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The shifting ground of swidden agriculture on Palawan Island, the Philippines

Wolfram Dressler · Juan Pulhin

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Abstract Recent literature describing the process and pathways of the agrarian transition in Southeast Asia suggests that the rise of agricultural intensification and the growth of commodity markets will lead to the demise of swidden agriculture. This paper offers a longitudinal overview of the conditions that drive the agrarian transition amongst indigenous swidden cultivators and migrant paddy farmers in central Palawan Island, the Philippines. In line with regional agrarian change, we describe how a history of conservation policies has criminalized and pressured swidden farmers to adopt more intensive "modern" agricultural practices. We examine how indigenous swidden cultivators adjust their practice in response to recent changes in policies, security of harvests, and socio-cultural values vis-à-vis intensification. Rather than suggest that this transition will lead to the demise of swidden, results reveal that farmers instead negotiate a shifting ground in which they lean on and value swidden as a means of negotiating agrarian change.

W. Dressler (✉)
School of Social Science, University of Queensland, St Lucia, QLD 4072, Australia
e-mail: wolfram.dressler@mail.mcgill.ca; wolfram_dressler@hotmail.com

J. Pulhin
Department of Social Forestry and Forest Governance, University of the Philippines Los Banos, 4031 College, Laguna, the Philippines

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Introduction

Traditional livelihoods have been in a state of transition throughout much of upland Southeast Asia. Recent literature has suggested that a regional agrarian transition has generated policies and market pressures that have commodified, sedentarized, and intensified family food crop production among smallholders (Bryceson 1996; Elson 1997; Patel 2006). In particular, such localized pressures and opportunities have made it increasingly difficult for upland farmers to sustain swidden agriculture (Sturgeon 2005; Hansen and Mertz 2006).[1] The underlying concerns of the policies driving the agrarian transition are that, because swidden has remained a major cause of deforestation (Myers 1988), it must be criminalized and sedentarized through intensification. Carried over from colonial ideologies, state foresters and resource managers have considered swidden as a primitive practice where forest is "slashed and burned" with a lack of planning and foresight (Cairns 2007). Drawing on such discourse, state interventions have sought to modernize upland farmers by stabilizing, sedentarizing or replacing swidden cultivation. Well documented, however, is that "traditional" swiddens—as distinguished from more destructive "incipient swiddens"—have often persisted as diverse social and

[1] We define swidden agriculture as the intermittent clearing of forest for staple food crop production, followed by a much longer period of forest fallow, which restores the productivity of the land (Conklin 1957; Cramb et al. 2009). Rotational swidden farming contrasts with sedentary farming which remains in one place.

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ecological practices that are integral to indigenous ways of life[2] (Conklin 1957; Kundstadter et al. 1978; Dove 1983; Brookfield and Padoch 1994; Cairns 2007). Despite the sustained impacts of such campaigns, many farmers have continued to negotiate the shifting ground of swidden—from changing crop yields to changing ceremonies—to maintain subsistence security and cultural values while, in some cases, even intensifying production (Hansen and Mertz 2006).

Scholars have argued that swidden agriculture will soon be integrated with, or be completely replaced by, commercial agriculture that runs parallel to the political economic drivers of the agrarian transition—a process whereby rural sectors move from being predominantly agricultural to predominantly industrial and urban (Cramb et al. 2009). National campaigns have facilitated this transition by resettling uplanders to the lowlands, displacing swidden with sedentary farming, or stabilizing swiddens with agroforestry throughout Southeast Asia (Walker 2004; Dressler 2006; Colchester 2006; Baird and Shoemaker 2007). Several scholars, notably Rigg (2005, 2006), have suggested that swidden and related subsistence strategies have been in decline due to "progressive shifts from farm to non-farm activities" (2005, p. 174) including mixed-forms of "pluriactivity," full-time commercial agriculture (in fallowed or fixed plots), and/or non-agricultural employment (Schmidt-Vogt 2001; Castella et al. 2005; Rigg 2006; Saito et al. 2006). Experiencing population increases, larger families, land shortages, greater income needs, and pressures from government and civil society to settle, swidden farmers have sought new ways to "increase production from a constant area of land or obtain the same production from less land"—in some cases investing in inputs to raise yields or others improving fallows to raise a particular yield more comprehensively (Brookfield 2007, p. 11).

Although swidden agriculture has been in decline, we argue that it is premature to suggest that swidden is headed toward extinction. As much as scholars have shown that the agrarian transition and swidden decline is not "a smooth and equal" process (Rigg 2005, p. 180), generalized typologies of agrarian change have remained sequential and linear. Recent research claims that swidden is in a trajectory of demise due to the effects of intensification, wage labor and other factors (Gou et al. 2002; Castella et al. 2005; Rigg 2005; Ducourtieux et al. 2006). Rather than fully support this conclusion, we argue that it is more useful to consider how and why certain farmers have negotiated the complex and recursive changes of swidden in the context of local situations and circumstances. Thus, we seek to understand the varied ways farmers negotiate and respond to changes in swidden in the face of agrarian change at the local level. Will all farmers negotiate the shifting ground of swidden in the same way? Will indigenous farmers abandon swidden when the opportunity to intensify arises and or familial needs call for ritual ceremony and the planting of staple crops?

The Philippines represent one country where colonial and post-colonial governments have viewed swidden as illegitimate agriculture that threatens timber reserves. Government campaigns have unleashed anti-swidden discourses that justified the resettling of swidden cultivators and adoption of permanent agriculture in the lowlands (Eder 1987; Lopez 1987; Brown 1990), to coercively regulate swidden agriculture (Dressler 2006), and or to use community approaches to ensure forest uses and swidden farming stabilize (Novellino and Dressler in press). As these campaigns unfolded, upland frontiers have opened up to become dynamic spaces filled by flows of migrant settlers, capital, knowledge, and new markets (Eder 2006). All of these factors have spurred agricultural intensification that has incorporated and or displaced traditional swidden farmers to upland areas. The frontier island of Palawan is one area where migrants have relocated upland in search of new livelihoods, "co-mingling and competing with several indigenous peoples already present" (Eder 2004, p. 633). After several decades of migrants moving upland, the introduction of new technologies, farmer knowledge and government support for intensive agriculture has transformed the pre-existing mix of swidden agriculture and forest extraction, and related activities. Indeed, parts of Palawan have now become "post-frontier" in character (Eder 2006), where indigenous farmers negotiate the changing character of swidden due the pressures and opportunities of agrarian change. In this context, we offer a longitudinal overview of just how and why the indigenous Tagbanua—a "swidden people" of Malay descent (Fox 1954)—have adjusted practices associated with integral swiddens in response to agricultural intensification amidst migrant neighbors in the land rich, people poor areas of Buenavista and Cabayugan in central Palawan (hereafter Buenavista-Cabayugan; see Fig. 1).

This paper first describes the political economic context of several centuries of state repression of swidden in the

[2] We further distinguish between (a) "integral" swidden practices based on traditional farming practices; culture; greater species diversity; and longer fallows from "incipient" swiddens based on sustained periods of cultivation; less integration into culture and lifeways; and production of crops destined for permanent, intensified production (Conklin 1957; Kundstadter et al. 1978). While Brookfield (2007) argues that many integral swiddens have long been mixed with other cropping practices, some of which are more intensified than others, we maintain that differences exist between smaller, more diverse swiddens embedded in lifeways, and shorter fallow swiddens featuring uniform row crops. We also differentiate swidden cycles and fallows from agroforestry plots that are usually planted with permanent hardwoods and tend to fall outside of swidden rotation. However, we acknowledge that the distinction remains ambiguous.

