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Rethinking the Work of Geographical Indications in Asia: Addressing Hidden Geographies of Gendered Labor

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1 INTRODUCTION: HOPES FOR GEOGRAPHICAL INDICATIONS AND ACKNOWLEDGING THEIR LIMITS

Geographical indications (GIs)¹ are widely perceived to provide prospects for new forms of rural development, community autonomy, preservation of cultural traditions, and even the conservation of biological diversity when

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¹ The 1994 Trade-Related Aspects of Intellectual Property Agreement (TRIPS Agreement) established GIs as a distinctive category of intellectual property. Indications of source, appellations of origin, denominations of origin, and collective trademarks and certification marks are herein collectively denoted as marks indicating conditions of origin (MICOs) to reflect this broader field of legal vehicles. In some common-law jurisdictions, recognition is possible without registration if the MICO is an indication of source for consumers. Some countries in the Global South employ the term GI as a generic name for a new form of protection established by new legislation to comply with the TRIPS Agreement. Because the TRIPS Agreement leaves discretion with member countries regarding the means and forms of such protections, countries may name their protections GIs, but utilize governance frameworks historically applied to denominations of origin or collective trademarks, for example. *See* Article 22(1), Agreement on Trade-Related Aspects of Intellectual Property Rights, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, LEGAL INSTRUMENTS -RESULTS OF THE URUGUAY ROUND, vol. 31, 33 I.L.M. 1125 (1994) [hereinafter TRIPS Agreement]. They may also fuse elements from diverse legal vehicles and add new ones. *See* DANIELE GIOVANNUCCI ET AL., *GUIDE TO GEOGRAPHICAL INDICATIONS: LINKING PRODUCTS AND THEIR ORIGINS* 8 (2009), available at www.intracen.org/Guide-to-Geographical-Indications-Linking-Products-and-their-Origins/. Many countries have entrenched contemporary GIs as forms of state property when historically they would have been held by collective stakeholders such as producer associations that upheld quality controls and were responsive to local conditions. Moreover, some states in Asia have allowed traders to use them as if they were producers, which may alienate their governance from those who create the goods that bear them. *See*

the production of goods encourages the stewardship rather than the depletion of the natural resources from which they are made.² They may also provide an effective means to protect traditional environmental knowledge (TEK) and traditional cultural expressions (TCEs),³ enable the sustainable use of genetic resources, contribute to maintaining agricultural landscapes, and utilize TEK that might otherwise be lost.⁴ Consequently, the European Union has promoted their extension across the Global South as a rural development strategy that, not incidentally, supports European interests in global trade.⁵ Asian countries have seen in GIs a means to protect artisanal knowledge,⁶ viewing human factors such as producer know-how, skills, and practices as linked to a particular territory and its means of production. The broader group of legal vehicles we refer to as marks indicating conditions of origin (MICOs) are attractive to development practitioners who hope to prevent social inequalities by creating community controls over economic activities that tie rural areas

N. S. Gopalakrishnan, Prabha S. Nair, & Arayind K. Babu, *Exploring the Relationship between Geographical Indications and Traditional Knowledge: An Analysis of the Legal Tools for the Protection of GIs in Asia* (Geneva: International Centre for Trade and Sustainable Development, Working Paper, 2007).

² See, e.g., PHILIPPE CULLET, INTELLECTUAL PROPERTY PROTECTION AND SUSTAINABLE DEVELOPMENT (2005).

³ For traditional knowledge (TK), see, Teshager W. Dagne, *Harnessing the Development Potential of Geographical Indications for Traditional Knowledge-based Agricultural Products*, 53 J. OF INTELL. PROP. L. & POL'Y 441 (2010); Shivani Singhal, *Geographical Indications and Traditional Knowledge*, 3 J. OF INTELL. PROP. L. & POL'Y 732 at 738 (2008); David Downes, *How Intellectual Property Could Be a Tool to Protect Traditional Knowledge*, 25 COLUM. J. ENVTL. L. 253 at 281 (2000); and sources cited in Nicole Aylwin & Rosemary J. Coombe, *Marks Indicating Conditions of Origin in Rights-Based Sustainable Development*, 47 U.C. DAVIS L. REV. 753, at 773–74 (2014). For traditional cultural expressions (TCEs), see, MICHAEL BLAKENEY ET AL., EXTENDING THE PROTECTION OF GEOGRAPHICAL INDICATIONS: CASE STUDIES OF AGRICULTURAL PRODUCTS IN AFRICA 120–34 (Michael Blakeney et al. eds., 2013); DAPHNE ZOGRAFOS, INTELLECTUAL PROPERTY AND TRADITIONAL CULTURAL EXPRESSIONS 176–77 (2010).

⁴ JORGE LARSON GUERRA, RELEVANCE OF GEOGRAPHICAL INDICATIONS AND DESIGNATIONS OF ORIGIN FOR THE SUSTAINABLE USE OF GENETIC RESOURCES (2007), available at http://underutilized-species.org/Documents/PUBLICATIONS/gi_larson_lr.pdf. See also, JORGE LARSON GUERRA, GEOGRAPHICAL INDICATIONS, IN-SITU CONSERVATION AND TRADITIONAL KNOWLEDGE (2010) ICTSD Policy Brief No. 3, available at <http://ictsd.org/i/publications/100736/>.

⁵ Rosemary J. Coombe, Sarah Ives, & Daniel Huizenga, *Geographical Indications: The Promise, Perils and Politics of Protecting Place-Based Products*, in THE SAGE HANDBOOK OF INTELLECTUAL PROPERTY, 207, 210 (Mathew David & Debra Halbert eds., 2014); Cerka Bramley & Estelle Biénabe, *Why the Need to Consider GIs in the South?*, in DEVELOPING GEOGRAPHICAL INDICATIONS IN THE SOUTH 1–14 (Cerka Bramley, Estelle Biénabe, & Johann Kirsten eds., 2013).

⁶ Delphine Marie-Vivien, *The Protection of Geographical Indications for Handicrafts: How to Apply the Concepts of Natural and Human Factors to All Products*, 4 WIPO.J. 191 (2012).

into larger markets and forge collective rights indivisible from locality.⁷ For rural economies, GIs are extolled as providing “a physical and conceptual structure for affirming and valuing the unique socio-cultural and agro-ecological characteristics of a particular place”⁸ which may have spillover effects that contribute to regional branding and foster tourism.

Nonetheless, there is considerable evidence that poorly designed GI systems negatively transform the conditions of production they are celebrated as sustaining.⁹ Such systems have a tendency to conflate nature and culture and to uniquely depoliticize relations of production in their regions of application. The discourse advocating their adoption and celebrating their use relies on a “social imaginary” of place-based products that projects a harmonious community, represented “holistically, possessing singular traditions and rooted in a particular place characterized by a naturally bounded and distinctive ecosystem.”¹⁰ This social imaginary binds traditions to territory through an Orientalist lens in which peoples collectively share narratively romanticized bonds to a natural environment shaped by their labors into an authenticated place. The use of GIs tends to imbue products with distinct attributes that simply reflect local biodiversity and cultural distinction, both presumed to be isomorphic with a community. Thus a stable, unified, and harmonious place is ideally imagined, represented, and, ultimately perhaps, even experienced. In neoliberal terms, this is a “win-win” scenario where tradition, culture, and knowledge are simply integrated into global markets and legally protected in a global trading system. This social imaginary presumes a unified community that will receive uniform benefits from its use, a scenario which usually has little factual basis, as we have explored elsewhere.¹¹

Diverse stakeholders in supply chains are assumed to all share similar interests in developing a region’s reputation through the marking of distinctive goods. Nonetheless, GI premiums are rarely shared equitably, particularly in

⁷ Aylwin & Coombe, *supra* note 3, at 777. ⁸ GIOVANNUCCI ET AL., *supra* note 1, at 8.

⁹ Sarah Bowen & Ana Valenzuela Zapata, *Geographical Indications, Terroir, and Socioeconomic and Ecological Sustainability: The Case of Tequila*, 25 J. RURAL STUD. 108 (2009); Tomer Broude, *Taking “Trade and Culture” Seriously: Geographical Indications and Cultural Protection in WTO LAW*, 26 UNIV. OF PENN. J. OF INTL. ECON. LAW 623 (2005); ANITA SAY CHAN, NETWORKING THE PERIPHERIES: TECHNOLOGICAL FUTURES AND THE MYTH OF DIGITAL UNIVERSALISM 23–52 (2014).

¹⁰ Rosemary J. Coombe, Sarah Ives, & Daniel Huizenga, *The Social Imaginary of Geographical Indicators in Contested Environments: The Politicized Heritage and the Racialized Landscapes of South African Rooibos Tea*, in THE SAGE HANDBOOK OF INTELLECTUAL PROPERTY 224, 225 (Mathew David & Deborah Halbert eds., 2014).

¹¹ *Id.*; Rosemary J. Coombe & Nicole Aylwin, *Bordering Diversity and Desire: Using Intellectual Property to Mark Place-based Products*, 43 ENV’T & PLAN. A: SOC’Y & SPACE 2027 (2011).

the Asian context, where traders are treated as if they are producers and constitute the most powerful actors in the value chain.¹² As Basole's fieldwork in the Banaras textile industry revealed, artisans see very little of the GI premium and the system does little to assist those facing destitution.¹³ It is interpreted in a way that imposes outside notions of authenticity, prevents the community from innovating, and is biased toward distributing value toward merchants and traders.¹⁴ GIs imposed from the top-down tend to favor more powerful actors. Benefits rarely trickle down to small producers or individual artisans; traders and master weavers with bargaining power in the supply chain are often the primary beneficiaries of increased revenues in a cottage industry in which it is very difficult for traditionally non-weaving castes to find any access. Consumers often have little or no idea of who the producer is, and producers have scant information about how their products are marketed.¹⁵

Such limitations of GIs in practice are not unique to the South Asian context. State-driven GI strategies that focus primarily upon increased productivity and export earnings tend to further deprive small producers and privilege industrial elites wherever they are introduced.¹⁶ Even in the European context, experts caution against the general promotion of GIs and urge attention to their governance when assessing their capacities to propel equitable rural development.¹⁷ The oldest appellations of origin were developed to protect aristocratic traditions and continue to reflect class-based privilege, concentrate control over governance in small elites, restrict the upward mobility of smallholders, discourage the formation of or supplant cooperatives, and entrench poor agricultural working conditions.¹⁸ Many MICO regimes have reduced rather than increased local biological and cultural

¹² Gopalakrishnan, Nair & Babu, *supra* note 1.

¹³ Amit Basole & Deepankar Basu, *Relations of Production and Modes of Surplus Extraction in India, Part-II Informal Industry*, 46 *ECON. & POL. WKLY.* 63 (2011).

¹⁴ Amit Basole, *Authenticity, Innovation, and the Geographical Indication in an Artisanal Industry: The Case of the Banarasi Sari*, 18 *J. WORLD INTELL. PROP.* 127 (2015).

¹⁵ Soumya Vinayan, *Intellectual Property Rights and the Handloom Sector: Challenges in Implementation of Geographical Indications Act*, 17 *J. INTELL. PROP. RTS.* 55 (2012).

¹⁶ Coombe, Ives, & Huizenga, *supra* note 5, at 217.

¹⁷ Elizabeth Barham, *Translating Terroir: The Global Challenge of French AOC Labelling*, 19 *J. RURAL STUD.* 127 (2003).

