thehindubusinessline.com/industry-and-economy/agri-biz/article2633343.ece?ref=wl_industry-and-economy. Because pests eventually develop resistance to pest-resistant crops, seed companies who invest in pest-resistance research essentially create for themselves an ongoing, self-perpetuating market even in the absence of multiple transactions. See Brief for Respondents, *Bowman v. Monsanto Co.*, *supra* note 226, at 13; see also *supra* note 145 and accompanying text.

230. Although future studies may be able to show the extent to which these costs can be anticipated, none were immediately available during the writing of this Note.

231. See *supra* note 141 and accompanying text.

While mitigating initial capital costs for smallholder farmers could be one way to improve their cash flow, the other way—as has been suggested by some experts—would be to increase minimum support prices of crops in order to help supplement farmers' income.²³² Though both of these solutions are likely to increase farmer profits and decrease farmer debt, they both come at the cost of increasing government spending. And while ensuring that the amount of rural debt decreases is incredibly important, it is equally important to consider the possible efficiency concerns associated with doing so. In this regard, the only long-term way to correct the rural debt crisis is to prohibit the use of genetically modified crops altogether, thereby allowing farmers to rely on tried-and-tested sustainable methods of agricultural production.

This is not a decision that the Indian government would take without precedent. Eight E.U. member states have already banned the cultivation of genetically modified crops,²³³ and since mid-2012, both the Maharashtra state government and the Indian Supreme Court have called into question the worth of continuing genetically modified crop cultivation.²³⁴ Given the ongoing controversy that has surrounded the usage of Bt cotton,²³⁵ it would not be unjustifiable for the central government to impose a ban. However, given that Monsanto (which owns and licenses the Bt technology) has an influential voice in India's agricultural governance,²³⁶ this is unlikely to occur.

Having said that, the goal of banning genetically modified crops throughout the entire country may yet be achievable. The Indian Supreme Court has very few restrictions on legal standing where it recognizes the existence of a “public interest action, [where] the proceedings cut across and transcend . . . traditional forms and

232. *Farmers' Suicide A Serious Issue*, *supra* note 173.

233. Jeannie Stokowski-Bisanti, *Eight European Countries Ban Genetically Modified Crops, Poland the Latest*, EXAMINER (Jan. 8, 2013), <http://www.examiner.com/article/eight-european-countries-ban-genetically-modified-crops-poland-the-latest>.

234. *Maharashtra Bans Bt Cotton Seeds*, TIMES OF INDIA (Aug. 9, 2012, 5:16 PM), articles.timesofindia.indiatimes.com/2012-08-09/india/33118430_1_cotton-seeds-bt-cotton-cotton-growing-states (describing how the Maharashtrian government has banned entirely the sale and distribution of Bt cotton seeds throughout the state, replacing them with traditional Indian cotton seeds); *Panel Recommends 10-Year Moratorium on Bt Crop Trial*, ECON. TIMES (Oct. 19, 2012, 5:02 AM), http://articles.economictimes.indiatimes.com/2012-10-19/news/34584274_1_trials-of-gm-crops-aruna-rodrigues-field-trials (explaining that a Supreme Court-appointed panel “unanimously recommended” a ten-year moratorium on field trials of all genetically modified food crops until such time as adequate monitoring mechanisms are put in place).

235. EVERY THIRTY MINUTES, *supra* note 6, at 1.

236. US-INDIA AGRICULTURE KNOWLEDGE INITIATIVE: BOARD MEMBERS, *supra* note 141.

inhibitions.”²³⁷ Indeed, the aforementioned Supreme Court case was filed by “public spirited individuals possessing requisite expertise.”²³⁸ While the plaintiffs were able to obtain a favorable decision on the merits of their case, it is less clear whether a person bringing a public interest suit on behalf of rural farmers against Monsanto would have a meritorious claim. Nonetheless, recent precedent suggests at the very least that they would be able to have their case heard on the merits, which opens the door for public-spirited individuals to take direct action on behalf of the farmers who resort to suicide as a means to escape the pressures of the global agricultural system.

C. Intractability of Change in the International IPR Framework

Unfortunately, it is unlikely that the logic of the international agricultural system and the IPR regime that supports it will be able to change in order to accommodate the needs of the world’s small-holder farmers. The rights of plant breeders are paid special attention in countries that permit genetically modified crop cultivation,²³⁹ and there are few incentives in place for developing countries to stop using such technology.²⁴⁰

In that sense, the most that we can hope for is that agribusiness conglomerates like Monsanto will, in their approach to rural development, take into serious consideration the humanitarian impulses that initially drove the development of their rainmaking technology.²⁴¹ If they did so, they might be more amenable to the prospect of lending a helping hand to farmers who rely on the availability of affordable inputs in order to maintain their livelihoods.

CONCLUSION

Agribusiness conglomerates continue to put expensive hybrid seed varieties on the market; poor farmers continue to enter swathes of debt in order to buy them, and continue to commit suicide when they can no longer maintain their existence in a poverty-debt cycle. In rural

237. John E. Bonine, *Standing to Sue: The First Step in Access to Justice* (1999), <http://www2.law.mercer.edu/elaw/standingtalk.html> (citing *Sheela Barse v. Union of India*, (1988) 4 S.C.C. 226, 234 (India)).

238. *Aruna Rodrigues & Ors. v. Union of India & Ors.*, (2012) 5 S.C.C. 336 (India), available at <http://indiankanoon.org/doc/126946252/>.

239. See, e.g., Eric Holt-Giménez, *Monsanto v. Bowman: The Master’s Law*, HUFFINGTON POST (Feb. 25, 2013), http://www.huffingtonpost.com/eric-holt-gimenez/monsanto-v-bowman-the-mas_b_2721776.html.

240. See *supra* notes 139–45 and accompanying text.

241. Gillis, *supra* note 45.

India, the “invisible”²⁴² women who often run and always support smallholder farms are consequently the victims of a process of industrial agriculture that not only devalues traditional modes of agricultural production, but also destroys the lives and livelihoods of those farmers that once depended on them.

This Note has explored how the logic of capitalist agricultural production has penetrated all levels of discourse, from the international intellectual property regime all the way down to the small subsistence plots that provide so much of the world’s agricultural output.²⁴³ It has discussed how that logic intersects with the patriarchal structure of rural India, which in turn throws rural women into a state of poverty and insecurity that can be very difficult to escape.

But it has also shown how a focus on “the connection of women’s lives, work and knowledge with the creation of wealth”²⁴⁴ may help smallholder farmers to rise above the tribulations of their day-to-day existences. An emphasis on the regenerative and nurturing aspects of rural life necessarily includes placing women and sustainable agriculture at the center of the development discourse. Such a focus shows us how smallholder farmers can exploit the global capitalist system in which they live and work, and opens the door for the development and establishment of a workable, practical alternative to the current regime.

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242. PADHI, *supra* note 11, at 39.

243. Grainger-Jones, *supra* note 3.

244. SHIVA, *supra* note 210, at 24.

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