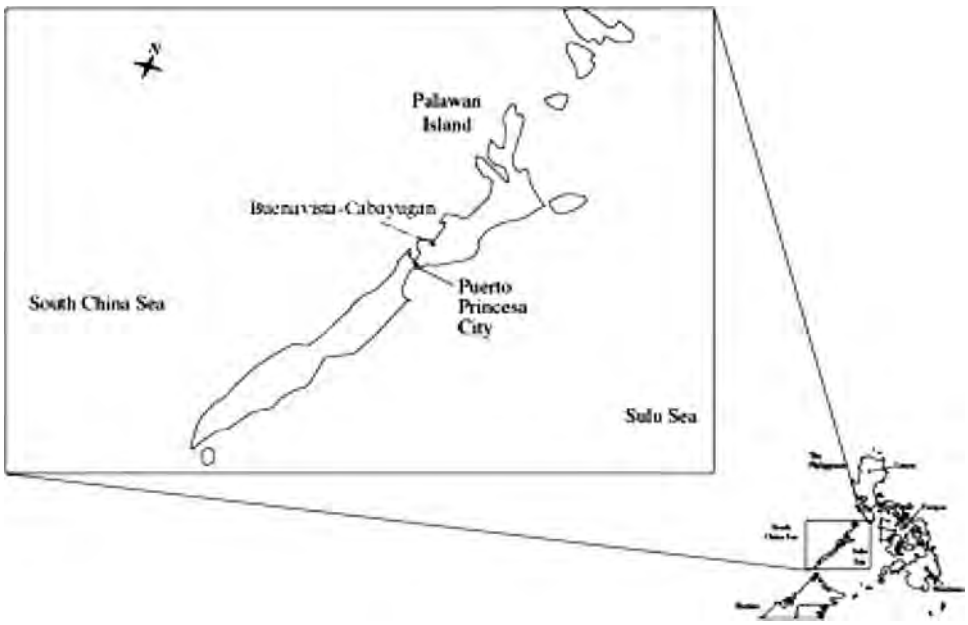

Fig. 1 Location of Buenavista-Cabayugan (*source*: Dressler 2009)

Philippines. Section two focuses on Buenavista-Cabayugan in the 1960s–1970s, examining how Tagbanua have maintained integral swidden practices as migrants and state officials have introduced paddy rice farming and other intensified methods to them. Although many Tagbanua had experimented with paddy farming,[3] most retained, or returned to cultivate, their swidden fields in due course (cf. Conelly 1992).[4] From the 1980s onward, the growth of anti-swidden policies and participatory approaches promoted intensified farming schemes for the purpose of stabilizing swiddens among the Tagbanua. Data from 2001 to 2004 have revealed that, despite greater numbers of migrants and Tagbanua moving into intensive farming and off-farm labor jobs, earlier patterns of the former relying on paddy rice and the latter on swidden have persisted. Section three draws on data from 2006 to 2008 to contrast and compare how Tagbanua and migrant farmers have adjusted swiddens in response to: (1) policies, (2) security of harvests and (3) the socio-cultural value of harvests.[5] Evidence suggests that, while some Tagbanua intensify production due to government pressure and the need to increase yields, an equal number have maintained paddy farms and swiddens. Those farmers who have experimented with paddy rice, or who have avoided it altogether, have invested in swidden and speak well of its socio-cultural value and subsistence safety-net function. Section four discusses how and why swidden farmers who have begun to intensify, or who side-stepped commercial agriculture, continue to rely on swidden for family food cropping and maintaining a sense of cultural continuity. Rather than suggest that these farmers are remnant shifting cultivators, we argue that some farmers' ability to rely on swidden in line with their economic position, social values and cultural preferences, better enables them to negotiate local agrarian transition.

[3] In this paper, paddy rice refers to both lowland irrigated and rain fed (*Tubigan*) wet rice cultivation, which in Buenavista-Cabayugan is termed, *basakan* (of Cebuano origin). Unless stated otherwise, however, paddy rice farming in this paper will refer primarily to lowland irrigated wet rice cultivation.

[4] Conelly (1992) fails to account for social and cultural factors that may have affected the varied adoption of paddy rice amongst indigenous people and migrant settlers in the Napsa'an area of Palawan Island.

[5] Data for this paper were derived from qualitative and quantitative methods spanning 2001–2008. Methods included key informant and oral history interviews, participatory wealth rankings, and livelihood surveys. From 2001 to 2004, the lead author completed 80 interviews, a participatory wealth ranking ($N = 156$), and a livelihood questionnaire ($N = 157$, a non-random, purposive sample of all households in Cabayugan proper). All questions were geared toward ascertaining

Footnote 5 continued
the extent to which each group's involvement in swidden and paddy rice production had changed relative to household livelihood portfolios, socio-political relations, and the influences of agrarian change. From 2006–2008, again using purposive sampling, he completed 40 in-depth interviews and a smaller livelihood questionnaire ($n = 20$) in Cabayugan among long-time swiddeners. The questions in both surveys were designed to understand the relative social, cultural, and economic importance of each form of rice production; how and why swidden size and yield had changed over time; and the main motives behind the shift from subsistence harvesting to commercial production across Cabayugan proper, and Buenavista. Both the wealth ranking and questionnaires covered the entire population of three *sitios* that make up Cabayugan proper (Cabayugan Centro, Sugod Uno, and Manturon), with select interviews being completed in Buenavista. Tagbanua in Buenavista and Cabayugan granted their Free and Prior Informant Consent for all components of this study. Pseudonyms have been used in this paper.

Colonial land use classifications driving agrarian transitions in the Philippines and Palawan

The classification of lands, agriculture, and people in the Philippines is rooted in law spanning the Spanish and American colonial periods, spurring agricultural change for centuries. After Spanish conquest in 1565, the Crown imposed the Regalian Doctrine, holding that all lands not registered as private title were "public domain" (Lynch 1982; Gatmaytan 1992). The Spanish used the Doctrine's principles 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" minority who, by avoiding proselytization, were considered "primitive" uplanders without title (Constantino 1978). The colonial state drew on this upland–lowland distinction to deny uplanders access to forests for swidden cultivation (*kaingin*).[6]

The American colonial government applied these principles through the zoning of the public domain it claimed in 1899 (Linn 2000). By 1903, the US Bureau of Forestry re-emphasized that swidden remained an impending threat to timber stands and soon implemented the Kaingin Law of 1901 (Scott 1979). The law upheld stiffer fines and prison sentences for "illegal" swiddeners, reinforcing the use of forestry reserves to protect upland forests. State officials used such territories to evict swidden cultivators (without private title) as squatters on public domain (Gatmaytan 1992).

After independence in 1946, the Philippine Republic secured further control over "*kaingineros*" [sic] by drafting a Revised Kaingin Law in 1963 (Scott 1979), stating that swidden farmers should be identified, managed, and/or resettled (Population Center Foundation 1980, p. 11). In 1975, Marcos's Presidential Decree 705 regulated swidden through national parks policy by reclassifying the management and use of public forests, and supporting the Forest Occupancy Management Programme's aim of resettling "squatters" (Population Center Foundation 1980, p. 44; Congress of the Philippines 1975). Other social forestry policies offered farmers de facto tenure with twenty-five-year leases based on the expectation that swiddens would be inter-cropped and phased out (Gatmaytan 1992).

The Philippine Constitution of 1987 and related land laws drew on the Doctrine's principles by classifying all lands with a slope over 18 percent slope as public domain, enabling state agencies to categorize forest dwellers as squatters (Gatmaytan 1992). Below a slope of 18%, the state prioritized the release of lands from the public domain as "alienable and disposable" to allow lowlanders to apply for private title and/or hold usufruct plots for intensive cultivation. New land laws and elevation thus sustained an upland–lowland divide according to state preferences for fixed-plot agriculture.