¹⁸ See Daniel W. Gade, *Tradition, Territory, and Terroir in French Viticulture: Cassis, France, and Appellation Contrôlée*, 94 *ANNALS ASS'N AM. GEOGRAPHERS* 848 (2004); Warren Moran, *Rural Space as Intellectual Property*, 12 *POL. GEOGRAPHY* 263 (1993); Warren Moran, *The Wine Appellation as Territory in France and California*, 83 *ANNALS ASS'N AM. GEOGRAPHERS* 694 (1999).

diversity.¹⁹ Moreover, the dominant social imaginary offered by proponents for GIs tends to be localized in activities of marketing, which do not merely misrepresent social realities but shape them, naturalizing hierarchical labor relations²⁰ and influencing the ways stakeholders come to understand their relationships to these products.²¹ Although marketing strategies are ideally formulated with the input of various stakeholders in the supply chain, the most well-connected corporate producer bodies and owners of large agricultural holdings have the greatest influence, shaping these narratives in ways that reinforce their privileges. Rather than merely promoting unique differences that pre-exist them, “GIs are being cultivated to promote products, processes and methods traditional to places, and traditions are being cultivated to support these marketing vehicles.”²²

Given the diversity of current GI regimes, few generalizations about their promise or performance as a global category seem warranted without greater empirical study of the actual conditions governing their use. Local regulatory mechanisms need to be analyzed within a broader scope of inquiry that is attentive to local conditions of class, ethnicity, and gender. Most academic scholarship ignores the social relations between workers, landowners, producers, and the degree to which MICO institutions represent their respective interests. Few scholars studying GIs consider political movements for decolonization or postcolonial forms of emancipation. In the South and Southeast Asian context, we should consider the propensity of GI governance to challenge or to further entrench patterns of plantation agriculture, peasant dispossession, and the legacies of exploitative labor relations. In this chapter we show how current uses of MICOs encourage tendencies toward socio-economic marginalization, reinforce local divisions of labor, and obscure colonial patterns of landholding. If the World Intellectual Property Organization’s development agenda is to have any meaning, we need to focus on MICOs as forms of local governance, and ask to what extent they might govern differently – to challenge rather than reinforce entrenched social hierarchies,²³ contribute to rights-based development,²⁴ or achieve social justice objectives.²⁵

¹⁹ See Aylwin & Coombe, *supra* note 3 (for these reasons the authors argue that rights-based sustainable development principles should guide the creation and governance of new MICOs).

²⁰ SARAH BESKY, *THE DARJEELING DISTINCTION: LABOR AND JUSTICE ON FAIR-TRADE PLANTATIONS IN INDIA* (2014).

²¹ Paola Filippucci, *A French Place without a Cheese: Problems with Heritage and Identity in Northeastern France*, 44 *FOCAAL-EUROPEAN J. ANTHROPOLOGY* 72 (2004).

²² Coombe, Ives, & Huienga, *supra* note 5, at 214.

²³ Debarati Sen, *Fair Trade vs. Swachha Vyāpār: Women’s Activism and Transnational Justice Regimes in Darjeeling, India*, 40 *FEMINIST STUD.* 444 (2014).

²⁴ Aylwin & Coombe, *supra* note 3. ²⁵ Coombe, Ives, & Huienga, *supra* note 10.

We will first describe some of the ideological tendencies in MICO rationales and consider how a famous GI, Darjeeling Tea, is used to protect goods considered traditional to a region in India. We then provide some insight into contemporary Southeast Asian political ecology to show why MICOs and their governance should be considered matters of pressing global concern. Finally, we explore emerging politics, practices, and policies in value chain governance that might ground Asian MICOs in alternative norms to meet the needs of wider constituencies while advancing environmental as well as social justice objectives.

2 EXISTING LANDSCAPES OF GEOGRAPHICAL INDICATIONS: DARJEELING TEA

The Darjeeling Tea GI is widely celebrated as having extended IP-based justice to the Global South;²⁶ it was the first of India's now over 230 registered GIs.²⁷ There is no doubt that it has been a marketing success in raising export earnings. The Tea Board of India controls this GI as a form of national IP, designating select plantations as natural garden homes for a unique tea, based in a *terroir* constituted primarily, we would suggest, through tropes of enchantment. Anthropologist Sarah Besky collected hundreds of Tea Board papers like this one:

What is it that makes the world's tea aficionados rush to Darjeeling during spring-time to "book" the first flush teas? The answer? . . . Darjeeling Tea just happens . . . To science, Darjeeling Tea is a strange phenomenon. To the faithful, it is a rare blessing. Thankfully, the Darjeeling Tea Estates have always lived by their faith-by humbly accepting this unique gift of nature and doing everything to retain its natural eloquence. So, Darjeeling tea, hand-plucked by local women with magician's fingers, withered, rolled and fermented in orthodox fashion, with the sole intention of bringing out the best in them.²⁸

It is easy to dismiss such romanticism as mere advertising, but Besky draws our attention to the labor conditions that support it. So-called "Indian" Darjeeling

²⁶ Pradyot Ranjan Jena et al., *Geographical Indication Protection and Rural Livelihoods: Insights from India and Thailand*, 29 *ASIAN-PAC. ECON. LITERATURE* 174 (2015); Pradyot Ranjan Jena & Ulrike Grote, *Changing Institutions to Protect Regional Heritage: A Case for Geographical Indications in the Indian Agrifood Sector*, 28 *DEV. POL'Y REV.* 217 (2010).

²⁷ GI Registry Government of India, *State Wise Registration Details of G.I. Applications* (15 September 2003), http://ipindia.nic.in/girindia/treasures_protected/registered_GI_18November2015.pdf. For an up-to-date list of Indian GIs, see Intellectual Property India, *Geographical Indications Registry*, <http://ipindia.nic.in/girindia/> (last visited 8 March 2016).

²⁸ BESKY, *supra* note 20, at 89.

Tea is picked nearly entirely by Nepali-speaking women, descendants of the indentured women from Nepal who brought this tea and their knowledge of its cultivation to a region that was incorporated into India in 1947. In the GI campaign, gendered, arduous, and exploitative industrial plantation toil (still locally disparaged as “coolie” labor) is erased, replaced by the craftwork of angelic guardians whose TEK is deployed in their gentle care of tea gardens – where they are naturally placed and affectively bound. To cite another Tea Board advertisement, “Perhaps it is the warmth of their touch which gives the brew such sweetness.”²⁹

This advertising imagery has a real impact on people’s lives and livelihoods. Besky reminds us that Darjeeling Tea is understood as national cultural patrimony, intangible cultural heritage, and the basis for a new industry – tea tourism – in which women are disciplined to “perform” the smiling docility of the GI’s social imaginary. These women make \$1 a day, work sixty-hour weeks, and are tied to plantations by debt; they inherit rather than choose their jobs and are reliant upon plantation owners for housing, healthcare, schools, and access to subsistence plots on environmentally degraded lands. In neocolonial, patriarchal labor conditions, such widespread gendered representations warrant serious consideration. Do they improve or undermine workers’ capacities to critique conditions of production or to articulate ways to transcend them? To the extent that such branding supports a new industry whose profitability is dependent upon meeting tourists’ expectations, to what extent will the capacities of women to transform their less than idyllic working conditions be enhanced?

The GI region comprises eighty-seven plantations, populated by semi-bonded labor; many were revived by the GI. It is not co-extensive with the Darjeeling district of West Bengal, where the same tea is cultivated by Adivasis (tribal or indigenous peoples), who are wholly excluded from this new market. The indication also excludes Nepal’s own smallholder co-operatives – viewed as imitators from whom Darjeeling needs to be protected.³⁰ Much of this tea is certified as fair trade, a practice that reproduces a patronizing narrative in which a Northern, modern, urban consumer savior provides an empowering lifeline for a Southern, traditional, impoverished, rural peasant.³¹ Historically, fair trade certification disregarded disparities in gender, was not sympathetic to unions, and seemed to prefer peasant producers lacking any organization

²⁹ *Id.* at 98.

³⁰ Ironically, it is rumored that at least some of the “green leaf” that went into the processed tea was cheaper tea smuggled in from Adivasi co-operatives in Nepal. *See Id.* at 103.

³¹ Lindsay Naylor, “Some Are More Fair Than Others”: *Fair Trade Certification, Development, and North–South Subjects*, 31 *AGRIC. & HUM. VALUES* 273, 277–78 (2014).

other than co-operatives.³² Instead of bringing Western consumers closer to workers in a relation of greater justice, the administration of the Darjeeling mark creates greater distance between the female tea pluckers and consumers – some of whom are tourists dressing up as smiling tea-pickers to mimic the Tea Board advertisements (!). The workers have new jobs to add to their toil – posing for pictures and singing for visitors – captive creatures in a practice they describe as “turning the plantation into a zoo.”³³

In neighboring smallholder plots, anthropologist Debarati Sen reports, Nepali tea pluckers also feel objectified:

You know that smiling woman on that tea package is not us. It's nice to know people around the world care about us so much, but why now? Where were these people when we had no roads, when no one gave us loans, when we ate only stale rice? What can they do for us if they do not care about what we women want?³⁴

These farmers criticize the nature of fair trade justice and empowerment because of its lack of support for their own efforts to improve their communities, contest local patriarchies, resist the domination of local middlemen, and engage in entrepreneurial activities to meet their family needs with dignity.

Historically, because these women were squatters on abandoned plantations, whose rights to the lands they worked were unrecognized, they could not access the state-subsidized, high-yielding Green Revolution technologies targeted for plantations. In short, they learned to cultivate illegal tea with manure and homemade compost, a tradition of knowledge born of poverty and necessity. When, in the 1990s, organic tea was newly valued in global markets, plantations were forced to give up chemical fertilizers; their productivity declined 30 per cent. To augment supplies, plantation managers made agreements with these illegal producers who were assisted by NGOs to register themselves and market their tea as “co-operatively produced” rather than become wholly subsumed under the plantation labels.

Although nearly all of this tea is farmed by women, the advent of global consumer interest prompted underemployed local men to seize these new opportunities, quickly assuming management of the co-operatives as middlemen with the new international agencies. Controlling the new profits, they invested these in ways that did not support or provide benefits to the women whose labors had sustained the organic production from which the community was now benefitting. Women's efforts to diversify the local economy received no

³² Eileen Davenport & Will Low, *The Labour behind the (Fair Trade) Label*, 8 CRITICAL PERSP. ON INT'L BUS. 329 (2012).

³³ BESKY, *supra* note 20, at 111. ³⁴ Sen, *supra* note 23, at 444.

assistance and their organic quality-control work attracts no compensation. The men do not use any part of the fair trade premium to support female entrepreneurial activities; indeed, women are sexually shamed for engaging in such immodest work. Nevertheless, they still consider themselves far better off than the female plantation workers whose celebrated labor supports the GI.

Certification bodies, then, need to attend to the local dynamics that affect exclusion and marginalization. Fair trade certification still has a long way to go in making all stages in value chains transparent; labor relations are notoriously difficult to discern and improve.³⁵ A heated global debate has emerged in which Fair Trade USA (which wants to expand fair trade's certification to more plantations) has splintered off from the Fair Trade Labelling Organizations International (FLO). The move has been criticized by the group Equal Exchange as a dilution of the fair trade ethos because it enables large corporations such as Nestlé and Starbucks to represent more of their products as ethically produced.³⁶ The distinction between smallholders and plantations, however, is only one way of addressing the "proper laboring subject of fair trade."³⁷ Fair trade was originally an agricultural justice movement forged through "bottom-up partnerships between Latin American [smallholder] coffee producers and Northern activists."³⁸ In the Indian tea industry, however, it was implemented in a largely top-down fashion.³⁹ Fair trade in Asia is not linked to political struggles amongst plantation workers, and neglects the colonial legacies of a feudal order in which large holdings with absentee owners produced largely non-indigenous crops for colonial elites with the inadequately compensated labor of racialized and socially marginalized peoples.⁴⁰

If inclusion of plantation-based goods in fair trade incorporates these goods into a market, it does little to provide any form of political recognition for plantation laborers. It appears to exclude them into the "global community of solidarity and interdependence" between producers and consumers that the fair trade movement propounds as an alternative to global capitalism.⁴¹

³⁵ Daniel Berliner et al., *Governing Global Supply Chains: What We Know (and Don't) about Improving Labor Rights and Working Conditions*, 11 ANN. REV. L. & SOC'Y 193 (2015).

³⁶ Sarah Besky, *Agricultural Justice, Abnormal Justice? An Analysis of Fair Trade's Plantation Problem*, 47 ANTIPODE 114 (2015). Darjeeling Tea plantations were amongst the first in the world to be fair trade certified, whereas "Equal Exchange sells Darjeeling tea grown only on cooperatives" arguing that it better achieves justice for workers.

³⁷ *Id.* at 1142. ³⁸ *Id.* ³⁹ *Id.*

⁴⁰ Phyllis Robinson, *Transforming the Tea Industry: From Plantations to a Small-Farmer Model*, SMALL FARMERS BIG CHANGE (17 February 2010), <http://smallfarmersbigchange.coop/2010/02/17/transforming-the-tea-industry-from-plantations-to-a-small-farmer-model-2/>.

⁴¹ *Id.* at 1144 (citing JOHN BOWES, *THE FAIR TRADE REVOLUTION* (London: Pluto Press, 2011); APRIL LINTON, *FAIR TRADE FROM THE GROUND UP: NEW MARKETS FOR SOCIAL JUSTICE*

Plantation workers are denied representation and voice in the framing of transnational justice by Fair Trade USA, which insists upon describing industrial agricultural enterprises as “farms” to avoid issues of land tenure and labor organization.⁴² Equal Exchange ignores the historical forces which have divided peoples into those who have the opportunity as landholders to cultivate crops and co-operativize, and those whose political marginalization was more deeply entrenched by colonial rule, while ignoring gender and ethnicity:

[I]n Darjeeling[,] Nepali tea pluckers, like ethnically-marked plantation and large farm workers in other parts of the world, are multiply oppressed. As plantation workers, many lack full access to participation in a global economic order. As Nepalis within India, all struggle for recognition as well as full domestic political representation.⁴³

Both co-operative and plantation workers are linked as much by their shared struggle for representation within the Indian state as by their experience of economic hardship.⁴⁴ Fair trade certification evades these political struggles and thereby “ignores – and by extension reinforces – the deep-seated ethnic marginalization that has sustained the Darjeeling tea industry for nearly 180 years.”⁴⁵ Such selective political attention, however, is not necessary to certification systems; alternative forms of transnational solidarity are possible. In order to address other forms of oppression based on cultural, linguistic, ethnic, and gender identity, however, GIs must attend to the ways in which people make their own claims and give voice to their needs. As we shall explore, this concern with representation and voice is precisely the way in which new MICOs are evolving. In the meantime, hundreds of thousands of people across Asia are being pushed into plantation agriculture under conditions that promise to exacerbate climate change, rural insecurity, and human rights abuses.

3 THE CRISIS OF BIOCULTURAL DIVERSITY IN SOUTHEAST ASIAN POLITICAL ECOLOGY

A great tract of Earth is on fire. It looks as you might imagine hell to be. The air has turned ochre: visibility in some cities has been reduced to 30 metres. Children are being prepared for evacuation in warships; already some have choked to death. Species

(Seattle: University of Washington Press, 2012); SARAH LYON & MARK MOBERG, *FAIR TRADE AND SOCIAL JUSTICE: GLOBAL ETHNOGRAPHIES* (New York: NYU Press, 2010)).

⁴² Equal Exchange similarly downplays workers in the factories that process tea, even as it champions small farmers and co-operatives.

⁴³ Besky, *supra* note 36 at 1152. ⁴⁴ *Id.* ⁴⁵ *Id.* at 1151.

are going up in smoke at an untold rate. It is almost certainly the greatest environmental disaster of the 21st century . . . Fire is raging across the 5,000km length of Indonesia . . . currently producing more carbon dioxide than the US economy. And in three weeks the fires have released more CO₂ than the annual emissions of Germany . . . Orangutans, clouded leopards . . . the Sumatran tiger . . . are among the threatened species being driven from much of their range . . . After the last great conflagration, in 1997, there was a missing cohort in Indonesia of 15,000 children under the age of three, attributed to air pollution. This, it seems, is worse . . . It's not just the trees that are burning. It is the land itself. Much of the forest sits on great domes of peat . . . the fires . . . smoulder for weeks, sometimes months, releasing clouds of methane, carbon monoxide, ozone and exotic gases such as ammonium cyanide.⁴⁶

3.1 *Deforestation, Plantation Agriculture, and the Decline of Swidden Cultivation*

Palm oil may be the largest cause of deforestation, land-grabbing, and labor exploitation in the world. It permeates our food chain; it is in almost half of all supermarket products.⁴⁷ Indigenous peoples and communities inhabit the frontlines of palm oil expansion; they face loss of lands, threats to security, and marginal economic benefits from a new monoculture plantation economy, powered by global corporate demand for the most widely consumed vegetable oil on the planet.⁴⁸ For years, the palm oil sector has manifested incontrovertible evidence of the widespread loss of forests, burning of peatlands, stealing of community lands, and the use of child and slave labor.

The expansion of palm oil plantations in Indonesia is part of a massive increase in commercial agriculture across upland Southeast Asia. Swidden agriculture, also known as shifting cultivation,⁴⁹ is the traditional land use system in this region; until recently it was the most extensive

⁴⁶ George Monbiot, *Indonesia is Burning. So Why Is the World Looking Away?* THE GUARDIAN (30 October 2015), www.theguardian.com/commentisfree/2015/oct/30/indonesia-fires-disaster-21st-century-world-media.

⁴⁷ Rainforest Action Network, *Testing Commitments to Cut Conflict Palm Oil. 2015: The Year to Drive Change – Progress Report* https://d3n8a8pro7v7hmx.cloudfront.net/rainforestactionnet/work/pages/5884/attachments/original/1435772500/RAN_TESTING_COMMITMENT_S_2015_FINAL.pdf?1435772500 (last visited 9 March 2016).

⁴⁸ *Id.*

⁴⁹ Alan D. Ziegler et al., *Recognizing Contemporary Roles of Swidden Agriculture in Transforming Landscape of Southeast Asia*, 25 CONSERVATION BIOLOGY 846 at 846 (2010) (citing Ole Mertz et al., *Swidden Change in Southeast Asia: Understanding Causes and Consequences*, 37 HUM. ECOLOGY 259 (2009)).

landscape in Southeast Asia.⁵⁰ Rapid transitions in land use in the humid tropical uplands of Southeast Asia are replacing swidden agriculture and displacing its traditional practitioners.⁵¹ Hundreds of forest species, managed by communities dependent upon them for subsistence/sustenance and marketable products, may also be at risk.

Governments denounce swiddening, associating it with deforestation, inefficient carbon sequestration, and degradation of soil and water resources.⁵² However, these rotational crop systems “include a wide range of land use and management practices that affect carbon cycling differently,”⁵³ providing various kinds of regrowth,⁵⁴ with fallows offsetting planting-phase CO₂ emissions.⁵⁵ Governments have never, however, measured impacts across the landscapes people cultivate over time.⁵⁶ Swiddening is difficult to measure because it is represented by a large number of distinct landscape features, which may be in transition and mistaken for other land uses, with swidden fallows considered to be “wasteland/abandoned/unused” or

⁵⁰ Committee on Sustainable Agriculture and the Environment in the Humid Tropics, NATIONAL RESEARCH COUNCIL (U.S.) (eds.), *SUSTAINABLE AGRICULTURE AND THE ENVIRONMENT IN THE HUMID TROPICS* (Washington: National Academy Press, 1993). DOI: 10.17226/1985; Dietrich Schmidt-Vogt et al., *An Assessment of Trends in the Extent of Swidden in Southeast Asia*, 37 *HUM. ECOLOGY* 269 (2009).

⁵¹ Janice Alcorn & Antoinette G. Royo, *Best REDD Scenario: Reducing Climate Change in Alliance with Swidden Communities and Indigenous Peoples in Southeast Asia*, in *SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION* 289–306 (Malcolm F. Cains ed., 2015).

⁵² Jefferson Fox et al., *Policies, Political Economy and Swidden in Southeast Asia*, 37 *HUM. ECOLOGY* 305 (2009), available at <http://link.springer.com/article/10.1007%2F1510745-009-9240-7>. See also, Mertz, *supra* note 49.

⁵³ Jefferson Fox, J. C. Castella, & A.D. Ziegler, *Swidden, Rubber and Carbon: Can REDD+ Work for People and the Environment in Montane Mainland Southeast Asia?* (CCAFS Working Paper No. 9, 2011), available at www.ccafs.cgiar.org.

⁵⁴ Biomass and carbon stocks in swidden systems change dramatically between the planting and mature fallow phases, with forms of regrowth ranging from grasslands to mature secondary forests. Gabriela Vargas-Cetina, *supra* note 19 (citing Bruun et al., *supra* note 52; Kanok Rerkasem et al., *Consequences of Swidden Transitions for Crop and Fallow Biodiversity in Southeast Asia*, 37 *HUM. ECOLOGY* 347 (2009)).

⁵⁵ Scientists have shown that CO₂ originally resulting from the burning phase is or may be offset by carbon sequestered during the fallow phases and that longer fallows may be optimal. T. B. Bruun et al., *Environmental Consequences of the Demise of Shifting Cultivation in Southeast Asia*, 37 *HUM. ECOLOGY* 347 (2009).

⁵⁶ Mertz *supra* note 49. H. J. GEIST & E. F. LAMBIN, *WHAT DRIVES TROPICAL DEFORESTATION? A META-ANALYSIS OF PROXIMATE AND UNDERLYING CAUSES OF DEFORESTATION BASED ON SUBNATIONAL CASE STUDY EVIDENCE* (LUCC International Project Office, 2001); Tuiseem Shimrah, K. S. Rao, & K. G. Saxena, *The Shifting Agricultural System (Jhum) and Strategies for Sustainable Agroecosystems in Northeast India*, 39 *AGROECOLOGY & SUSTAINABLE FOOD SYSTEMS* 1154 (2015).

“residual/miscellaneous,”⁵⁷ rather than recognized as part of an agricultural system. Climate change mitigation policy has made research into these systems imperative because they are rapidly disappearing in mountain regions of Asia as farmers are pushed by national policies and pulled by market forces toward high-value commercial crops, especially rubber and oil palm.⁵⁸

Long before swiddens were denigrated as environmentally destructive,⁵⁹ they were discouraged and their cultivators often criminalized throughout South and Southeast Asia.⁶⁰ Most colonial and postcolonial states engaged in coercive efforts to eradicate swiddening as economically inefficient and socially uncivilized. If scientific research no longer supports these prejudices,⁶¹ swiddening’s historical practitioners continue to bear stigma.

⁵⁷ Christine Padoch et al., *The Demise of Swidden in Southeast Asia? Local Realities and Regional Ambiguities*, 107 *DANISH J. OF GEOGRAPHY* 29, 32 (2007).

⁵⁸ Fox, Castella, & Ziegler, *supra* note 53.

⁵⁹ Wolfram Dressler & Juan Puhlin, *The Shifting Ground of Swidden Agriculture on Palawan Island, the Philippines*, 27 *AGRIC. & HUM. VALUES* 445 (2010).

⁶⁰ Bram Büscher & Wolfram Dressler, *Commodity Conservation: The Restructuring of Community Conservation in South Africa and the Philippines*, 43 *GEOFORUM* 367 (2012); Fox et al., *supra* note 52; Jonathan C. Newby et al., *Smallholder Teak and Agrarian Change in Northern Laos*, 11 *SMALL SCALE FORESTRY* 27 (2011); Peter Vandergeest & Nancy Peluso, *Political Ecologies of War and Forests: Counterinsurgencies and the Making of National Natures*, 101 *ANNALS ASS’N AM. GEOGRAPHERS* 587 (2011); in Cambodia, the dominant development paradigm stressed principles of civilization and modernity in which upland peoples were at best bearers of culture that was nostalgically reified, or at worst, primitive relics of another era in need of assimilation. See Neal B. Keating, *Kuy Alterities: The Struggle to Conceptualise and Claim Indigenous Land Rights in Neoliberal Cambodia*, 54 *ASIA PAC. VIEWPOINT* 309 (2013); Jonathan Padwe, *Highlands of History: Indigenous Identity and its Antecedents in Cambodia*, 54 *ASIA PAC. VIEWPOINT* 282 (2013); in Vietnam, swidden agriculture was the feature that the central government used to identify ethnic minorities as being “at the starting point of the evolutionary ladder.” Rob A. Cramb et al., *Swidden Transformations and Rural Livelihoods in Southeast Asia*, 37 *HUM. ECOLOGY* 323, 339 (2009) (citing T. D. NGUYEN, *CULTURE, SOCIETY AND PEOPLE IN THE CENTRAL HIGHLANDS* (Ho Chi Minh City: Social Science Press, 2005)). See generally, Asian Indigenous Peoples Pact, *REDD+ Implementation in Asia and the Concerns of Indigenous Peoples* (Chiang Mai, Thailand, International Working Group for Indigenous Affairs, 2011), AIPP, www.iwgia.org/iwgia_files_publications_files/0654_REDD_Plus_Implementation_in_Asia_and_the_Concerns_of_Indigenous_Peoples.pdf (last visited 9 March 2016). State foresters and resource managers continued to entertain colonial ideologies that considered swiddening to involve unplanned indiscriminate slashing and burning, misunderstanding its systemic nature and integration with local culture and social structure. See MALCOLM F. CAIRNS, *VOICES FROM THE FOREST: INTEGRATING INDIGENOUS KNOWLEDGE INTO SUSTAINABLE UPLAND FARMING* (2007).