National and Palawan-based policies on swidden agriculture

The Philippine government's efforts to curb swidden cultivation grew out of colonial forestry principles that sought to maximize timber yields by reducing swidden-induced deforestation and, more recently, national and international laws for biodiversity conservation. After the first People Power Revolution ousted Ferdinand Marcos in 1986, the restoration of democracy enabled the state and nongovernmental organizations (NGOs) to support indigenous rights to land and livelihood in the uplands. On Palawan Island, in particular, those government and NGO actors who exposed human rights abuses and extensive logging on indigenous lands (Vitug 1993, 2000), soon drew on locally-oriented policies to stabilize swidden for fear of deforestation (DENR 1998).

Different "people friendly" legal structures have affected the viability of swidden among the indigenous peoples of central Palawan Island. Nationally, the Local Government Code devolved resource management authority from national agencies to Local Government Units, advocating for NGO and People's Organization involvement in local governance. Indigenous peoples soon set up alliances with NGOs under the Indigenous Peoples' Rights Act of 1997 (IPRA 1997), which recognized indigenous peoples' rights to ancestral lands as *de jure* domain claims (ibid).[7] Provincially, the Palawan Council for Sustainable Development and City Government of Puerto Princesa (Palawan's capital) worked on the Strategic Environmental Plan's (SEP 1992; Sibal 2001) management zones to regulate the size and location of swiddens. Local organizations and governmental officials drew on these laws to facilitate community-based conservation that compelled indigenous peoples to intensify production (Novellino and Dressler, in press).[8]

Backed by the SEP, the Mayor of Puerto Princesa City and his Council drafted a "zero burning" ordinance in

[6] Swidden is often referred to by the pejorative Tagalog term, *kaingin*.

[7] The use of Ancestral Domain Claim refers to a legal land claim with dimensions that are zoned and registered at the Bureau of Lands in Manila. The condition of harvesting in a "traditional" and "sustainable" manner has been enshrined within Ancestral Domain Management Plans as specified in the *Implementing Rules and Regulations* of the Indigenous Peoples Rights Act of 1997.

[8] The PCSD is a unique government body formed by Republic Act No. 7611 with a mandate for the protection of the environment within the province. Indigenous interests are very poorly represented within the council whose decisions clearly express the views of the authorities.

1993 to regulate swidden burns in order to conserve old growth forest in buffer zones, without realizing that the ban would curb yields and induce hunger among Tagbanua and other uplanders (McDermott 2000). Only by changing the earlier policy to one of "controlled burning" and providing Tagbanua with emergency rice, could the City offset the negative impact of the bans (see Puerto Princesa Legislature 1993, 1994). In time, a raft of new people oriented policy controls governed swidden by ensuring that cultivation was either customary-sustainable or, when heavily used, converted to agroforestry, or intensified paddy fields. The section below considers how colonial and post-colonial pressures have facilitated irregular agrarian change to affect how and why Tagbanua farmers have adjusted swidden in response to intensification in the Buenavista-Cabayugan area.

The local agrarian transition on Palawan Island

The Tagbanua (*Apurhano*) of Buenavista-Cabayugan are a near-coastal people who have relied on swidden practice for subsistence, culture, and worldview for centuries (Fox 1954; Warner 1979). Warner (1979) describes how they collectively knew 140 traditional varieties of rice and used more than 20 in situ, with swidden cycles figuring prominently in ritual, ceremony, and religion (Fox 1954). Their swiddens have tended to be smaller in size, ranging from 0.25 to 0.50 ha, hosting wildlings and domesticates (e.g., mixes of traditional upland rice, cassava, sweet potato, greater yam), and were at one time commonly left in fallow for 10–15 years (Dressler 2005). Moreover, non-timber forest product harvesting,[9] seasonal fishing, shallow diving, and the collection of crustaceans have complemented swidden cultivation; and most have combined these activities with wage-based employment (Venturello 1907; Kress 1977; Conelly 1992; McDermott 2000).[10] Many are nominally westernized, have intermarried with lowland Filipino migrants; and, despite blending Christianity with custom, still classify themselves as indigenous (i.e., *katutubo*; Eder 2004). Customs persists in some areas, but less in others.

Travelling north from towns such as Napsa'an and Aborlan,[11] Tagbanua eventually resettled in the then well-forested barangays of Buenavista and Cabayugan (Buenavista-Cabayugan) during the mid-to-late 1800s. Arriving in small clusters, and perhaps as "self-contained" subgroups (Fox 1954, p. 27), they first cultivated swidden on the flat, fertile valley lands near Ulugan and St. Paul Bay (Marche 1970). Tagbanua pioneers cut swiddens in the area to assign place names and meanings to a variegated landscape. From the 1950s until today, however, lowland migrants departed from the politically and economically-strained areas of Luzon and Mindanao to settle in the Buenavista-Cabayugan area (Kerkvliet 1977; Chaiken 1994). Elderly migrant farmers recounted during interviews how unequal tenant-land lord relations, the failure of land reform to grant secure holdings, and socio-political conflicts (see Kerkvliet 1974)[12] all prompted them to look for greener pastures on Palawan, an island known for resource abundance and peace (Eder and Fernandez 1996). While some were assisted by relatives already living in Puerto Princesa City, most self-financed their travels to Palawan. The original migrant population was relatively homogeneous, with most migrants living among Tagbanua coming from Bulinao and Iloilo (Dressler 2009). Characteristic of most upland areas on the island, migrants and Tagbanua assisted one another to clear forest and prepare swidden in rotation (i.e., the *bayanihan* system) in the then land-rich, people-poor area. They hunted wild pig, shared food without monetary exchange, and collected non-timber forest products since at least the 1950s (Fox 1954; Connelly 1985).

Soon reciprocal work relations were partly succeeded by commodity relations spurred by agricultural intensification, reinforcing differences along an upland-lowland divide. With pioneer migrants settled and other migrants following in the 1970s, they hired Tagbanua to help clear forests for swidden and paddy farming on flat, fertile alluvial land. As Tagbanua labored and produced goods for migrants, production and exchange relations supported fledging commodity markets and unequal trade relations. The more time Tagbanua spent producing commodities for migrant markets, the less time they invested in swidden-based production (Eder 1987).

Migrants came to control more and more productive resources in the Buenavista-Cabayugan area. They claimed flat lands through seizure or purchase, converted most swiddens into paddy fields, and then tendered lands as private title. With secure title, wealthier migrants easily expanded paddy rice, while Tagbanua and poorer migrants cultivated swidden on usufruct plots in the uplands. Those Tagbanua struggling with paddy rice, returned to cultivate swidden.

[9] These include almaciga resin (*Agathis philippensis; alba*); wild pig (*Sus barbatus*), various types and grades of rattan (mainly *Calamus caesius*); honey; bird eggs and swiftlet nests; and orchids (Conelly 1985).

[10] Tagbanua have traded forest products for commodities with Chinese and Muslim merchants for several centuries (Kress 1977).

[11] Aborlan lies in south-central Palawan, and is considered the cultural cradle of Tagbanua society (Fox 1982).

[12] Although state programs such as Masagana 99 facilitates mass enrolment in paddy farming with significant increases in yield, the overall benefits of such programs were not equitably, and so failed to improve income levels for the majority of landless tenants in the Philippines (Kerkvliet 1974).

Enduring social and economic differences

Comparing the intergenerational livelihood motives of Tagbanua and migrants illustrates how the area's history has driven social and economic conditions that reinforce an irregular local agrarian transition—as characterized by the shifting nature of swidden agriculture. Results from an earlier livelihood questionnaire covering Cabayugan proper's entire population ($N = 157$) suggest, for example, that the area's relatively homogenous population in the 1970s, had diversified into no less than 13 different migrant ethnicities by 2001, easily out-numbering Tagbanua. In 2001, of the 157 households surveyed in Cabayugan proper, 70 percent ($n = 111$) were migrant households, with the remaining 30 percent ($n = 46$) being Tagbanua. However, while an increase in mixed-marriages paralleled impressive livelihood diversification (e.g., owning sari-sari stores, teaching, carpentry, fishing, etc.), many households remained differentiated according to long-standing agricultural practices—those they knew best and relied on in times of uncertainty.

Just like their parents, the offspring of migrant pioneers (20 households, 18% of questionnaire respondents) who were born in the early 1970s stated they remained to access a "better livelihood" (15 households, 14%) and "get married" (13 households, 12%).[13] Most first generation migrants born in Cabayugan were now raising children and cultivated irrigated paddy rice on cleared lands inherited from their parents. Because land and ownership rights passed between generations of the same kin group and ethnicity—the basis of which was constituted by socio-political ties—newly formed households could access private title and or hold land in usufruct for conversion to private title. Thus, first generation households were easily incorporated into the paddy rice economy that their parents had set up, further drawing on Tagbanua labor for paddy field expansion. Older, new, and recently-arrived migrant households were actively securing flat lands for "modern" paddy farming and opportunities in off-farm employment for which they qualified.

With limited access to the same socio-political networks, most Tagbanua of the same aged cohort remained because of fewer opportunities to move beyond swidden and forest extraction (rattan, almaciga resin, honey, etc.). Indeed, compared to migrants, recently-formed Tagbanua households of the fifth generation stayed put according to their degree of dependency on forest products and swidden agriculture, although most were dissatisfied with current rice yields under shorter 3–4 years fallows.[14] Moreover, many suggested that familial-kin obligations and limited employment opportunities in Puerto Princesa City kept them in the uplands. With little education and fewer socio-political ties, young Tagbanua continued to work swiddens, tended the paddy fields and tree crops of migrants, and labored inside and outside of the area.

More recently, in 2004, a representative cross section (8 individuals consisting of migrant and Tagbanua men and women between 20 and 70 years of age) of Cabayugan proper's population (now Tagbanua $n = 50$; migrant = 106; total $N = 156$) participated in an asset-based wealth ranking to explore how assets influenced agricultural potential and to define relative wealth.[15] Participants assisted in defining an emic index of relative household wealth, ranging from "wealthy" (i.e., *mayaman*), "moderately wealthy,", "poor" and "very poor" (*mas hirapan*), showing how assets can influence how each group negotiates subsistence (swidden) and intensified production (paddy) in the face of agrarian change. We focus on moderately wealthy, poor and very poor households.

The past and present generation of migrants dominated the category of "moderately wealthy" households (25%, $n = 39$ of 156). As shown in Fig. 2, not one Tagbanua family was represented among them. Just under half of the migrant households in this ranking held private title and or tax assessment certificates (41%) upon which they based the retention and expansion of lands for paddy rice. 77% cultivated paddy rice using traditional implements and draught animals, such as water buffalo (i.e., *carabao*; 72%). Farmers in this wealth category could use mechanized implements for greater efficiency in cultivation (e.g., water pumps for irrigation, 3%; hand tractors for plowing,

[13] Respondents could choose multiple answers to one question.

[14] The same can be said of fourth-generation Tagbanua surveyed (born between 1940 and 1950) who confirmed that they stayed put because of marriage, forest-based livelihoods, and a lack of other opportunities (Livelihood questionnaire, summer 2002).

[15] The lead author investigated how relative levels of household asset holdings might affect livelihood portfolios, paddy rice and swidden cultivation, and overall social and economic differences within and between migrants and Tagbanua. To understand why some households were "rich" and others "poor, migrant and Tagbanua farmers helped define criteria for a wealth-ranking based on the relative ownership value of assets (relative to a particular asset's productive capacity and return on investment). Relative household wealth was ranked by participants according to the type, number, and value of different assets owned by households in each social group. As participants knew what other households owned enabled them to define and rank the relative value of assets according to wealth categories they had pre-assigned. Participants then aggregated different levels of asset holdings into an emic (participant generated) index of relative household wealth, ranging from "wealthy" (i.e., *mayaman*), "moderately wealthy," "poor," and "very poor" (i.e., *mas hirapan*). Percentage of asset ownership per ranking index is based on the level of household ownership of asset type in each respective wealth ranking for the entire population of the *sitios*. The population estimates of the three *sitios* surveyed changed marginally in 2004 ($N = 156$; Tagbanua $n = 50$; migrants $n = 106$).

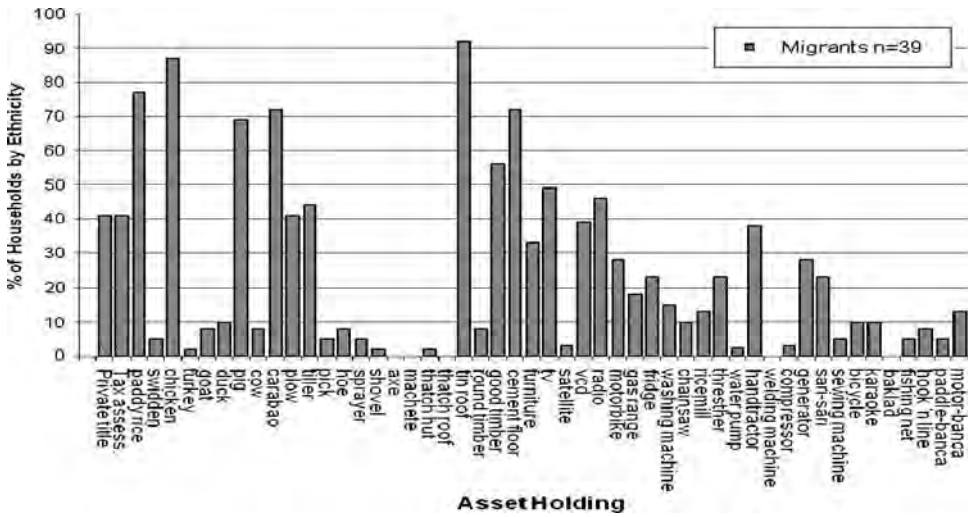

Fig. 2 Moderately wealthy households by asset holding and ethnicity (*source*: Cabayugan Wealth Ranking 2004)

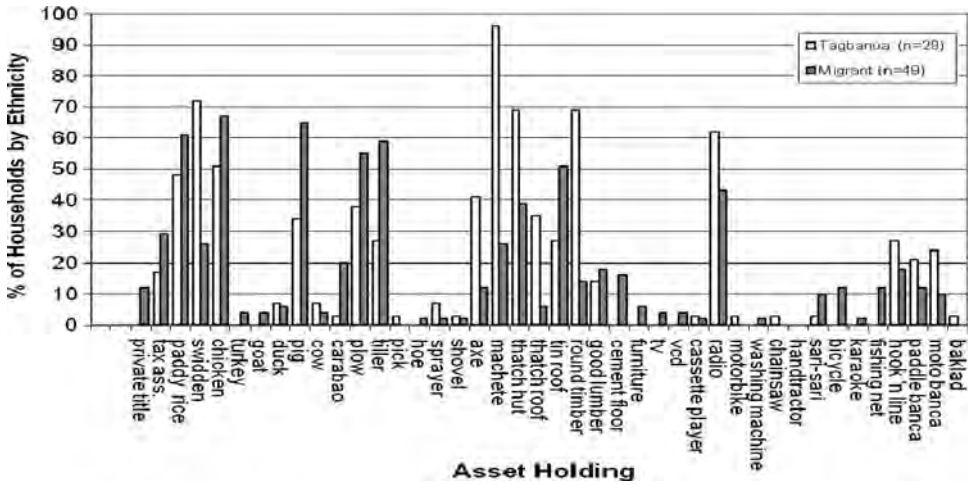

Fig. 3 Poor households by asset holdings and ethnicity (*source*: Cabayugan Wealth Ranking, Spring 2004)

38%). Thus, migrants have come to view swidden cultivation and other subsistence activities as less important.