⁶¹ Asia Indigenous People Pact & International Working Group for Indigenous Affairs, *Shifting Cultivation, Livelihood and Food Security: New and Old Challenges for Indigenous Peoples in Asia*, AIPP & IWGIA, www.iwgia.org/iwgia_files_publications_files/0694_AIPPShifting_cultivation_livelihoodfood_security.pdf (last visited 9 March 2016); Alcorn & Royo *supra* note 51; Dietrich Schmidt-Vogt, *Second Thoughts on Secondary Forests: Can Swidden Cultivation be*

Widely vilified, considered primitive and obstacles to progress, they have faced policies of harassment, eviction, and sedentarization throughout Southeast Asia.⁶² In the Philippines, for example, the Spanish used the Regalian Doctrine to categorize and divide the nation into two social groups: Christians who, being closer to God, were the productive social class that occupied lowlands with title; and a tribal pagan minority who, by avoiding proselytization, were considered primitive uplanders occupying public domain without title.⁶³

There continue to be clear political and strategic advantages for states in differentiating between agricultural and forest lands; rights of tenure were attached to the former while the latter was claimed as state domain. By misrecognizing fallows and secondary forests of swidden agriculture as forest terrain, not only could these be described as environmentally degraded, but they could also be seized by states and opened up to migrant farmers for permanent agriculture, while swiddeners were criminalized for further cultivating them.⁶⁴ Across Asia swiddeners lost lands to illegal logging, livestock grazing, long-term cultivation of annual crops, greenhouse horticulture, coercive development projects, and, most recently, monoculture tree plantations.⁶⁵ Their antagonists insist upon the greater productivity and environmental sustainability of these new practices despite considerable evidence to the contrary.⁶⁶

Swiddeners in the Philippines were the first to align with NGOs and join global social movements pressing for land and livelihood rights as indigenous peoples with cultural identities tied to these agroforestry systems.⁶⁷ Regional groups now press for such recognition.⁶⁸ The Asian Indigenous Peoples' Pact

Compatible with Conservation?, in SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION 388–40 (Malcolm F. Cains ed., 2015); Herwasono Soedjito, *Shifting Cultivators, Curators of Forests and Conservators of Biodiversity: The Dayak of East Kalimantan, Indonesia*, in SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION 420–48 (Malcolm F. Cains ed., 2015).

⁶² Fox et al., *supra* note 52. ⁶³ *Id.* at 445–48.

⁶⁴ Carol Colfer, Janice Alcorn, & Diane Russell, *Swidden and Fallows*, in SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION 62, 63–64 (Malcolm F. Cains ed., 2015).

⁶⁵ Schmidt-Vogt et al., *supra* note 50; Alcorn & Royo *supra* note 51; MARCUS COLCHESTER, PALM OIL AND INDIGENOUS PEOPLE IN SOUTHEAST ASIA (2011); Fox et al., *supra* note 52.

⁶⁶ Alan D. Ziegler et al., *Environmental Consequences of the Demise in Swidden Agriculture in Southeast Asia: Hydrology and Geomorphology*, 37 HUM. ECOLOGY 361 (2009).

⁶⁷ Alcorn & Royo, *supra* note 51, at 292.

⁶⁸ See longer discussion in Rosemary J. Coombe, S. Ali Malik, & Marc Griebel, *Culturalized Properties in Neoliberal Futures: Frontiers of Dispossession and Indigenous Assertion*, in

(AIPP) estimates that close to two-thirds of the world's 370 million indigenous peoples are in Asia, and that between 14 and 34 million of these groups practice shifting cultivation in Southeast Asia.⁶⁹ Increasingly, they work with international environmental organizations to document the TK of swiddeners and the ecosystem services (ecoservices) they deliver. Swiddening is practiced largely by ethnic minorities, historically disparaged as hill tribes; it has been suggested that "the notion of indigeneity took shape as a counter-discourse intended to refute the claim that shifting cultivators were forest destroyers."⁷⁰ Regional indigenous organizations are now supported by transnational environmental and food security organizations alarmed by the environmental and social consequences of intensified agriculture.⁷¹ They argue that shifting cultivation is important to local food security and nutrition, closely tied to ritual cycles, and constitutive of local cultural identities; in 2014, the United Nations Food and Agriculture Organization (FAO) Assistant Director General and Regional Representative for Asia and the Pacific asserted that swidden agriculture was the cultural heritage of indigenous communities.⁷² Although many shifting cultivators may choose to transition to intensive agricultural production, others want to maintain swiddens, not only for the security they provide against landlessness,⁷³ but because their decline undermines collective decision-making, customary land claims, and community governance.⁷⁴

Many indigenous farmers willingly adopt new forms of agriculture, but others have little choice; although earlier shifts to smallholder commercial agriculture appear to have been voluntary, the recent rise of commercial estates (particularly in Malaysia, Indonesia, and the Philippines) has led to a widespread, rapid, and often brutal demise of this agroforestry system⁷⁵ with

INTELLECTUAL PROPERTY, CULTURAL PROPERTY, AND INTANGIBLE CULTURAL HERITAGE (Christoph Antons & William Logan eds., 2017).

⁶⁹ AIPP & IWGIA, *supra* note 61, at 2.

⁷⁰ DEREK HALL, PHILIP HIRSCH, & TANIA MURRAY LI, POWERS OF EXCLUSION: LAND DILEMMAS IN SOUTHEAST ASIA 172 (2011).

⁷¹ In 2014, for example, under the sponsorship of the FAO, the Norwegian Rainforest Foundation, and the Danish Ministry of Foreign Affairs, the AIPP gathered representatives from Southeast Asia to address the value of swidden systems.

⁷² CHRISTIAN ERNI (ED.), SHIFTING CULTIVATION, LIVELIHOOD AND FOOD SECURITY: NEW AND OLD CHALLENGES FOR INDIGENOUS PEOPLES IN ASIA (2015), available at www.fao.org/3/a-i4580e.pdf.

⁷³ Cramb et al., *supra* note 60, at 332. ⁷⁴ *Id.*

⁷⁵ *Id.* at 328. See ZAHARI ZEN, COLIN BARLOW, & RIA GONDOWARSITO, OIL PALM IN INDONESIAN SOCIO-ECONOMIC IMPROVEMENT: A REVIEW OF OPTIONS (Canberra: Department of Economics, Research School of Pacific and Asian Studies, Australian National University Working Paper 11/2005, 2005), available at <http://rspas.anu.edu.au/economics/publish/papers/wp2005/wp-econ-2005-11.pdf>; John F. McCarthy & Rob A. Cramb, *Policy Narratives, Landholder Engagement, and Oil Palm Expansion on the Malaysian and*

significant local and global environmental consequences. Policies promoting industrialized agriculture and timber farming in Asia are responsible for accelerating rates of deforestation⁷⁶ and raising greenhouse gas emissions⁷⁷ by reducing total carbon stocks.⁷⁸ Increases in agricultural productivity have generated high rates of erosion and enhanced probability of landslides, sedimentation in rivers, declines in water quality, and stream desiccation caused by irrigation. When monoculture plantations are planted with non-native species at relatively high latitudes and elevations, water shortages occur.⁷⁹ In Asia, the multiple-use forest reserves where swidden communities reside are more effective at fire prevention than other so-called protected areas, suggesting that swidden demise and regional conflagration are integrally related.⁸⁰

3.2 Undermining Indigenous Livelihood Security and Ecosystem Services

Numerous studies show swiddening to be a rational, economical, and environmental choice for resource-poor farmers, providing ecoservices in hydrology, biodiversity, and carbon storage that may help to mitigate climate change.⁸¹ Swiddening requires relatively large forested landscapes and affords

Indonesian Frontiers, 175 THE GEOGRAPHICAL J. 112 (2009); Colfer, Alcorn, & Russell, *supra* note 64; Yurdi L. Yasmi, Lisa Kelley, & Thomas Enters, *Forest Conflict in Asia and the Role of Collective Action in its Management* CAPRI, Working Paper No. 102, 2010); MARCUS COLCHESTER & SOPHIE CHAO, CONFLICT OR CONSENT? THE OIL PALM SECTOR AT A CROSSROADS (2013), available at www.forestpeoples.org/topics/palm-oil-rspo/publication/2013/conflict-or-consent-oil-palm-sector-crossroads.

⁷⁶ Jonah Busch et al., *Structuring Economic Incentives to Reduce Emissions from Deforestation within Indonesia*, 109 PROC. NAT'L ACAD. SCI. 1062, 1063 (2012).

⁷⁷ Alessandro Baccini et al., *Estimated Carbon Dioxide Emissions from Tropical Deforestation Improved by Carbon-Density Maps*, 2 NATURE CLIMATE CHANGE 185 (2012).

⁷⁸ Studies have shown aboveground carbon declining more than 90 per cent when swidden systems with long fallow periods are replaced by rotational systems with short fallow periods or by continuous cycles of annual crops, and reductions of soil organic carbon from 10 percent to 40 percent resulting from the conversion to continuous annual agriculture with the largest declines associated with plantations. See Bruun et al., *supra* note 55, at 379.

⁷⁹ Roy C. Sidle et al., *Erosion Processes in Steep Terrain – Truths, Myths and Uncertainties Related to Forest Management in Southeast Asia* (2006) 224 FOREST ECOLOGY & MGMT. 199; Alan D. Ziegler et al., *supra* note 69; Maite Guardiola-Claramonte et al., *Local Hydrologic Effects of Introducing Non-native Vegetation in a Tropical Catchment*, 13 ECOHYDROLOGY 13 (2008); Maite Guardiola-Claramonte et al., *Modeling Basin-Scale Hydrologic Effects of Rubber (Hevea brasiliensis) in a Tropical Catchment*, 3 ECOHYDROLOGY 306 (2010); Jane Qui, *Where the Rubber Meets the Garden*, 457 NATURE 246 (2009).

⁸⁰ Andrew Nelson & Kenneth M. Chomitz, *Effectiveness of Strict vs. Multiple Use Protected Areas in Reducing Tropical Forest Fires: A Global Analysis Using Matching Methods*, PLOS ONE (16 August 2011), <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0022722>.

⁸¹ Bruun et al., *supra* note 55; Cramb et al., *supra* note 60.

lower short-term economic return, but provides benefits that permanent agriculture does not. Biodiversity benefits under swidden are greater than monoculture plantations or other agroforestry options;⁸² not only maintaining, but increasing biodiversity in some regions, as secondary succession⁸³ in swidden fallows provides diverse habitats and preserves genetic resources.⁸⁴ Shifting cultivation also maintains a diversity of human food sources⁸⁵ and plant species, with a variety of local uses,⁸⁶ as evidence throughout the region indicates.⁸⁷ Even farmers who undertake commercial farming are reluctant to abandon swiddens because they function as important social safety nets against market fluctuations, climate shifts, forest fires, encroachments from migrants, and logging.⁸⁸ Few swidden households in the region have the asset base that the new agriculture demands or access to the land, credit, and networks needed for maintaining intensified production.⁸⁹ Although commercial agriculture raises the income of former swidden farmers, their vulnerability increases with specialization, leaving them indebted and pushing them into wage labor. Some peoples continue to uphold swidden practices because they consider it part of their cultural identity;⁹⁰ others find new markets for swidden crops. Nearly all hold significant agricultural TEK, the loss of which

⁸² Soil fertility, plant biomass, and species richness of plants may decline over time in swidden systems, but maintenance of lengthy fallow and short cropping periods both slow this decline and regenerate secondary forests. See Fox et al., *supra* note 52, at 323 (internal citations omitted).

⁸³ Secondary succession occurs after an ecosystem has been disturbed and plant species succeed one another. Soedjito, *supra* note 61, at 421, 423.

⁸⁴ The diversity of fallows provides microenvironments that enable a greater variety of plant and animal species than a more uniform forest or a farming environment could afford. It has been estimated that demographic density would have to be multiplied at least five times before showing any significant modification to the value of biodiversity or of ecosystem functions in some swidden regions. See Laurent Chazee, *Valuation and Management of Forest Ecosystem Services: A Skill Well Exercised by the Forest People of Upper Nam Theun, Lao P.D.R in SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION* 559–76 (Malcolm F. Cains ed., 2015).

⁸⁵ Christine Padoch & Miguel Pinedo-Vasquez, *Saving Slash and Burn to Save Biodiversity*, 42 *Biotropica* 550 (2010).