In contrast to migrants (31%, $n = 49$), the majority of Tagbanua (19%, $n = 29$) households were ranked as relatively "poor," with differences in asset holdings reflecting the livelihood portfolios of very poor households. As shown in Fig. 3, while several "poor" Tagbanua cultivated paddy rice (48%), fewer owned plows and tillers than machetes for working swiddens. In contrast, many more migrants in this same ranking cultivated paddy rice (61%), held private title (26%), and owned an array of productive assets needed for paddy field preparation and harvests [carabao (20%); plows (55%); tillers (59%)].

While both migrants and Tagbanua households occupied the "very poor" wealth ranking, the latter clearly represented the majority (13%, $n = 21$) with less than one quarter (10%, $n = 16$) of the former falling into this category. Figure 4 indicates that very poor Tagbanua households had no formal land tenure, owned few traditional farm implements such as carabao (9%), and none owned mechanized farm equipment, such as hand tractors. More impoverished Tagbanua farmed swidden (76%), used "basic" tools for cultivation (axes and machete, etc.), and also depended on artisanal fishing (hook and line, paddle dugout canoes). Although very poor migrants also relied on swidden, they did less so than their indigenous neighbors. Most migrants owned a greater number and diversity of livestock, lived in thatch houses with tin roofs, and fished with smaller motor-driven outrigger canoes (6%). Thus, Tagbanua still consider swidden cultivation and other subsistence activities to be important.

Despite within-group differentiation being apparent, with land and capital difficult to acquire for intensified agriculture, and the appropriateness of horticulture in upland areas, many Tagbanua have continued to rely on swidden amidst its apparent state of decline. We now examine how these historical conditions affected the outcomes of three crucial elements—policy, security of rice harvests, and socio-cultural values—on Tagbanua swidden cultivation in 2007–2008. We describe how these three

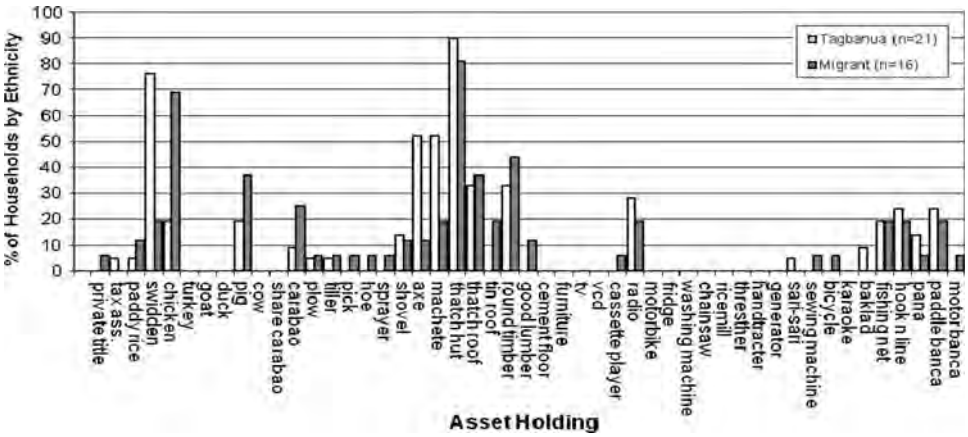

Fig. 4 Very poor households by asset holding and ethnicity (*source*: Cabayugan Wealth Ranking, Spring 2004)

themes come together to influence how Tagbanua farmers negotiate the shifting ground of swidden, where some households intensify or abandon swidden, while others maintain swidden as a coping mechanism against the uncertainties of intensification.

Results

Perspectives on the overall decline of swidden

Interviews in 2006–2008 suggested that the City Government of Puerto Princesa's political rhetoric and policy bias against swidden burning in 1994 has continued to influence "relatively poor" Tagbanua farmers to reflect on the viability of swidden. When asked whether he planned to cultivate swidden in the future, a middle-aged Tagbanua farmer, Juanito Capistrano, stated,[16]

> It is prohibited. They will apprehend you. The Mayor said it was prohibited. The reason it is prohibited is because the trees will be gone!

Another middle-aged Tagbanua farmer, Raul Daganta, pointed out that,[17]

> During those times none, there were no laws, but now it [swidden] is already prohibited. The Mayor prohibited it. It is just prohibited because they say it destroys the environment. So I don't do kaingin anymore. […] Other times, like rainy season, I do paddy-farming because kaingin is already prohibited. We are also aware already… it bothers our conscience also when we kill [trees], isn't it?

These comments have come 14 years *after* the City Mayor implemented the Zero Burning Ordinance (1992–1994). They reflect how Tagbanua still fear the political repercussions of burning and how many have adopted the Mayor's own environmental discourse. Prominent Tagbanua leaders, who have allied themselves with Mayoral politics and NGOs, have internalized and acted out this pervasive anti-swidden sentiment. Tagbanua leaders have even gone so far as to post signs in their ancestral domain claim that declare swidden *cannot* be cultivated in old growth forest (*giba*); the mere presence of such signs may persuade others not to burn, reduce fallows and intensify swidden.

Security of harvest: reduction in swidden productivity and cycle

In line with the City Government's environmental rhetoric and ideals, some Tagbanua have realized declining swidden yields and consider sedentary farming as a more productive alternative. Data from a survey of 20 long-term Tagbanua swidden farmers have pointed to a reduction in overall swidden size and yields. Over two decades, the average size of the *main* household swiddens under cultivation has declined from 3.4 to 1.3 ha from 1980 to 2006, with average household rice production dropping for the same period, from 650 to 542 k/ha, respectively. Few, if any, were able to sell what little surplus they had. These data show the trend, or, at least, the perception of declining swidden yields, and the need to intensify production. When asked about changes in swidden cycles, for example, some farmers stated that, after planting tree and row crops in swiddens, they would avoid larger, systematic "hot" burns (ideal for removing weeds and leaving ash). One Tagbanua farmer, Nilo Dagome, suggested,[18]

[16] Key informant interview, Juanito Capistrano, Sugod Uno, December 13, 2006.

[17] Key informant interview, Raul Daganta, Sugod Uno, December 12, 2006.

[18] Key informant interview, Nilo Dagome, Bentoan, December 10, 2006.

> Burning is prohibited in *kaingin*. Ahh, there's no more burning again. We just weed by hand, that means under-brushing, then plant cassava. And then after about three years, coconut, mangoes, it can't be planted with rice or other crops because you just maintain the clearing as it is until it is big. Under-brushing until it's tall! We just maintain the field [and] then put in fertilizers and pesticides to make the crops grow fast.

Many Tagbanua farmers have for these reasons moved from swidden to permanent cash cropping. Some farmers have stopped cultivating swidden altogether, plowing and planting cash crops on lands once in rotation with diverse vegetative cover (e.g., planting "Nestle cacao" in swidden fields). One Tagbanua farmer recently went so far as to plant .5–3 hectares of short fallow swidden land to cassava and cashew, respectively. Produce from "mono-cropped" fields has been sold in larger quantities to locals and/or buyers in the City. As fewer Tagbanua burn due to their fear of damaging tree and row crops, swiddens eventually turn into agroforestry plots or paddy rice fields.