⁸⁶ Schmidt-Vogt, *supra* note 61. These include food, medicine, textile fibres, biofuel, handicrafts, and construction.

⁸⁷ Rerkasem et al., *supra* note 54; Shimrah, Rao, & Saxena, *supra* note 56; Janet Sturgeon, *Transformation of a Landscape: Shifting Cultivation, Biodiversity and Tea in SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION* 850–60 (Malcolm F. Cains ed., 2015).

⁸⁸ Cramb et al., *supra* note 60, at 337–38; Colfer, Alcorn, & Russell, *supra* note 64, at 71; Malcolm Cairns & Harold Brookfield, *Composite Farming Systems in an Era of Change: Nagaland, Northeast India*, 52 *ASIA PAC. VIEWPOINT* 56 (2011).

⁸⁹ See Dressler & Puhlin, *supra* note 59, at 454. ⁹⁰ *Id.* at 456.

the global community sought to avoid when the Convention on Biodiversity (CBD) recognized the significance of local communities' knowledge, innovation, and practices in preserving biodiversity and maintaining genetic resources.

The landscape and species diversity that swiddening maintains contrasts starkly with the changes in land use being encouraged by or pressed upon peoples across Southeast Asia; plantation agriculture, particularly, results in deteriorated soil quality.⁹¹ Nearly all alternative land-use scenarios proposed in the region produce more decreased stocks of soil organic carbon and fewer ecoservices than provided by swiddens.⁹² Nonetheless, "global forest governance initiatives and national governments continue to press for the replacement of swidden with other land uses, such as monocrops considered to be better for carbon and livelihood outcomes."⁹³ Scientific debates are ongoing, but bring little relief or political leverage to peoples dispossessed from these traditional agroforestry systems. Many commentators propose territorial solutions based on park protection that recognize synergistic linkages between biological and cultural diversity, which became apparent when the criminalization of indigenous agriculture in many areas simultaneously facilitated both detribalization and the erosion of culturally rooted resource management practices.⁹⁴ Nonetheless, new models are emerging for recognizing

⁹¹ Bruun et al., *supra* note 55, at 381–83.

⁹² Maintaining swidden systems with long fallows provides greater benefits in terms of providing carbon absorption, hydrological properties, reducing soil erosion, enhancing floral diversity, and supporting soil nutrient cycling than monocropping, annual crop rotations, or protected forests. See Wolfram Dressler et al., *Examining How Long Fallow Swidden Systems Impact upon Livelihood and Ecosystem Services Outcomes Compared with Alternative Land-Uses in the Uplands of Southeast Asia*, 7 J. DEV. EFFECTIVENESS 1 (2015); Ole Mertz et al., *The Last Swiddens of Sarawak, Malaysia*, 41 HUM. ECOLOGY 109 (2013); Christine Padoch & Terry C. H. Sunderland, *Managing Landscapes for Greater Food Security and Improved Livelihoods*, 64 UNASYLVA 3 (2013); Cornelia Hett et al., *A Landscape Mosaics Approach for Characterizing Swidden Systems from a REDD+ Perspective*, 32 APPLIED GEOGRAPHY 608 (2012).

⁹³ Given the range of ecosystem services that swiddeners perform, consideration was given to compensating communities in REDD+ climate negotiations; new ways of valuing swiddens are considered imperative. The concept of ecosystem services is a neoliberal market-based vehicle in which external beneficiaries of environmental services would remunerate local communities who manage ecosystems so as to deliver those services. It is largely rejected by activists and scholars who believe that payments meant for communities are likely to be expropriated if they are administered by Asian states and such a scheme is likely to be used as an opportunity for states to craft new pretexts for enabling corporate landgrabbing. See Delphine Marie-Vivien et al., *Trademarks, Geographical Indications and Environmental Labelling to Promote Biodiversity: The Case of Agroforestry Coffee in India*, 32 DEV. POL'Y REV. 379 (2014).

⁹⁴ Malcolm F. Cairns, *Ancestral Domain and National Park Protection: A Logical Union? A Case Study of the Mt. Kitangland Range National Park, Bukidnon, Philippines*, in SHIFTING

biocultural heritage as an aspect of what are increasingly known as biocultural rights.⁹⁵

3.3 Women's TEK in Swidden Agriculture

The contribution of Asian women in ensuring household economy and nutritional security through their management of natural resources has only recently become the subject of scholarly research.⁹⁶ Elderly women hold encyclopedic TEK derived from years of informal experimentation with biodiversity.⁹⁷ In many mountainous ecosystems, women's lifelong need for location-specific knowledge makes them "the backbone of food, medicinal, and nutritional security."⁹⁸ Theoretically, men and women have equal needs and opportunities to conserve biocultural diversity for sustaining livelihoods in the face of socio-economic, agricultural, and climate change,⁹⁹ but women face greater challenges to maintain livelihoods in shifting mountain ecosystems.¹⁰⁰ Policy makers and planners in Southeast Asia seldom consider

CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION 598–99 (Malcolm F. Cains ed., 2015).

⁹⁵ SANJAY KABIR BAVIKATTE, *STEWARDED EARTH: RETHINKING PROPERTY AND THE EMERGENCE OF BIOCULTURAL RIGHTS* (2014).

⁹⁶ Fikram Berkes & Nancy J. Turner, *Knowledge, Learning and the Evolution of Conservation Practice for Social–Ecological System Resilience*, 34 *HUM. ECOLOGY* 479 (2006); Ranjay K. Singh, Jules N. Pretty, & Sarah Pilgrim, *Traditional Knowledge and Biocultural Diversity: Learning from Tribal Communities for Sustainable Development in Northeast India*, 53 *J. ENV'T & PLAN. MGMT.* 511 (2010); Carol J. Pierce Colfer et al., *Gender Analysis: Shifting Cultivation and Indigenous People*, in *SHIFTING CULTIVATION AND ENVIRONMENTAL CHANGE: INDIGENOUS PEOPLE, AGRICULTURE AND FOREST CONSERVATION* 920–57 (Malcolm F. Cains ed., 2015).

⁹⁷ Honey Bee, *A Union for a Century CENTENARIAN* (July 2012), www.sristi.org/hbnew/files/cenetenarian/khapriben-chotiyabhai-rathwa-english.pdf. Honey Bee, *The Age of Motorcycles, Medicines, and Electricity*, *CENTENARIAN* (July 2012), www.sristi.org/hbnew/files/cenetenarian/khapriben-chotiyabhai-rathwa-english.pdf.

⁹⁸ Ranjay K. Singh, Orik Rallen, & Egul Padung, *Elderly Adi Women of Arunachal Pradesh: Living Encyclopedia and Cultural Refugia in Biodiversity Conservation of the Eastern Himalaya, India*, 52 *ENVTL. MGMT.* 712, 713 (2013) (citing Tara Devi Dhakal & Brigitte Leduc, *Women's Role in Biodiversity Management in the Himalayas*, in *GENDER PERSPECTIVES IN MOUNTAIN DEVELOPMENT: NEW CHALLENGES AND INNOVATIVE APPROACHES* 16–17 (2013)).

⁹⁹ Michael Kollmair, *Challenges and Opportunities for Women in the Changing Himalayas*, in *GENDER PERSPECTIVES IN MOUNTAIN DEVELOPMENT: NEW CHALLENGES AND INNOVATIVE APPROACHES* 2–4 (2010).

¹⁰⁰ MANOHARA KHADKA & RITU VERMA, *GENDER AND BIODIVERSITY MANAGEMENT IN THE GREATER HIMALAYAS TOWARDS EQUITABLE MOUNTAIN DEVELOPMENT* (2012), available at www.cbd.int/undb/countries/np/undb-np-icimod-gender.pdf.

women's knowledge and experience in devising policies for biodiversity conservation at the ecosystem level.¹⁰¹

Women play key roles in rice cultivation, seed selection, conservation of vegetable crops, and the use and storage of produce; they are responsible for agricultural innovations dependent upon systematic observation, careful experimentation, and adaptation. Historically they had considerable autonomy and greater sexual freedom, characteristics "interpreted as indications of depravity by dominant groups," which reinforced notions that swiddeners were "primitive" – the ultimate "others" whose agricultural practices were irrational and in need of reform.¹⁰² Negative attitudes toward women's agricultural work contributed to the generalized regional disapproval of swidden systems. In rice-growing swidden regions of Borneo, Sarawak, Java, Kalimantan, Laos, Thailand, and Nepal, women were active cultivators who led the harvesting rituals. They appear to have dominated the collection and trade of non-timber forest products in the fallows from which they have been dispossessed.

Moving into monocropping deprives women of access to resources necessary for maintaining an adequate living, forcing them to travel further and work much harder to provide food and fuel for their families and livestock. The TEK of shifting cultivation in South and Southeast Asia is increasingly held by women resisting industrial agriculture or maintaining swiddening instead of, or alongside, commercial crop activity. Often, only elderly women are left to safeguard and transmit swidden-related rituals and practices,¹⁰³ which are likely to disappear if their values are no longer appreciated. Asian indigenous peoples' organizations concerned about the decline of swidden cultivation emphasize the key role of women's TEK and the need to encourage its transmission.¹⁰⁴ In addition to better support for the production and marketing of non-forest timber products, they seek to have barter systems¹⁰⁵ and seed exchanges recognized as vital to biocultural conservation. They hope to develop value chains in "the promotion of a sustainable creative economy" involving "the marketing of indigenous handicrafts, designs, and other creative products as means of livelihood and promotion of indigenous cultures."¹⁰⁶ Novel usages of intellectual property seem inevitable in these emerging conditions, and new forms of MICOs could serve these purposes.

¹⁰¹ Singh, Rallen, & Padung, *supra* note 98, at 714. ¹⁰² *Id.* ¹⁰³ Chazee, *supra* note 84.

¹⁰⁴ Erni, *supra* note 72; AIPP & IWGIA, *supra* note 61.

¹⁰⁵ Ranjay K. Singh, *Barter System, Biodiversity and Livelihoods of Tribal Communities: Cultural Diversity and Conservation in Eastern Himalaya, Arunachal Pradesh*, 98 *CURRENT SCI.* 1280 (2010).

¹⁰⁶ AIPP & IWGIA, *supra* note 61, at 11.

Much of the most extensive knowledge of women's TK comes from the seven sister states of Northeast India.¹⁰⁷ Home to more than 166 distinct tribes, the region features a multiplicity of forest-dependent cultural communities that practice traditional swidden agriculture and govern resources through indigenous institutions.¹⁰⁸ It thus has a rich heritage of culturally embedded TK, which protects biodiversity and local ecosystems.¹⁰⁹ Tribal women in the region are major stakeholders and custodians of knowledge, conserving food and medicinal plants in both "jhum" lands (the regional name for swiddening) and home gardens.¹¹⁰ As agricultural plant scientist Ranjay K. Singh laments, "despite the rich knowledge of women, and their role in conserving biocultural diversity as experimenters, conservators and stabilisers of foods, medicines and other indigenous resources, their contribution is rarely recognised at the policy level."¹¹¹ Although there are numerous TK protection initiatives in India, no area of national government has shown significant interest in assessing the erosion of tribal TK and its implications for biodiversity and the continuing resilience of indigenous livelihoods in the region.¹¹²

The state of Arunachal Pradesh is considered one of the biodiverse areas of the country. It is home to 26 tribes and 110 ethnic groups, who largely reside in

¹⁰⁷ Assam, Arunachal Pradesh, Nagaland, Tripura, Mizoram, Meghalaya, and Manipur – which border Bhutan, China, Myanmar, and Bangladesh – constitute one of the most bioculturally diverse regions of India. See Jimmy Y. Yumnam, *Rich Biodiversity of Northeast India Needs Conservation*, 95 *CURRENT SCI.* 297 (2008); Ranjay K. Singh & R. C. Srivastava, *Biocultural Knowledge and Adi Community: Conservation and Sustainability in the Biodiversity Hotspot of Arunachal Pradesh*, 96 *CURRENT SCI.* 883 (2009).

¹⁰⁸ Yumnam, *supra* note 107; Department of Planning, Arunachal Pradesh Human Development Report (ADHDR) (2005), available at http://planningcommission.nic.in/plans/stateplan/index.php?state=b_sdrbody.htm.