Socio-economic values: the move to intensify

At the end of this intensification spectrum (cf. Boserup 1981; Raintree and Warner 1986) one expects that all relatively poor Tagbanua and moderately wealthy migrants have moved from swidden to paddy rice cultivation. Indeed, many households who have intensified swidden production have converted fallows into cash crops or, if plots are on flat lands, into small paddy rice fields (usually rain fed—*tubigan*). Recognizing the value of paddy rice farming, many indigenous swidden cultivators have turned to the latter on a full-time basis. When asked why, Frances Dagas of Buenavista, stated,[19]

> We just depend on our own resources; we have not received any support from the City Government. The annual rice harvest we get really depends on the amount of rain in the clouds. We depend on the rain since we have no irrigation. After 6 months of planting basakan, we have enough rice to feed our family and even sell.

Another Tagbanua farmer, Raul Francisco, from Cabayugan stated that he preferred paddy rice cultivation because of the potential of increased yields. He stated,[20]

> Why not *kaingin*? Because paddy farming gives good yields. With *basakan* it is good because sometimes there is free assistance from the government.

However, while some relatively poor Tagbanua have started paddy farming independently or negotiated migrant social networks to access the capital and land necessary for cultivation (through wage laboring and share cropping), most have had difficulties cultivating paddy rice with any great success. Many have cultivated rainfed paddy rice with traditional implements, such as *carabao* or homemade tillers, and most do so on usufruct plots or as tenants in share-cropping arrangements. Conditions such as these can make paddy rice farming an insecure livelihood option for poor Tagbanua.

Perspectives on the persistence of swidden amidst overall decline

Despite the trend toward agricultural intensification, many relatively poor and very poor Tagbanua farmers have found the prospects of paddy rice farming daunting. Most have insufficient savings, limited access to capital and irrigation, and few political ties through which to access them. Moreover, the majority of Tagbanua households in each wealth ranking have access to assets that are better suited for swidden than intensified agriculture. As a result, many farmers have maintained both paddy farming and swidden, and without sufficient savings to sustain irrigated paddy rice, have returned to cultivate swidden for subsistence needs, paralleling Brookfield's (1972) notion of "disintensification." When asked about the viability of paddy farming, one Tagbanua farmer, Adolfo Yara, stated that,[21]

> I don't have enough equipment, because the equipment belongs to the owner of the paddy farm. I borrow the *carabao*, plow, and harrow from him. We don't have any yet, none, it's all with the Gonzales family. We borrow from him.

Another Tagbanua farmer, Antonio Salvador, noted that, if he could not afford capital, he would build his own,[22]

> It [tiller] may cost more now. It might cost three thousand [pesos] now, so we make our own. We use ipil wood, then we attach the metal. Ipil, we make a hole in the [ipil] and then we put in metal. It's really homemade. But the metal is hard to get. Those materials we can get easily are those when we are not in rush. But we use coconut shells when it is urgent, if

[19] Key informant interview, Frances Dagas, Sitio Buenavisa, December 19, 2007.

[20] Key informant interview, Raul Francisco, Martape, January 6, 2008.

[21] Key Informant Interview, Adolfo Yara, Sugod Uno, January 6, 2008.

[22] Key Informant Interview, Antonio Salvador, Sugod Uno, January 7, 2008.

> the metal is not available. That serves as the teeth [blade] when we are in a hurry.

Tagbanua, Alberto Rodriguez, spoke of swidden's subsistence value,[23]

> Kaingin [swidden] is still there. It is not for cash, not for selling. It is only for food consumption. Then we look for alternative livelihood [activities] that can be a possible source of income to buy things, rattan and *almaciga*.

Another Tagbanua, Matuar Nolito, noted about swidden's potential of producing food cheaply[24]:

> *Kaingin* is important because we avoid going into debt, but with *basakan* we can[go into debt], so we avoid *basakan* [paddy rice]. If didn't have *kaingin*, we won't have any food, where would we get our food!!

Security of harvest: the multi-functionality of swidden practice

Many marginalized Tagbanua still face difficulties in accessing the land and capital needed for successful paddy rice production, or other intensified practices. In cases where Tagbanua farmers have found it difficult to intensify production, many indicated during interviews that swidden supported sustenance and income through family food crop production [e.g., high yielding "miracle" cassava (kamoteng kahoy, *Manihot esculenta*), gabi (*Colocasia esculenta*), and ubi (*Dioscorea alata*]. The availability of staple root crops is critically important when rice stocks have already been consumed prior to the year's main harvest, and when heavy rains make fishing with a paddle dugout canoe (*paddle banca*) difficult. When asked about the relative value of swidden, Tagbanua farmer, Josez Rodriquez, stated,[25]

> Land is better. Upland farming is always there… Because in the sea you have enemies like the typhoon, just like now its … [rough]. You can't go to fish, the very source of income is dead. Unlike in the soil, there is no typhoon.

Manong Avecito, stated further,[26]

> Yes *kaingin* is always productive. If we have cassava and rice from our *kaingin* then we don't have to get more expensive rice at the markets, or from *basakan*—it [swidden] gives us food—there are no chemicals.
>
> Near the *kaingin*, we plant *kadios* (pigeon peas), *kamoteng baging* (sweet potato), *Palawan gabi*, and lots of *piña* (pineapple).

Swidden also yields crops with multiple functions. Cassava, for example, is used for emergency food shortages, for feeding pigs, for making children's sweets, and for selling to migrant paddy farmers when cash is needed. Vicente Calderon, a swidden farmer suggested,[27]

> *Kaingin* is helpful because we can plant *kamote*, *palay*, which we can sometimes sell. Last year we planted *kamote*, we also harvested it. Sometimes we eat *kamote*, sometimes we sell *kamote*.
>
> We also swap *kamote* for fish, dried fish like that; we also swap *kamote* for other fruits that we may not have. It's just like that. It's just a cycle so it would become money. We also feed *kamote* leaves to our piglets.

Pedro Aguilar,[28] from a forest *sitio*, stated similarly:

> We sell about thirty to forty pieces [of *kamote*] per can to those migrant farmers who need them, who don't plant them. We also feed it to our livestock (raised pigs).
>
> Sometimes there are also buyers of *kamote*. For our neighbors also who do not have *kamote*. They also buy from those who have.

Renato Mariposa stated how his swidden-based cassava was crucial for survival,[29]

> We got by with *kamote*. That's what made us survive. The *kamote* was preserved by grating it and then drying it under the sun. It is sliced before it is pounded then it is mixed with grated coconut and sugar to taste good. That was what we eat, as sustenance. *Kamote* served as our food. When we are struggling, we eat *kamote*, because if we will still eat the *palay* grains, we can no longer plant rice widely in our *kaingin.*

[23] Key Informant Interview, Alberto Rodriguez, Sugod Uno, January 7, 2008.

[24] Key Informant Interview, Matuar Nolito, Sugod Uno, January 8, 2008.

[25] Key Informant Interview, Jose Rodriguez, Sugod Uno, January 8, 2008.

[26] Key Informant Interview, Manong Avecito, Sugod Uno/Kayasan, January 8, 2008.

[27] Key informant interview, Vicente Calderon, Centro Buenavista, January 20, 2007.

[28] Key informant interview, Pedro Aguilar, Sitio Madahon, December 15, 2006.

[29] Key informant interview, Renato Mariposa, Centro, Buenavista, December 20, 2006.

Social and cultural values: retaining swidden traditions?