¹⁰⁹ P. S. RAMAKRISHNAN, A. K. DAS, & K. G. SAXENA, *CONSERVING BIODIVERSITY FOR SUSTAINABLE DEVELOPMENT* 246 (1996); P. S. RAMAKRISHNAN ET AL., *TRADITIONAL ECOLOGICAL KNOWLEDGE AND MANAGING BIOSPHERE RESERVES IN SOUTH AND CENTRAL ASIA* (2002); Anamika Singh, Ranjay K. Singh, & A. K. Sureja, *Cultural Significance and Diversities of Ethnic Foods of Northeast India*, 6 *INDIAN J. TRADITIONAL KNOWLEDGE* 79 (2007).

¹¹⁰ Ranjay K. Singh, *Conserving Diversity and Culture: Pem Dolma*, 15 *HONEY BEE* 12–13 (2004); Sunita Mishra, Ranjay K. Singh, & Anamika Singh, *Dynamics of Adi Women's Traditional Foods in Varying Socio-Ecological Systems of Arunachal Pradesh: A Source of Learning and Inspiration*, in *THE NEW CULTURES OF FOOD: MARKETING OPPORTUNITIES FROM ETHNIC, RELIGIOUS AND CULTURAL DIVERSITY* 203–22 (Adam Lindgreen & Martin K. Hingley eds., 2009).

¹¹¹ Ranjay K. Singh et al., *Traditional Knowledge and Biocultural Diversity: Learning from Tribal Communities for Sustainable Development in Northeast India*, 53 *J. ENVIRON. PLAN. & MGMT* 511, 512–13 (2010).

¹¹² Ranjay K. Singh & R. C. Srivastava, *Biological Geographical Indicators of Traditional Knowledge Based Products and Green Technology from Arunachal Pradesh: An Initiative for Safeguarding IPR of Communities*, 9 *INDIAN J. TRADITIONAL KNOWLEDGE* 689 (2010).

forest areas on which they are dependent for socio-cultural, food, and livelihood requirements.¹¹³ Most tribal groups have maintained distinctive indigenous landraces for subsistence and ritual purposes.¹¹⁴ Although such groups do not yet face absorption into commercial or plantation agriculture, increasing population levels, rapid urbanization, greater incorporation into market economies, transitions to individual land ownership, and the breakdown of extended families are threatening women's TEK, while modern educational systems tend to make children less interested in maintaining the communal ways of life that rely upon it. Top-down development projects encouraging commercial cultivation of oranges, pineapples, and ginger (as well as the recent introduction of exotic crops) have reduced numbers of indigenous crop species and wild-growing plants in jhum lands.¹¹⁵

In 2003, the Arunachal government reviewed its developmental policies and formulated state policies indicating an interest in promoting TK-related biodiversity and protecting the IP of knowledge holders.¹¹⁶ Singh and his collaborators used participatory research methodologies to identify Adi and Monpa community knowledge holders, document their TK, and design biocultural conservation activities, including community knowledge gardens, the promotion of TK-based microenterprise, and contests to enhance appreciation for TK in the area.¹¹⁷ These village-based participatory TK workshops were amongst the first in India, and recorded practices relating to food, medicine, agriculture, animal husbandry, handicrafts, cosmetics, and biodiversity conservation. Biodiversity contests in local schools tested children's TK and generated new enthusiasm. Recipe contests validated elderly women's knowledge of nutritional health¹¹⁸ while revitalizing customary lateral and vertical networks of knowledge sharing (these traditionally enabled cross-cultural transfers and refinements of knowledge on ethnomedicine and facilitated the flow of genetic resources from one biome to another).¹¹⁹ Indigenous

¹¹³ *Id.*

¹¹⁴ Singh, Pretty, & Pilgrim *supra* note 96; Ranjay K. Singh, *Community Based Forest Resources Management through Socio-Cultural Institutions: Dynamics of Biodiversity Conservation and Subsistence Living of Adi Tribe under Subtropical Ecosystem in Eastern Himalayas*, CANADIAN SOCIETY OF ECOLOGICAL ECONOMICS (2007) (paper presented at the International Conference "Sustaining Communities and Development in the Face of Environmental Challenges").

¹¹⁵ See RAMAKRISHNAN ET AL., *supra* note 109. ¹¹⁶ APHDR, *supra* note 108.

¹¹⁷ Singh, Pretty, & Pilgrim, *supra* note 96, at 527–28.

¹¹⁸ Ranjay K. Singh & Anamika Singh, *Biodiversity and Recipe Contests: Innovative Socioecological Approaches to Capture Ecological Knowledge and Conserve Biodiversity in Arunachala Pradesh*, 12 INDIAN J. TRADITIONAL KNOWLEDGE 240 (2003).

¹¹⁹ Singh, Rallen, & Padung, *supra* note 98, at 729.

women were trained to understand Free, Prior and Informed Consent (FPIC) principles, and how to manage and update TK databases, microenterprises, and screen practices for their market potential. These activities have enhanced valuation of biocultural resources and appear to have revitalized interest in using and developing ethnomedicines and domesticating food plant species, resulting in a heightened sense that the area's plants, animals, and related cultural practices were part of a tribal collective biocultural heritage rather than individual properties.¹²⁰ Significantly, "biological geographical indicators" were proposed as a MICO to designate new TK-based goods and technologies.¹²¹ MICOs might be used to duplicate these efforts in other regions in Asia to support women in maintaining swiddens.

3.4 Gendered Labor in Emerging Plantation Economies

Shifts from swiddening to commercial agriculture weaken biodiversity and women's TEK while introducing practices of land and resource dispossession, creating communal insecurity and conditions of precarity ripe for the abuse of women and children. The consequences of oil palm plantations for women have only recently become the subject of critical attention and there is a paucity of empirical research in the field.¹²² One significant exception is a study by anthropologist Tania Li commissioned to address the gendered impacts of Indonesian oil palm expansion under both smallholding and plantation models.¹²³ Most of Indonesia's oil palm is on the island of Sumatra, but Kalimantan was the main region of expansion from 2005 to

¹²⁰ Singh, Pretty, & Pilgrim, *supra* note 96, at 518–28.

¹²¹ Singh & Srivastava, *supra* note 112, at 691.

¹²² One study explored the social impact on a Dayak village in West Kalimantan, finding that women lost lands for subsistence farming, lost rubber income, were denied status as landholders, and were particularly vulnerable as plantation workers. See Julia & Ben White, *Gendered Experiences of Dispossession: Oil Palm Expansion in a Dayak Hibun Community in West Kalimantan*, 39 J. PEASANT STUD. 995 (2012). The NGO Down to Earth considered the introduction of oil palm in Papua, finding that women lost access to forest lands and resources, received only precarious plantation work, had difficulty feeding their families, and faced greater domestic violence. See Yuliana Langowuyo, *Women and Oil Palm in an Investment Region*, DOWN TO EARTH (October 2014), www.downtoearth-indonesia.org/story/women-and-oil-palm-investment-region. Women workers are more often treated as casual labor and exposed to serious health hazards because oil palm plantations in Indonesia tend to use hazardous pesticides banned elsewhere.

¹²³ Tania Murray Li, *Social Impacts of Oil Palm in Indonesia: A Gendered Perspective from West Kalimantan*, OCCASIONAL PAPER 124. CENTER FOR INTERNATIONAL FORESTRY RESEARCH (2014), available at www.cifor.org/publications/pdf_files/OccPapers/OP-124.pdf. The report draws upon Li's student team's empirical research in one district of West Kalimantan from 2010 to 2012.

2013, adding 1.5 million ha of plantations and a much smaller area (228,000 ha) of smallholdings. Her study illustrates some striking historical tendencies of the impacts of palm oil industries upon women in swidden regions.

Historically, the Indonesian state designated huge areas of territory as “concession lands” which were thereby available for oil palm development. Such territory appears to have deemed public domain under state forestry law, where the customary land rights of swidders were unrecognized.¹²⁴ Although little oil palm is planted on what the state considers to be primary forest land¹²⁵ (a category which may reflect only the longer length of swidden fields lying fallow in an area), much of it is planted on lands from which customary landholders are now excluded. They can neither farm independently nor access what were until recently considered common resources necessary for rural security of livelihood. The state, which has not historically recognized these lands, issues plantation licenses that require companies “to negotiate with communities and individuals for release of their customary rights,” so that “customary rights are only recognized provisionally and contingently, just enough to facilitate their release to corporations.”¹²⁶ People cede these lands in return for small payments or vague promises of inclusion in future smallholder schemes; many, it appears, do not understand these “releases” as permanent alienations. Oil plantations are sites of the most violent of Indonesian land conflicts, which are likely to escalate as former landholders become squeezed between plantations, unable to make a living on smallholdings or bestow lands to their children.¹²⁷ Unless they become employees of plantations, former landholders are likely to become unemployed or casual laborers paid below provincial minimums.¹²⁸

¹²⁴ Douglas Sheil et al., *The Impacts and Opportunities of Oil Palm in Southeast Asia: What Do We Know and What Do We Need to Know?* (2009), available at www.cifor.org/library/2792/the-impacts-and-opportunities-of-oil-palm-in-southeast-asia-what-do-we-know-and-what-do-we-need-to-know/.

¹²⁵ Krystof Obidzinski et al., *Environmental and Social Impacts of Oil Palm Plantations and Their Implications for Biofuel Production in Indonesia*, 17 *ECOLOGY & SOC'Y* 1 (2012).

¹²⁶ Li, *supra* note 123, at 4.

¹²⁷ John F. McCarthy, *Where is Justice? Resource Entitlements, Agrarian Transformation and Regional Autonomy in Jambi, Sumatra*, in *COMMUNITY, ENVIRONMENT AND LOCAL GOVERNANCE IN INDONESIA: LOCATING THE COMMONWEAL 169–98* (Carol Warren and John F. McCarthy eds., 2009); Tania Murray Li, *Centering Labour in the Land Grab Debate*, 38 *J. OF PEASANT STUD.* 281 (2011); Lesley Potter, *New Transmigration “Paradigm” in Indonesia: Examples from Kalimantan*, 53 *ASIA PAC. VIEWPOINT* 272 (2012).

¹²⁸ Obidzinski et al., *supra* note 125; Hariati Sinaga, *Employment and Income of Workers on Indonesian Oil Palm Plantations: Food Crisis at the Micro Level*, 1 *FUTURE OF FOOD: J. ON FOOD, AGRIC. & SOC'Y* 64 (2013).

Smallholder schemes in which holders might independently farm lands to which they would eventually receive title were historically introduced alongside state and corporate plantations that absorbed the labor of swiddeners and transmigrants. By the late 1990s, companies were reluctant to engage in further smallholder regimes, and since 2004 the law has required that only 20 per cent of lands need to be developed in partnerships with smallholders.¹²⁹ Partnerships only pay the smallholder a monthly dividend for oil palm cultivation and such payments are much lower than the yields from independent planting.¹³⁰ Independent smallholders plant oil palm on lands held individually, collectively, purchased from others, or claimed by the state as forest land (which was generally acquired by refusing rights to indigenous farmers). Since 2000 there has been a large increase in smallholders' cultivation of palm, solely or in combination with other crops, given increasing prices. Farmers may be successful where they have access to roads, mills, credit, and plants, but the threshold for entry remains too high for most former swiddeners. Successful oil palm smallholders (often government employees) tend to acquire more lands from surrounding swiddeners, which increases rural income inequalities.¹³¹

Historically, government allocations under transmigration and smallholder schemes recruited married householders, but registered lands only in the names of the husband, thereby stripping women of their joint rights under customary law. Recently, plantations have ceased to approach conjugal units as recruits, instead hiring a small core workforce of single young men, while recruiting women as temporary employees. Women's land rights are no longer secure in cases of divorce; men can sell or mortgage lands without their wives' consent, and take monthly payments directly. To the extent that smallholders have any voice in livelihood conditions, it is through plantation-based

¹²⁹ Companies resist even this requirement and in some areas refuse any role for smallholders. Historical discussions of the reluctance of both state and corporate plantations to work with smallholders are discussed in McCarthy & Cramb, *supra* note 75; Piers Gillespie, *How does Legislation Affect Oil Palm Smallholders in the Sanggau District of Kalimantan, Indonesia?* 14 AUSTRALASIAN J. NAT. RESOURCES L. & POL'Y 1 (2011); John F. McCarthy, Piers Gillespie, & Zahari Zen, *Swimming Upstream: Local Indonesian Production Networks in "Globalized" Palm Oil Production*, 40 WORLD DEV. 555 (2011); Colchester & Chao, *supra* note 76; MARCUS COLCHESTER, NORMAN JIWAN, & EMILOLA KLEDEN, INDEPENDENT REVIEW OF THE SOCIAL IMPACTS OF GOLDEN AGRI RESOURCES' FOREST CONSERVATION POLICY IN KAPUAS HULU DISTRICT (2014), available at www.forestpeoples.org/topics/palm-oil-rspo/publication/2014/independent-review-social-impacts-golden-agri-resources-forest.