Many poorer Tagbanua farmers have also articulated that swidden farming remains an important cultural marker—a reflection of who they are as "a people"—and seemed reluctant to abandon swidden, even when engaging intensified farming. While some Tagbanua opt out of swidden farming, those who reflect on their social position see swidden as an emblem of cultural difference. Questions on the socio-cultural value of swidden elicited the following response from the elderly Tagbanua, Rogelio Baldera. He stated,[30]

> You must not leave *kaingin* because if you do the tradition will be gone. You should not focus only on coffee, because *kaingin* might be set aside, abandoned. If you leave swidden you don't have your tradition anymore and you also have no food to eat.

Pepito Banal Abad, stated similarly,[31]

> Ay, of course we cultivate *kaingin* that is our tradition as natives. Of course our *kaingin* farming is different… so it is not the one that destroys the forest [Author note: this remark distinguishing being between incipient and integral farming practices].

Dagumboy Bacod stressed that because he focused on cassava production, he could share his surplus with those who required food during "months of hunger,"[32]

> We had 10 sacks of *kamote* and can give some away when *katutubo* (indigenous persons) are in need; but other families would do this for us too.

Many poor middle-aged farmers and remaining elders have stated further that, despite the rise in intensification, they still performed ceremonies related to site selection (*maglambay*), initial clearings (*sagkat/sagda*), plantings (*magpanitabnan*), and final harvests (*sungrud*). Tagbanua elders have continued to perform the *lambay* and *sagda* on an individual and collective basis. During several household visits, the lead author found Tagbanua farmers preparing discrete individual ceremonial offerings, while on other occasions, families performed stylized versions of rice ceremonies. A Tagbanua elder (now deceased), Tatay Pabio Franco, explained,[33]

> Yes we do the *sagda*—we give an offering for the clearing [of forest]. This is done in December before we could cut any trees. We are afraid of the *panya'en* [malicious forest spirit] that is why we do the *sagda*—the first step is the offering to the *panya'en*. The offering is a mix of *mascada*, betel nut and leaf (*buyo*), a golden necklace, a small chick, and sticky rice.
>
> We then cut the chick's leg to let blood drip on the earth and we release the chicken to see if it goes inside the forest. The *panya'en* will get the chicken by force – it eats it – we are feeding the *panya'en* – if it eats then we are given good health and harvest. We can clear the forest area.
>
> But if chicken comes back out, then the *panya'en* is angry… I will have a bad dream when I sleep… the *panya'en* will visit me. He gives us a worry not to cut the *giba* until a limit. We can see the *panay'en* and its families. They have families, like people outside. Some live as the spirits of bad humans in large trees. So we *say*, *"If you live here in this place and even if you have many houses here, please don't be angry with us and make us sick.*

Although swidden ceremonies are less common than they once were, the fact they have persisted suggests many Tagbanua still consider swidden as integral to their culture and livelihood, despite decades of political pressure to sedentarize. The following section elaborates further on how farmers have negotiated the changing character of swidden in response to irregular agrarian change and what this means for recent interpretations of the "demise" of swidden.

Discussion

The agrarian transition in rural Southeast Asia has been characterized by a shift from subsistence to intensified agriculture and wage labor in line with expanding markets, increasing off-farm employment, and growth in external remittances (Eder 1999; Rigg 2005, 2006). The many rural farmers who have experienced insufficient returns on labor from swidden due to decreasing soil fertility and declining overall yields have diversified and/or intensified production (Walker 2004; Fujita 2006; Rigg 2006; Fisher and Hirsch 2008). Others have stepped out of combined subsistence and commercial pursuits to invest in "professional farming" and to join the emergence of "agrarian entrepreneurship" (Rigg 2005, p. 180). Rigg (2005) argues further that "today, there are few subsistence cultivators (type 1) except in the remote and marginal areas of countries like in

[30] Key informant interview, Rogelio Baldera, Sugod Uno, Cabayugan, January 6, 2008.

[31] Key informant interview, Pepito Banal, Sugod Uno, Cabayugan, December 21, 2007.

[32] Key informant interview, Dagumboy Bacod, Sugod Uno/Martape, January 6, 2008.

[33] Key informant interview, Tatay Pabio Franco, June 2004, Sugod Uno, Barangay Cabayugan.

the Laos PDR … Most… are either semi-subsistence (type 2) or have embraced pluriactivity (type 3), to a greater or lesser extent" (p. 180). Such accounts suggest that the demise of swidden is inevitable.

Although certain aspects of this trend have taken place in the Buenavista-Cabayugan area, reflecting Palawan Island's growing post-frontier status (Eder 2006), the effect of the local agrarian transition on swidden has been more recursive and context dependent than smooth and linear. Most often wealthier households who control productive resources have the ability to intensify agriculture over the long-term. While moderately wealthy migrant households have secured productive resources for intensification, from *carabao* to hand tractor, very poor Tagbanua continue to have difficulty accessing the same resources due to political and economic barriers, including lower social status, political exclusion, and/or growing debt. Such social and economic exclusion has arisen because many farmers have difficulty negotiating the socio-political relations that drive intensification, influence access to assets, and affect commodity relations and market sales. Those poor Tagbanua farmers who have become marginalized by the processes driving intensification have seen their standard of living remain the same or decline, and have relied on swidden in the absence of capital and savings that are required for intensification. However, even those indigenous farmers who have experimented with paddy rice cultivation and or cash crops often maintain, or revert back to swidden for fear of losing their subsistence base due to the uncertainty of investing in more costly intensified agriculture and poverty more generally. Many of these farmers will maintain and invest in swidden farming to ensure that crops are available when paddy rice production costs are too high (e.g., fertilizers, pesticides, etc.), yields are too low, the crop is damaged or consumed; and when other forms of subsistence (e.g., fish) are unavailable due to inclement weather or family emergencies (death, etc.). Others claim that investing in swidden is an investment in culture. In many ways, then, Tagbanua farmers actively negotiate the shifting ground of swidden, where some revert back to, sustain, or invest in swidden against a backdrop of agrarian change. Swidden is in flux rather than demise.

The shifting ground of swidden in the Buenavista-Cabayugan area has involved two overlapping trends in household livelihood strategies that have remained in flux over time and space. On the one hand, Tagbanua have experienced within group differentiation as farmers increasingly invest in intensive farming and diversified strategies. On the other, these and other farmers have also maintained swidden plots for security of harvest and maintaining of socio-cultural values, among other reasons. First, the state and City Government's anti-swidden discourses have continued to influence Tagbanua perceptions of swidden's legitimacy and viability as a livelihood strategy. In particular, the anti-swidden ordinances have had a lasting negative impact on the local subsistence security and agro-ecological diversity of swiddens. As a result of the ban, Tagbanua farmers who had cleared, but not yet burned and planted, their swiddens were left without harvests. During the three-season ban, many Tagbanua went hungry, while bolder migrants subverted the ban by clearing and burning forest, whether primary or secondary growth (McDermott 2000). Rather than conserve old growth forest, there was instead a loss of genetic diversity: diverse fallows regrew more slowly with monocrops, rice seeds from locally-developed cultivars lost viability or were eaten, and farmers claimed losses of rice varieties important for medicinal and ceremonial purposes (ibid). The sustained nature of political pressures have caused Tagbanua farmers to internalize the anti-swidden rhetoric of the City Government and some NGOs, leading farmers to self-regulate the clearing and burning of forest for swiddens within their ancestral domain claim (see Agrawal 2006).

As such anti-swidden discourse persists, Tagbanua farmers have realized that their swiddens are less productive than they once were, indicating that swidden size and yield have declined in the Buenavista-Cabayugan area. With pressures not to burn and declining yields, farmers planted tree and row crops in swiddens, which they cleaned by under-brushing and creating minimal, discrete burns (rather than systematic "hot" burns). As a result, certain Tagbanua with access to and use of capital have shifted to cash cropping and/or paddy rice farming. Tagbanua statements on the value of paddy rice, for example, have partly rested on government support of sedentary farming and that, with access to capital, rice yields are often sufficient for both domestic use and market sales. Some Tagbanua have even converted larger swidden fields into cashew or cacao "mini-plantations." This was not yet evident in 2001.