¹³⁰ McCarthy, Gillespie, & Zen, *supra* note 129, at 555; Colchester & Chao, *supra* note 76.

¹³¹ John F. McCarthy, *Surfing and Crashing in the Indonesian Oil Palm Boom*, JAKARTA POST (March 28, 2008), www.thejakartapost.com/news/2008/03/27/surfing-and-crashing-indonesian-oil-palm-boom.html.

co-operatives; however imperfect such institutions,¹³² their exclusion of women denies them any voice in plantation life.¹³³

In regions where swiddens are most intact, women want to add palm oil cultivation to their other crops to avoid releasing lands to outsiders and to retain them for future generations. Lack of roads, capital, and planting material, however, ensures that smallholding is primarily for local elites. The more lands are dominated by smallholder monocropping, the more limited other farmers' crop choices become and the more nutrition declines. Landlessness is worst for those closest to the plantation core that have lost access to most if not all subsistence resources, often transmigrants who relinquished customary lands in the areas from which they came to take advantage of plantation employment. Women, who must anchor households and support children when men migrate, face the direst situations, often becoming the casual day laborers of plantation economies who face the greatest health risks.

The historical trajectory toward impoverishment that Li describes for one area in West Kalimantan is cause for alarm and will potentially recur on other land frontiers in Indonesia. Two possible futures for oil palm development remain: the continued expansion of government-supported monocropped corporate plantations and the promotion of independent oil palm smallholdings as part of mixed agroforestry systems, supported by many UN organizations, social movements, and NGOs. Only independent oil palm smallholdings are likely to achieve environmental and social justice certification, particularly given ongoing conflicts over corporate enclosures. Just 10 per cent of palm oil in Indonesia can be certified by the Roundtable on Sustainable Palm Oil (RSPO),¹³⁴ which sets very minimal conditions. Smallholders will require greater organization and the capacity to develop local institutions, but only they will be able to meet "standards for sustainable, equitable, and socially responsible oil palm development."¹³⁵ The rights and livelihoods of both women and children are at stake. With reports of forced and child labor on plantations increasing in Indonesia, Malaysia, and Papua

¹³² The limitations of co-operatives in Indonesia are discussed in David Henley, *Custom and Koperasi: The Cooperative Ideal in Indonesia*, in *THE REVIVAL OF TRADITION IN INDONESIAN POLITICS: THE DEPLOYMENT OF ADAT FROM COLONIALISM TO INDIGENISM* 87–112 (Jamie S. Davidson & David Henley eds., 2007).

¹³³ Mia Siscawati & Ava Mahaningtyas, *Gender Justice: Forest Tenure and Forest Governance in Indonesia*, in *THE CHALLENGES OF SECURING WOMEN'S TENURE AND LEADERSHIP FOR FOREST MANAGEMENT: THE ASIAN EXPERIENCE* (2012), available at www.rightsandresources.org/documents/files/doc_5224.pdf

¹³⁴ Li, *supra* note 123, at 39. ¹³⁵ *Id.* at 40.

New Guinea,¹³⁶ new means of certifying conditions of oil palm production that do protect biocultural diversity and women's access to livelihood resources are essential.

4 FUTURE LANDSCAPES FOR MICOS

The term “conflict palm oil” brings consumers' attention to their own complicity in Asian conflicts, because palm oil is ubiquitous in manufactured household food products such as cookies, instant noodles, and potato chips. There are no consumer markets in the world in which everyday goods do not contain this oil.¹³⁷ The conditions of palm oil plantation have attracted international attention; activists pressure the largest purchasers in the global food industry to adopt more responsible practices. As a consequence:

[I]n the last two years, more than twenty of the world's largest consumer brands and palm oil traders have announced new palm oil procurement commitments, which are intended to eliminate sourcing from growers associated with on-going deforestation, climate pollution, and human rights abuses . . . Working with allies from around the world, Rainforest Action Network (RAN) is exposing the supply chains that link Conflict Palm Oil to the foods Americans are sold, focusing on a group of large corporate palm oil end-users we call the Snack Food 20.¹³⁸

The Snack Food 20 could fundamentally transform palm oil production by supply-chain mapping and monitoring, developing procurement policies for the protection of rainforests and peatlands, respecting the rights of communities to give or withhold FPIC to land development, insisting that plantation lands be acquired only from those who hold title, respecting workers' rights, eliminating child labor, banning burning and reducing greenhouse emissions, including smallholders in supply chains, and practicing equitable benefit sharing.¹³⁹ Given the growing conflicts between companies and communities and the increasingly dire ecological crisis fuelled by palm oil intensification, third-party verification of compliance is urgently needed.

Many companies surpassed the inadequate standards of the RSPO, committing to ambitious deadlines for cutting suppliers trafficking conflict palm oil by the end of 2015 (which were largely unrealized). When Kit Kat bars were

¹³⁶ Palm oil has been listed on the US Department of Labor's *List of Goods Produced by Child Labor or Forced Labor* since 2010. See Monbiot, *supra* note 47.

¹³⁷ A partial list would include brands such as Campbell Soup, Dunkin' Donuts, Heinz, Hershey, General Mills, Kelloggs, Kraft, Krispy Kreme, Mars, and Smuckers.

¹³⁸ Rainforest Action Network, *supra* note 47, at 2. ¹³⁹ *Id.*

clearly linked to rainforest destruction in Indonesia in 2010, Nestlé began verifying that its sources were not associated with destruction of high conservation value and high-carbon stock forests. Far less has been done to protect labor rights. Unilever recognized that it had a palm oil problem after Dove personal care products were similarly exposed in 2008, but its 2013 commitment allegedly lacked “both clear requirements and a deadline for suppliers to end destruction of rainforests, peatlands and abuse of human and labour rights in all operations.”¹⁴⁰ Some corporations have released stronger commitments since 2013, while others, such as Hormel Foods and Kraft Heinz Company, still inadequately pressure suppliers; PepsiCo could play a vital role in transforming the worst conditions in Indonesia and Malaysia.¹⁴¹

Ultimately, environmentalists want a moratorium on the clearance of forests and development of peatlands, halting further expansion until comprehensive assessments identify the conservation and climate change values of these regions. Others seek to ascertain whether indigenous peoples and local communities are fully consenting to palm oil development on their customary lands, and to ensure protection of their water sources, food systems, and livelihoods.¹⁴² Certification regimes need to find means of identifying suppliers operating plantations on lands acquired through coercion. The transformation of global palm oil supply chains will be a massive undertaking, in which corporations must assume new forms of transnational governance. Through such chains, nearly all consumers are linked to Asian indigenous peoples and become complicit in their dispossession. Even if some of the proposed certifications are developed and implemented, new MICOs must be forged to meet environmental and human rights objectives.

Contemporary struggles around private standards and certifications for goods have become much more conscious of their capacity to represent interests, uphold power relations, provide representation, and engender voice.¹⁴³ Interest in the institutional dimensions of value chains has put new emphasis upon how local actors engage them and shape their structures, processes, values, and outcomes.¹⁴⁴ Increasingly, labor, food safety, and agricultural practice standards are converging, with workers and small producers recognized as active participants in tackling social and environmental

¹⁴⁰ *Id.* at 8. ¹⁴¹ *Id.* ¹⁴² *Id.*

¹⁴³ Valerie Nelson & Anne Tallontire, *Battlefields of Ideas: Changing Narratives and Power Dynamics in Private Standards in Global Agricultural Value Chains*, 31 *AGRIC. & HUM. VALUES* 481 (2014).

¹⁴⁴ Anne Tallontire et al., *Beyond the Vertical? Using Value Chains and Governance as a Framework to Analyse Private Standards Initiatives in Agri-food Chains*, 28 *AGRIC. & HUM. VALUES* 427 (2011).

problems. The United Nations Research Institute for Sustainable Development, for example, has focused on Social and Solidarity Economy approaches to production and exchange, which share explicit economic and social objectives:

[T]hey reconnect economic activity with ethical values and social justice, aim to satisfy human needs, build resilience, expand human capabilities, empower women, foster workplace democracy, and/or promote ways of living, producing and governing that are more caring of both people and the environment.¹⁴⁵

This new model addresses sustainability and labor issues at a landscape or industry level.¹⁴⁶ It develops and influences standards rooted in the capacity of workers and smallholders to articulate their own needs in a variety of forums, public and private, building multi-scalar alliances that create pressures for change, while engaging external actors as brokers and facilitators to help communities realize social and economic aspirations. Another key shift is the recognition that global value chains operate within territorial institutional dynamics. Creating change involves engaging key actors to work collaboratively across a sector on multiple issues, moving beyond farm-level interventions to landscape and industry-wide initiatives.¹⁴⁷

These systems support negotiations with companies, improving the bargaining power of specific communities and enabling grievances to be addressed. In some cases this has led to a redistribution of benefits towards local communities, requiring companies to obtain FPIC, or pay royalties for locally extracted resources. These systems can therefore provide recognition of stakeholders' rights, and a capacity to have their concerns heard. As in fair trade, enclaves of coproduction emerge where coordinated joint efforts between companies, NGOs and/or State actors come together – as developmental interventions – to generate relatively inclusive smallholder outcomes.¹⁴⁸

Such private regulatory vehicles are likely to be ineffective in the absence of public regulatory standards, because they attempt to redistribute benefits in a way that conflicts with the local constellations of power and interest reflected

¹⁴⁵ Nelson & Tallontire, *supra* note 143, at 485–86 (citing, Geneva: United Nations Research Institute for Social Research, *Potential and Limits of Social and Solidarity Economy*, UNRISD, www.unrisd.org/80256B3C005BD6AB/search/513E84D6BA2D56EEC1257AF.A00469157?OpenDocument (last visited 9 March 2016).

¹⁴⁶ *Id.* at 493. ¹⁴⁷ *Id.*

¹⁴⁸ Jeremy McCarthy, *Certifying in Contested Spaces: Private Regulation in Indonesian Forestry and Oil Palm*, 33 *THIRD WORLD Q.* 1871 (2010).

in public policies. Few would argue that forms of certification will substitute for recognition of indigenous title; critics suggest that certifying products emerging from regions characterized by land conflicts ratifies bad policies and weakens customary rights claims. Certification may redistribute benefits but doesn't provide public accountability; it may extend "the extraction of resources without conferring effective forms of redress or recognition on groups claiming resource rights."¹⁴⁹ In the absence of community rights, companies have enormous bargaining power and communities often settle for what they can get. Oil palm certification, for example, continues to be dominated by industry, does not apply throughout the whole value chain, and finds no demand in large consumer and manufacturing markets such as China and India. Such certifications do, however, publicize local conditions and provide opportunities for new forms of political pressure toward these ends.

Gender equity is increasingly considered in mapping value chains that follow plantation crops.¹⁵⁰ Proponents of certifications to enhance social justice insist that the entire value chain must be considered if equities are to be secured,¹⁵¹ which must include employment conditions, too often overlooked in fair trade justifications and in MICOs more generally. Certifications must address conditions of both formal and informal employment as well as the impact of conditions of production upon women's reproductive work.¹⁵² In regions where development has devolved to municipal authorities, old plantation industries such as tea (which have both a female labor force and a female consumer base) have been receptive to new certifications.¹⁵³

It is unlikely that MICOs will develop in a fashion that is more equitable to small producers, more sensitive to gender relations, or more attuned to biocultural diversity without collective organization, greater differentiation amongst marked products, and considerable transnational support.¹⁵⁴ More relational forms of institutional support need to be developed in process-based approaches to GIs, to avoid them simply becoming forms of geographical branding.¹⁵⁵ Although it is often assumed that such supports must

¹⁴⁹ *Id.*

¹⁵⁰ Allison Loconto, *Can Certified-Tea Value Chains Deliver Gender Equality in Tanzania?* 21 *FEMINIST ECO.* 191 (2015). *See also*, the discussion of Just Change tea in Coombe & Aylwin, *supra* note 11, at 2032–36.

¹⁵¹ Stephanie Barrientos, Catherine S. Dolan, & Anne Tallontire, *A Gendered Value Chain Approach to Codes of Conduct in African Horticulture*, 31 *WORLD DEV.* 1511 (2003).

¹⁵² Lone Riisgaard et al., *Integrating Poverty and Environmental Concerns into Value-Chain Analysis: A Strategic Framework and Practical Guide*, 28 *DEV. POL'Y REV.* 195 (2010).

¹⁵³ Loconto, *supra* note 150, at 194–96. ¹⁵⁴ *Id.*

¹⁵⁵ Ricky Conneely & Marie Mahon, *Protected Geographical Indications: Institutional Roles in Food Systems Governance and Rural Development*, 60 *GEOFORUM* 14 (2015).

come from states, a number of initiatives indicate that transnational relationships between organized civil society groups may fulfill similar functions. Self-determined forms of certification link producers and consumers in transnational networks of solidarity. Many small-scale producer co-operatives have withdrawn from Fair Trade USA, for example, because producers get little input into standards of certification that don't consider the circumstances of their lives.¹⁵⁶ A new Small Producers' Symbol (Símbolo de los Pequeños Productores – SPP) certification system under the Latin American Fair Trade network began certifying groups in 2011, using standards for production created by small producers attempting to address their everyday socio-economic issues; “in assessing standards, the SPP attempts to create direct relations and dignified living through dialogue – articulated as an economy of trust.”¹⁵⁷ Significantly, geographer Lindsay Naylor argues that this MICO “creates new ways of participating in economic activities and performing economic identities that are focused on place-based ways of living” and suggests a geographical basis for such indications.¹⁵⁸

Initiatives to counter gender discrimination and to forge networks of female solidarity may be driven by producers and workers as well as by consumers.¹⁵⁹ Café Femenino, for example, is a Fair Trade coffee brand developed in the Andean foothills of Northern Peru, under which multiple capacity-building gender empowerment projects are clustered.¹⁶⁰ Members of a female-owned co-operative grow the coffee on lands owned by women, which supports community development initiatives in health, literacy, transportation, and youth employment. Use of the Café Femenino mark accrues an extra two cents a pound for the women and the same amount again for the community foundation.¹⁶¹ Profits are also distributed to a women's shelter and crisis foundation, as well as women's hospitals and

¹⁵⁶ See Sarah Lyon, *Maya Coffee Farmers and Fair Trade: Assessing the Benefits and Limitations of Alternative Markets*, 29 *CULTURE & AGRIC.* 100 (2007); SARAH LYON, *COFFEE AND COMMUNITY: MAYA FARMERS AND FAIR-TRADE MARKETS* (2011); Marie-Christine Renard & Allison Loconto, *Competing Logics in the Further Standardization of Fair Trade: ISEAL and the Símbolo de Pequeños Productores*, 20 *INT'L J. SOC'Y. AGRIC. & FOOD* 51 (2013); Erin Smith & William Loker, “We Know Our Worth”: *Lessons from a Fair Trade Coffee Cooperative in Honduras*, 71 *HUM. ORG.* 87 (2012).

¹⁵⁷ Naylor, *supra* note 31, at 280. ¹⁵⁸ *Id.* at 281.

¹⁵⁹ See longer discussion in Coombe and Aylwin, *supra* note 11, at 2037.

¹⁶⁰ John-Justin McMurtry, *Ethical Value-Added: Fair Trade and the Case of Café Femenino*, 86 *J. BUS. ETHICS* 27 (2009).

¹⁶¹ *Id.* at 38.

a breast cancer research foundation in Canadian consumer communities.¹⁶² The ethical aspect of the added value that this MICO creates is deliberately extended through the entire supply chain. The economic benefits have encouraged families to put more land in women's names, securing greater economic independence and more equity in local gendered divisions of labor.

Another prospect is provided by alternative food networks, wherein civil society groups mobilize "to vindicate the cultural value of food in terms of taste, its conditions of production and its ecological and cultural dimensions as part of the landscape that supports the economy of the smallholder family."¹⁶³ They promote local vernacular economies and self-governance through voluntary certifications. Largely involving producers and consumers in close proximity, such initiatives centrally involve women as farmers, mothers, food providers, and monitors of family nutrition and health who are concerned with agrochemicals, genetic modification, and labor conditions to create relationships of trust between producers and consumers in processes of food governance that are more democratic than those provided by third-party certifications.¹⁶⁴ Alternative food networks often involve female smallholders engaged in multicropping and the preservation of native plant varieties and are dominated by women who understand the integral relationship between agriculture, territory, and food. They offer intriguing possibilities for translation and adaptation in Asian contexts.

There is also hope that "GI production systems based on well-managed extractive activities [can be used to] promote the conservation of natural vegetation and forested areas with benefits to ecosystem and landscape conservation,"¹⁶⁵ and biocultural diversity treated as "an asset that can be developed through GI differentiation."¹⁶⁶ For example, forest biologists, agricultural scientists, and ecologists argue that a landscape with a reputation as a well-managed sustainable environment rich in biodiversity is one that can support a GI for a production system that maintains biodiversity.¹⁶⁷ Such "green GIs" are most successful when they are initiated by local producers,

¹⁶² Imperial Coffee and Services Inc., *Café Femenino Project Empowers Women*, IMPERIAL (2 September 2015), <http://imperialcoffee.com/2015/09/02/cafе-femenino-project-empowers-women/>.

¹⁶³ Ronald Nigh & Alma-Amalia González Cabañas, *Reflexive Consumer Markets as Opportunities for New Peasant Farmers in Mexico and France: Constructing Food Sovereignty Through Alternative Food Networks*, 39 *AGROECOLOGY & SUSTAINABLE FOOD SYSTEMS*. 317 (2015).

¹⁶⁴ *Id.* at 329–30. ¹⁶⁵ *Id.* at 8. ¹⁶⁶ *Id.*

¹⁶⁷ Marie-Vivien et al., *supra* note 93, at 380–85.

give biodiversity objectives primacy, and provide specifications for their use that prioritize local environmental practices.¹⁶⁸ Nonetheless, it is doubtful that benefits will be realized in countries where institutions for supply-chain governance are weak, trends toward agroindustrialization are already established, and there is little state support for local organizations or community governance.¹⁶⁹ Again, new forms of support and collaboration will be essential.

One final set of values that might inform new initiatives for developing MICOs emerges from the growing recognition of biocultural rights. Norms linking biodiversity maintenance and TEK protection have been evolving under the auspices of the CBD since 1992. In countries where the indigenous status of minority ethnic groups is precarious, unacknowledged, or refused, the relationship between “traditional” peoples, local communities, and natural environments is recognized through an acknowledged interrelationship between biological and cultural diversity. Biocultural diversity has emerged as a hybrid good to be pursued in support of the livelihood resources, identities, and political interests of local communities¹⁷⁰ alongside political principles of FPIC that fulfill state obligations to “take into consideration indigenous and local communities’ customary laws, community protocols and procedures when accessing TK associated with genetic resources.”¹⁷¹

Biocultural community protocols are legal vehicles that indigenous peoples use in environmental and biodiversity negotiations to regulate the interface between international legal instruments and the locally held collective heritage resources that internationally ground indigenous rights.¹⁷² Many social movements and UN bodies embrace these principles, but the prospect of marking goods and services as indicating places of origin that comply with

¹⁶⁸ Claude Garcia et al., *Geographical Indications and Biodiversity in the Western Ghats, India: Can Labelling Benefit Producers and the Environment in a Mountain Agroforestry Landscape?*, 27 MOUNTAIN RES. & DEV. 206 (2007).

¹⁶⁹ LARSON, ICTSD Policy Brief No. 3, *supra* note 4.

¹⁷⁰ Reiner Buergin, *Contested Rights of Local Communities and Indigenous Peoples in the Context of the Biocultural Turn in Environmental and Development Discourses*, 49 MOD. ASIAN STUD. 2022 (2015).

¹⁷¹ Krystyna Swiderska, *Protecting Traditional Knowledge: A Holistic Approach Based on Customary Laws and Bio-Cultural Heritage*, in CONSERVING AND VALUING ECOSYSTEM SERVICES AND BIODIVERSITY 331–44 (Karachepone N. Ninan ed., 2009).

¹⁷² UNEP, *BIOCULTURAL COMMUNITY PROTOCOLS: A COMMUNITY APPROACH TO ENSURING THE INTEGRITY OF ENVIRONMENTAL LAW AND POLICY* (2009), available at www.unep.org/communityprotocolsPDF/communityprotocols.pdf; HOLLY SHRUMM AND HARRY JONAS (eds.), *BIOCULTURAL COMMUNITY PROTOCOLS: A TOOLKIT FOR COMMUNITY FACILITATORS: INTEGRATED PARTICIPATORY AND LEGAL EMPOWERMENT TOOLS TO SUPPORT COMMUNITIES TO SECURE THEIR RIGHTS, RESPONSIBILITIES, TERRITORIES, AND AREAS* (2012); Bavikatte, *supra* note 95, at 227–30.

these norms is only beginning to be explored. Means to verify compliance with the FPIC of indigenous peoples (which in many cases will be based on customary or “living law”) and to certify and communicate such compliance are still being devised.¹⁷³ The International Institute for Environment and Development (IIED) Report considering “Intellectual Property Tools for Products Based on Biocultural Heritage” suggests that some types of GIs might be used by associations of small producers to recognize and support group rights; used appropriately and controlled by local communities, they can protect traditional methods, support sustainable development, and might be further developed to mark products “derived from the collective biocultural heritage of indigenous people.”¹⁷⁴

Alejandro Argumedo argues that MICOs, collectively owned and run in accordance with community self-determined rules which correspond with customary law principles, offer real economic and political benefits to indigenous communities. In countries with state-held GIs, collective trademarks are better vehicles for indigenous communities but a new regime of “biocultural heritage indications” that builds upon this legal vehicle might “open up the current IPR [Intellectual Property Rights] system to millions of poor rural communities.”¹⁷⁵ As this chapter went to press, the IIED, the University of Leeds, and Asociacion ANDES (Peru) were widely consulting experts on the best means to develop a biocultural heritage (BCH) indication regime for marking products and services.¹⁷⁶

¹⁷³ BRENDAN TOBIN, *INDIGENOUS PEOPLES, CUSTOMARY LAW AND HUMAN RIGHTS: WHY LIVING LAW MATTERS* 178 (2014).

¹⁷⁴ Graham Dutfield, Alejandro Argumedo, & Krystyna Swiderska, *Designing an Effective Biocultural Heritage Indication Labeling System* (2015), available at <http://pubs.iied.org/14655IIED>.

¹⁷⁵ ALEJANDRO ARGUMEDO, *COLLECTIVE TRADEMARKS AND BIOCULTURAL HERITAGE. TOWARDS NEW INDICATIONS OF DISTINCTION FOR INDIGENOUS PEOPLES IN THE POTATO PARK, PERU* 5 (2013). Argumedo is an agricultural development expert and Director of Asociacion ANDES, an internationally linked indigenous NGO; he was instrumental in establishing an indigenous, community-run Potato Park in Písaq, Peru. The Park has been informally using a collective trademark since 2005 and bases the rules governing its use on principles derived from an Andean cosmovision – the *ayllu*, a holistic territorial approach to life and development that informs all activities in which biocultural heritage goods and services are produced and marketed (10–11). The use of the collective mark helps to protect the communities from appropriation of genetic resources, and functions to communicate the collective nature of *ayllu* production processes and Quechua knowledge and innovation systems (14). It also helps to ensure cohesion between villages, increases people’s pride in their local heritage, and encourages greater reflexivity about community values in development while educating others about indigenous community rights. The mark also independently generates revenue to the extent that tourists value it as authenticating the goods and souvenirs they take home.

¹⁷⁶ Dutfield, Argumedo, & Swiderska, *supra* note 174, at 3–5.

5 CONCLUSION

In this journey through tea plantations, oil palm frontiers, and tribal women's gardens, we have attempted to illustrate that GIs and other MICOs have largely worked in Asia to hide or obscure racialized conditions of gendered labor. They have done little to illuminate the hidden and unappreciated work of conservation and biocultural regeneration that women do across the region. Nonetheless, MICOs which can be held and governed locally according to living law and rights-based development criteria and certified for new markets have the potential to be shaped in ways that respect and value the work that women do in rural Asia while contributing to the maintenance of those biocultural heritage resources which have traditionally sustained rural communities. New values are emerging for managing supply chains that recognize the environmental and cultural labors of women in ways that support their livelihoods. The adoption and adaptation of such models in Asian contexts should be welcomed and encouraged.