Second, despite some Tagbanua households intensifying production, these and other farmers still consider staple crops grown in and around swiddens as buffers against food insecurity; other farmers even uphold the customary practices of swidden farming. As the results have shown, most Tagbanua swiddeners have difficulties entering into and sustaining paddy rice farming, with the vast majority lacking the assets, flat lands, irrigation, savings and networks necessary for maintaining and expanding cultivation. Accessing start-up capital, for example, usually involved Tagbanua farmers entering into share cropping arrangements in which they have used capital to plow their "landlord's" field and then retaining portions of the harvest for their labor. Only in a few cases have Tagbanua tenants used their landlord's equipment to plow their own fields on

a full-time basis (limited further by a lack of flat land). In other cases, the planting of cash crops has often failed because of poor crop tending practices. Thus, Tagbanua have remained partly dependent on swidden for subsistence and on intermittent sources of cash income (with non-timber resources being the major source of income) amidst a sea of intensification.

Tagbanua have used swidden to secure subsistence and cash income needs for familial reproduction in the context of political pressure, cultural change and rise of intensification. Those families who live in upland areas have come to rely on swidden for robust, fast-growing and prized root crops, such as the high yielding "miracle" kamote (cassava, *Manihot esculenta*) and *kamote baging* (sweet potato, *Ipomoea batata*), to feed the family and draw cash during periods of hardship, especially when avoiding more costly intensive production. Next to traditional varieties of swidden rice, the more abundant root crops such as cassava, sweet potato and *ubi* (*D. alata* L.) serve as important staple foods for indigenous families (and some migrants). In fact, most meals in a week will have a starchy root crop component, emphasizing the "primacy of the plant starch staple" in the indigenous diet (Conklin 1954, p. 30; Warner 1979, p. 73). Indeed, Tagbanua rely heavily on roots crops during the "months of hunger" toward the end of the dry season (May–June), just before the main harvest (September), when most families have consumed their rice supplies, and heavy rains make fishing difficult (see Eder 1988; Novellino 1999; Lacuna-Richman 2004). Tagbanua place considerable value on such root crops "for [they] will survive a drought that would kill the rice […] "it is the root crops—less susceptible to erratic rainfall and faunal pests—that are really the relatively insured staple" (Warner 1979, p. 73). In the forest fringes of swiddens, farmers may also find emergency root crops such as *korot/kudot* (*Dioscorea hispida* Dennst) and assortments of wild yams.[34] In other cases, indigenous farmers have sold various types of cassava and vegetables to wealthier migrants who have fewer of such crops because they specialize in paddy farming, giving the former a comparative advantage. Among many, the different root crops and vegetables that grow near and/or overlap with swidden spaces also serve as storehouses of production.[35] These include Palawan *gabi*, *tales* (taro, *C. esculenta* L. Schott and Endl.); *ubi* (greater yam, *D. alata* L.)*; kamoteng baging* (sweet potato, *Ipomoea batatas*); *kadios* (pigeon pea, *Canjanus cajan*); and other vegetables, including *talong* (eggplant, *Solanum melongena* L.); *sitaw* (yardlong beans, *Vigna unguiculata* L); and *kalabasa* (squash, *Cucurbita maxima* Duch). Most of these species can be found growing wild or in vegetable gardens near the edges of swidden, well inside of swiddens, and or in swidden fallows near households. Further afield a farmer will also find domestic vegetables "gone wild" or tree crops often harvested in long-fallowed forest.

Finally, Tagbanua farmers have continued to value the socio-cultural character of traditional swidden practices. Although less significant than in the past, middle-aged and elderly farmers have continued to invest in the ritual practices associated with the site selection, clearing, planting, harvesting, and post-harvest ceremonies of swiddens. Rather than being stripped of social significance, swidden partly remains a strategic and culturally-based practiced in the Buenavista-Cabayugan area. Following the *bayanihan* system (reciprocal labor sharing) and *sungrud* (harvest sharing), members of the bilateral family are still brought together to uphold customary practice, particularly the sharing of swidden food crops. Because swidden-based root crops remain a livelihood mainstay, farmers will share root crops with others in difficult times. As such, whether Tagbanua fully abandoned swidden remains to be seen; what is certain, however, is that the shifting ground of swidden remains irregular, recursive, and context dependent.

Conclusion

In the Philippines, state driven anti-swidden discourses have supported laws, policies and practices that have sought to criminalize and eradicate swidden agriculture. Despite this, poor indigenous farmers continue to cultivate swidden in varied ways, shapes and forms. State conservation planners and practitioners have long considered swidden to be a primitive and destructive type of farming—the agriculture of the poor—as defined relative to modern intensive agriculture—a socially-constructed binary that lingers from the colonial period. Failing to distinguish between incipient and integral practices, state interventions have sought to sedentarize, intensify, and "modernize" swidden farmers collectively. Recently, systemic campaigns that have advocated for "stable swiddens" have informed initiatives to develop and intensify agriculture for forest conservation and development—part of local and broader agrarian transitions. Although typologies of such transitions suggest intensification will subsume swidden, the fact remains that swidden has persisted in areas as a vital, integral practice.

Indeed, recent research has shown how national political economic policies, rooted in anti-swidden discourses, have

[34] The availability of a variety of root crops inside swiddens as core sustenance for poor farmers is well established (Eder 1978; Novellino 1999; Dressler, 2005). Eder (1978) and Novellino (1999) have also documented how *korot* is harvested when other sources of food are in decline. *Korot* is a wild tuber that contains a poisonous alkaloid called dioscoreine. In order to be eaten, the tuber must be peeled and cut into small pieces and soaked to extract the alkaloid (Eder 1978).

[35] See Dressler (2005) for a more comprehensive list of species grown inside and adjacent to swiddens.

spurred on the so-called agrarian transition such that swidden will eventually be taken over by commercial agriculture and or off-farm labor. Scholars suggest that swidden-based livelihoods are in decline because of the "progressive shift from farm to non-farm activities" (Rigg 2005, p. 174)—a transition said to subsume swidden along a sequential trajectory (Rigg 2006). This paper's longitudinal overview of how swidden farmers respond to a local agrarian transition shows otherwise. While some Tagbanua farmers have been intensifying, one cannot conclude that swidden is headed toward "extinction" in central Palawan.

Our paper has demonstrated that, while the policies and practices fuelling the agrarian transition have caused two different social groups—migrants and the indigenous Tagbanua—to intensify swiddens and invest in paddy rice, field based evidence paints a contrasting picture: Tagbanua continue to rely on integral swiddens for readily available food crops and for their role in customary practice. Although some Tagbanua have intensified production, the majority have remained peripheral to the processes that drive the local agrarian change. While the Tagbanua of Buenavista-Cabayugan have been considered comparatively poor because of difficulties in accessing capital for intensification, many make proactive choices about retaining swidden for its subsistence worth and cultural value, rather than investing in paddy farming or other cash crop ventures. Despite many indigenous peoples in the Philippines and Southeast Asia eschewing traditional subsistence production—the "ways of the past"—other farmers have successfully negotiated the shifting ground of swidden as it overlaps with subsistence and commercial agriculture in upland regions.

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Author Biographies

Wolfram Dressler is a Senior Lecturer in the School of Social Science at the University of Queensland.

Juan Pulhin is a Professor in the College of Forestry and Natural Resources at the University of the Philippines Los Banos.